

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL-
SITE INVESTIGATION AND RESTORATION BRANCH
FINAL PLAN OF REMEDIAL ACTION



Cobra Machine and Fabrication Site
Wilmington, DE

DNREC Project No. DE-1181

The final plan of remedial action (final plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) preferred cleanup alternative for the remediation at the Cobra Machine and Fabrication site in Wilmington, Delaware. The final plan is issued under the provisions of the Delaware Hazardous Substances Cleanup Act, 7 Del. C Chapter 91 (HSCA) and the Regulations Governing Hazardous Substance Cleanup (Regulations). As described in Section 12 of the Regulations, DNREC provided notice to the public and an opportunity for the public to comment on the proposed plan of remedial action. During the comment period of January 26, 2004 through February 16, 2004, DNREC did not receive any comments on the proposed plan thus the proposed plan has been adopted as the final plan. The final plan designates the selected remedy for the site.

The final plan summarizes the August 2003 Remedial Investigation (RI) report, the October 2003 underground storage tank removal and over-excavation document and the administrative record file upon which the proposed plan is based. All investigations of the site, the proposed plan, and the final plan will constitute the remedial decision record. Copies of these documents can be obtained or viewed at locations listed at the end of this document. Copies of these documents can be obtained or viewed by contacting DNREC.

INTRODUCTION

The Cobra Machine and Fabrication site is comprised of approximately 1.75 acres of land, located at 2 James Court, Wilmington, New Castle County, Delaware (Figure 1). The site is described on the tax maps of New Castle County, as tax parcel numbers 26-056.00001, 10-0010.0059 and 10-0010.0060. The site is bounded to the north by James Court Street, to the south, east and west by commercial properties. The current owner of this site San Co. Construction, Inc, (San Co) purchased the site in August 2003 and intends to use the property as a paved storage yard. Through a Prospective Purchaser Agreement, under the provisions of the Delaware Hazardous Substance Cleanup Act (HSCA), 7 Del. C. Chapter 91, as administered by the Delaware Department of Natural Resources and Environmental Control-Site Investigation

and Restoration Branch (DNREC), SanCo agreed to investigate the potential risks posed to the public health, welfare, and the environment at the site by performing a Remedial Investigation (RI) and contracted Duffield Associates, Inc. (Duffield) to perform the RI.

SITE DESCRIPTION AND HISTORY

The site is fenced with restricted access and is currently used as a paved storage yard and is zoned for commercial use. The major portion of the site is covered with two buildings and pavement. The remaining areas to the west and south are open grass covered areas. Properties on the surrounding area are also being used for commercial purposes. The site was used as a light industrial, specialty machine shop involved in cutting, milling, grinding and welding of metals. The operations included the use of cutting oil and solvent degreasing. Solvent degreasing was conducted in a small contained (unheated) degreaser. Spent solvent was recycled by Safety Clean Inc. Metal cuttings were collected into a drum for recycling.

INVESTIGATION RESULTS

Based on a review of all the environmental investigations conducted at the site, the analytical results indicate that only certain metals such as arsenic, manganese, iron and the semi-volatile organic compounds (SVOCs) benzo(a)pyrene exceeded their respective unrestricted (i.e., residential) use Uniform Risk-based Standard (URS) values in soil. However, iron and arsenic concentrations were below the default natural background concentrations for Delaware soil as indicated in the following table:

SOIL

<u>Contaminant</u>	<u>RME Concentration*</u> <u>(mg/kg)</u>	<u>URS for Unrestricted Use</u> <u>(mg/Kg)</u>	<u>URS for Restricted Use</u> <u>(mg/Kg)</u>	<u>Default Natural Background Concentration</u> <u>(mg/kg)</u>
benzo(a)pyrene	0.62	0.09	0.8	
Arsenic	3.88	0.4	4	11
Iron	20149	2300	61000	3000-22000
Manganese	1061	160	4100	60-350

*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

In groundwater manganese was detected at a concentration of 1680 microgram/liter (ug/L) which is above the federal secondary maximum contaminant level (SMCL) for drinking water which is based on aesthetic qualities of the water such as taste and odor and does not present a risk to human health or environment. No other chemicals were detected in groundwater above their respective URS level.

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 manganese and benzo(a)pyrene as contaminants of concern in soil was 7.13×10^{-6} for carcinogenic risk and a Hazard Index (H.I) of 0.1 based on an unrestricted land use scenario. Manganese detected in groundwater showed a non-carcinogenic risk equivalent to a H.I of 0.33. These risk levels are

below DNREC's cleanup level of 1×10^{-5} for carcinogenic risk and H.I. of 1.0 for non-carcinogenic risk.

REMEDIAL ACTION OBJECTIVES

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

- Prevent human residential exposure to impacted soil; and
- Prevent human exposure to impacted groundwater.

These objectives are consistent with the current commercial use of the site for storage of construction equipment, New Castle County zoning policies, and state regulations governing water supply, and worker health and safety.

Based on the qualitative objectives, the quantitative objectives are:

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

FINAL 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 remedial action for the site includes the following:

Since the risk evaluation performed based on the results of the remedial investigation and the removal of a waste oil tank and associated soil indicates that the remedial objectives for the site have been met, DNREC determined that no further action is required at this site.

PUBLIC PARTICIPATION

The Department actively solicited written public comments and suggestions on the proposed plan of remedial action. The comment period began January 26, 2004, and ended at the close of business (4:30 p.m.) February 16, 2004. No comments were received. If you have any questions or concerns regarding the Cobra Machine and Fabrication site, or if you would like to view reports or other information regarding this site, please contact the project manager, Qazi Salahuddin, 391 Lukens Drive, New Castle, Delaware 19720 or at 302.395.2600.

DECLARATION

The final plan of remedial action for the Cobra Machine and Fabrication site is protective of human health, welfare and the environment, and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.

John Blevins
Director, Division of Air and Waste

Date



1:4,000
 0 50 100 200 300 400 Feet



FIGURE 1
SITE LOCATION MAP
COBRA MACHINE
AND
FABRICATION SITE
WILMINGTON, DELAWARE