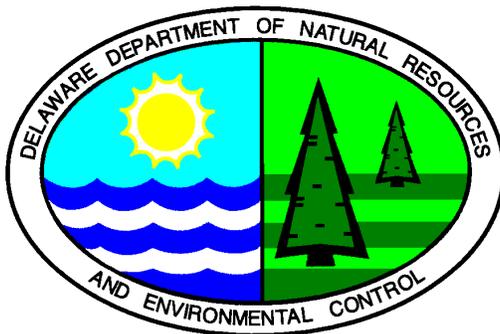


## STATE OF DELAWARE

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

#### AMENDED PROPOSED PLAN OF REMEDIAL ACTION



August 2006

**Budd Metal Site (OU-1)**  
**Wilmington, Delaware**

**DNREC Project No. DE-0270**

This Amended Proposed Plan of Remedial Action (Proposed Plan) presents the Department of Natural Resources and Environmental Control (DNREC)-Site Investigation and Restoration Branch (SIRB) preferred cleanup alternative for the remediation at the Budd Metal project (Site).

The purpose of the amended proposed plan is to modify the conditions of the original Final Plan of Remedial Action (Final Plan) for the Site issued by DNREC-SIRB in July 1996. The July 1996 Final Plan of Remedial Action is herein modified to reflect a separation of the Site into two (2) Operable Units based upon tax parcels to expedite the remedy of the Site. The east parcel will be known as Operable Unit 1 (OU-1) and the west parcel will be known as Operable Unit 2 (OU-2) which is allowable under the provisions of HSCA. The Site owner requested the separation and DNREC-SIRB approved the request in March 2006. In addition, as required by Section 12 of the Delaware Regulations Governing Hazardous Substance Cleanup (regulations), DNREC-SIRB is providing notice to the public and an opportunity for the public to comment on the Amended Proposed Plan. At the conclusion of the comment period, DNREC will review and consider all of the comments received and then will issue an Amended Final Plan of Remedial Action (Final Plan). The proposed amendments to this plan reflect the need to expedite the remedy of the east parcel described in the July 1996 Final Plan of Remedial Action (Final Plan). Implementation of the July 1996 Final Plan for the west parcel is not currently feasible on the same schedule as the east parcel due to current site use as a tire-recycling center. DNREC-SIRB intends to impose a schedule on the remedial action for OU-2 to insure that the remedy is completed to its final state. The Final Plan will designate the selected remedy, if required, for the site. All investigations of the site, the proposed plan, the amended proposed plan, comments received from the public, DNREC SIRB's responses to the comments, and the final plan will constitute the Remedial Decision Record.

This amended proposed plan summarizes the findings of the 1994 Preliminary Assessment - Site Investigation (PA/SI), 1995 Remedial Investigation (RI), a ground-water sampling event 2003 in response to tire chip questions and, 2005 Supplemental Remedial Evaluation for the eastern parcel, and the administrative record file upon which this proposed plan is based. Copies of site-related documents can be obtained or viewed at the locations listed at the end of this document. **DNREC's proposed plan is preliminary and a final decision will not be made until all of the comments are considered. The final plan could differ from the proposed plan based on public comments.**

## **Introduction**

The Department of Natural Resources and Environmental Control Site Investigation Restoration Branch issues the Amended Proposed Plan of Remedial Action under the provisions of the Delaware Hazardous Substance Cleanup Act (HSCA) and the Delaware Regulations Governing Hazardous Substance Cleanup (the Regulations). The Amended Proposed Plan presents to the public the Department's proposed selection of remedial activities to occur at the Budd Metal Company, Inc. site, Wilmington, Delaware.

## **Site Description and History**

The Budd Metal Site, located in a low-lying industrial area southeast of the city limits of the City of Wilmington, Delaware, situated between Heald Street and New Castle Avenue, is approximately 4,000 feet southeast of the Christina River (Figure 1 - Site Location). The Budd Metal Site (hereinafter the "Site") is comprised of Tax Parcel Numbers 10-001.00-050 ("East Parcel") and 10-001.00-047 ("West Parcel") and occupies approximately 12 acres of land (Figure 2- Site Plan). The East Parcel is approximately 3.8 acres in size and the West Parcel is approximately 8.2 acres in size.

The Budd Metal site was previously used as a metal fabricating facility, which included an office building, a fabrication building/warehouse, a shipping and handling warehouse building, a warehouse, and a garage. Currently, the East Parcel contains an unoccupied one-story warehouse of approximately 6,500-square feet. The West Parcel currently houses a tire recycling business, and much of it is covered by stockpiled tires.

In March 1995, the Department under the authority granted by the Hazardous Substance Cleanup Act (7 Del. C., Chapter 91) reached an agreement with the past owner of the Budd Metal Company, Inc., Mr. Isaac Buddovitch (the Potentially Responsible Party) to perform a Remedial Investigation/Feasibility Study (RI/FS) of the soil and groundwater at the Site. The current owner of the property, Heald Street, LLC, entered into a Voluntary Cleanup Program (VCP) agreement with DNREC-SIRB (1996) in order to conduct an evaluation of site soil and groundwater in an attempt to identify areas of environmental concern.

The RI/FS was conducted consistent with the Delaware Regulations Governing Hazardous Substance Cleanup (HSCA), Delaware Standard Operating Procedures (SOP) for Chemical

Analytical Programs (CAP), the Guidance Document and other Departmental policies or procedures.

The data generated during the RI confirmed the findings of previous studies of the site. Specifically, the data confirmed that elevated levels of lead are present in the uppermost levels of the fill soils in the Western Parcel of the Site. Petroleum hydrocarbons, PCBs and PAH compounds are present sporadically in areas with elevated lead levels. Elevated levels of petroleum hydrocarbons and PCBs are present in the area of the former transformers, and petroleum hydrocarbons are present at elevated levels in the sediments in the drainage swale. In addition, elevated levels of lead and PAHs were detected in an area of the eastern portion of the site. Based on the results of the RI/FS conducted for the site, the Department has determined that the site does pose a threat to human health and the environment in its current state. Multiple contaminants exceed the Uniform Risk-Based Standard (URS) values; therefore, DNREC-SIRB recommends remedial action be conducted at the Site.

## **Investigation Results**

Duffield Associates Inc. (Duffield) conducted environmental investigations at the Site during the period of 1988 to 2006. In 1994 a Preliminary Assessment - Site Investigation (PA/SI) identified areas of environmental concern. A Remedial Investigation and Feasibility Study (RI/FS) report was prepared for the Site by Duffield in March 1996. DNREC-SIRB subsequently approved a cleanup plan for the property titled "Duffield Associates' August 1997 Remedial Design Work Plan for the Budd Metals Company Site" (RDWP). A supplemental groundwater sampling event occurred in 2003 in conjunction with DNREC-Division of Water Resources in response to tire chip questions. During these investigations, Duffield sampled and analyzed, site soils, groundwater, and surface water for a variety of substances including; metals, volatile organic compounds (VOCs), semi-volatile organic compounds, polychlorinated biphenyls (PCBs), pesticides, polynuclear aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH).

For both the East and West Parcels, the results of these studies indicated that lead in site soils is the primary constituent of environmental concern. Petroleum hydrocarbons were detected at elevated concentrations in a few discrete areas of the East Parcel. Specifically, elevated concentrations of petroleum hydrocarbons are present in the sediments of a drainage swale that extends across the southeastern portion of the East Parcel. Duffield reported low concentrations of PCBs as present in the location of former transformers on the East Parcel.

### **East Parcel Supplemental Investigation**

Recently, the site owner requested to address environmental conditions on the East Parcel with the objective of obtaining from DNREC-SIRB a Certification of Completion of Remedy (COCR) letter for this parcel alone, prior to addressing the remainder of the site (i.e., the West Parcel). In response to this request, DNREC-SIRB required that the site owner evaluate current environmental conditions of the East Parcel because the laboratory results are over 10 years old. Therefore, DNREC-SIRB requested that Duffield collect and evaluate confirmation samples from the East Parcel. As a result, Duffield Associates conducted a Supplemental Remedial Evaluation of the East Parcel on January 17, 2006.

A tire recycling facility currently utilizes the West Parcel of the Site. DNREC-SIRB will require that the site owner evaluate the environmental conditions of the West Parcel because the laboratory results are also over 10 years old. The Amended Proposed Plan of Remedial Action July 2006 section of this Plan requires this investigation.

## **Soil**

The results of previous environmental sampling and analyses are compared with the results of the confirmatory sampling performed on the East Parcel are discussed below. Approximately twenty-six (26) soil samples have been collected as part of the RI/FS and the January 2006, Supplemental Remedial Evaluation from the area of the East Parcel (Figure 2 - East Parcel). Analytic results for samples collected and analyzed from the Site indicate that lead in shallow soils, in excess of 1,000 mg/kg, is the primary constituent of concern on the East Parcel. The concentration of 1,000 mg/kg for lead is the target remedial concentration per the 2002 RDWP, and is the Restricted Use, Uniform Risk-Based Remediation Standard (URS) as published in DNREC-SIRB's December 1999, document titled "Remediation Standards Guidance Under the Hazardous Substance Cleanup Act."

Delineation of the area of lead impact on the East Parcel indicates that it is approximately 160 feet by 85 feet in size. In addition, two areas of petroleum impact were identified with diesel-range organic concentrations in excess of 1,000 milligrams per kilogram. PCBs were not detected in soils on the East Parcel at concentrations that exceed Restricted Use URS concentration.

## **Groundwater**

The January 2006 laboratory analytic results for leachability testing indicated lead leachate was present at concentrations in excess of the remedial standard for groundwater. However, analysis of the shallow groundwater at the Site indicated that lead was not present at detectable concentrations. These data suggested that the environmental setting of the site does not result in suitably acidic conditions, which would cause lead to mobilize. Taken further, the environmental setting should not have changed in at least 10 years in such a way that the lead in the soil has leached and resulted in lead-impacted groundwater.

In the January 2006 Supplemental Remedial Evaluation, samples of groundwater were also collected and analyzed for lead, PCBs, and petroleum hydrocarbons. No lead or PCBs were detected. Low concentrations of petroleum hydrocarbons were detected in one of three analyzed samples. Currently, groundwater at the site is not used for potable purposes. According to DNREC-SIRB, the area of the site will be designated as a Groundwater Management Zone (GMZ) eliminating the possibility of shallow groundwater being authorized for use for potable purposes. The GMZ for the Southwest Wilmington Area (including the Budd Metal Site) proposed by DNREC-SIRB is under review as of August 2006.

## **INTERIM RESPONSE ACTION**

Duffield and the Site owner conducted an Interim Response Action on the East Parcel to address the presence of elevated concentrations of petroleum hydrocarbons detected in surface soil samples collected from where the owner planned to perform maintenance and upgrades of storm water controls. Duffield submitted an Interim Action Work Plan to DNREC-SIRB on March 24, 2006, that DNREC-SIRB approved on March 28, 2006.

Duffield and the Site owner removed petroleum-impacted soils from two areas on the East Parcel and disposed of the soils off site at a licensed facility. Post-excavation samples were collected and analyzed for petroleum hydrocarbons. The laboratory reported residual petroleum hydrocarbons present in post- excavation samples at concentrations uniformly below the remedial action level of 1,000 milligrams per kilogram (mg/kg) indicating that the Interim Remedial Action was successfully completed.

## **Remedial Action Objectives**

According to HSCA Regulation 8-4(1), remedial action objectives (RAOs) must be established for all plans of remedial action. The regulations require that DNREC-SIRB set objectives for land use, resource use, and cleanup levels that are protective of human health and environment.

These objectives are:

- Close or eliminate pathways providing potential routes of exposure to on-site substances of potential environmental concern;
- Prevent future human exposure to potential elevated concentrations of site contaminants;
- Minimize the potential for dissolution, mobilization, or off-site migration of compounds of environmental concern; and
- Limit site groundwater to non-potable uses. These objectives are consistent with the current proposed use of the site and State Regulations governing water supply.

DNREC-SIRB will determine remedial action objectives for the West Parcel after the Supplemental Investigation for West Parcel is complete. As such, this Amended Proposed Plan of Remedial Action concerns the East Parcel, only. To achieve the remedial action objectives for the East Parcel, separation of the site into two operable units is proposed, as follows:

- Tax Parcel No. 10-001.00-050, the East Parcel comprising Operable Unit One (OU1), and
  - Tax Parcel No. 10-001.00-047, the West Parcel comprising Operable Unit Two (OU2).
- See Figure 2 - Site Plan with Operable Units Defined.

## **Original Proposed Plan of Remedial Action (July 1996)**

Remedial Action is defined in the Regulations as “the containment, contaminant mass or toxicity reduction, isolation, treatment, removal, cleanup, or monitoring of hazardous substances released to the environment, or the taking of such other actions as may be necessary to prevent, minimize,

or mitigate harm or risk of harm to the public health, welfare, or the environment which may result from a release or an imminent threat of a release of hazardous substances”.

The original proposed remedy for this site consisted of the following:

- 1) Excavation, stabilization and removal of PCB bearing soils to a regulated hazardous waste facility.
- 2) Excavation and stabilization of lead bearing site soils and placement back on-site.

Groundwater contamination has been documented in the shallow, unconfined (Columbia) aquifer on site, particularly in the north/central portion of the site, near the service garage. Restriction of groundwater use in the unconfined aquifer near the service garage is required to eliminate the potential for adverse exposures to humans from consumption of contaminated groundwater. Therefore, DNREC-SIRB will establish a groundwater management zone (GMZ) for the site. DNREC-SIRB has determined that TPH levels in groundwater, exceeding 10ppm, shall constitute as free product. Should the elevated levels of TPH in the groundwater, near the service garage, decrease to less than 1ppm following usually 3-5 years of successive groundwater monitoring, then DNREC-SIRB shall eliminate the GMZ from the site. Should the level of TPH in the groundwater in the vicinity of the service garage exceed 10ppm following two (2) successive groundwater monitoring years, then DNREC-SIRB shall require remediation be undertaken for the groundwater.

### **Amended Proposed Plan of Remedial Action July 2006**

This Amended Proposed Plan of Remedial Action concerns the East Parcel, only. DNREC-SIRB will require laboratory analysis to confirm existing environmental conditions also be conducted for the West Parcel. DNREC-SIRB has requested that the confirmatory analysis be presented in the form of a “Supplemental Remedial Investigation Work Plan for the West Parcel” DNREC- SIRB also required via correspondence that this plan be submitted and approved prior to DNREC-SIRB’s issuance of a Certificate of Completion of Remedy (COCR) for the East Parcel.

As indicated earlier, Duffield identified an area of lead impact, in excess of the URS for Restricted Use on the East Parcel of the Site. The July 1996 Final Plan required that these soils be chemically treated to stabilize the lead. Analytical results for soil samples collected during the January 2006 confirmatory sampling suggested that the lead in the soils is immobile. Based on these findings, the Owner proposes to modify the remedial strategy of chemical fixation of the lead-impacted area to construction of an engineered barrier (cap) over the area.

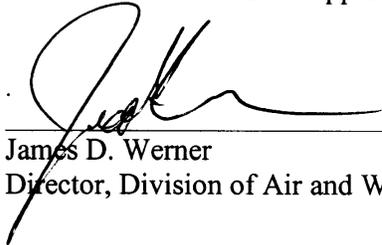
The Amended Proposed Plan of Remedial Action for the Budd Metal Site OU-1 includes the following:

- 1) Capping (bituminous concrete, concrete, or equivalent) of the delineated lead-impacted area to minimize human exposure to the affected media and;
- 2) Developing and implementing of an Operations and Maintenance (O&M) Plan for the cap and;
- 3) Creating institutional controls to include an Environmental Covenant to be entered into for OU-1, which will restrict future use of this tax parcel to non-residential purposes and to prohibit

excavation, trenching, construction, grading, drilling or other earth disturbance activities, renovation or demolition of the existing structure on the property, or any paved surfaces in excess of 12 inches below grade on the site without prior written approval from DNREC-SIRB and;

4) Establishing the Southwest Wilmington GMZ for OU-1 and preemptively for OU-2.

DNREC-SIRB has required that the Site owner must submit a "Supplemental Remedial Investigation Work Plan" to evaluate existing soil and groundwater conditions at the Budd Metal Site (OU-2 West Parcel) prior to issuance of a Certification of Completion of Remedy (COCR) for the Budd Metal Site (OU-1, East Parcel). As such, this Work Plan will be developed and submitted to DNREC for approval prior to DNREC-SIRB issuing COCR for OU-1.



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James D. Werner  
Director, Division of Air and Waste Management

8 AUG 2006  
Date of Review

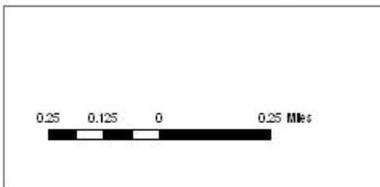
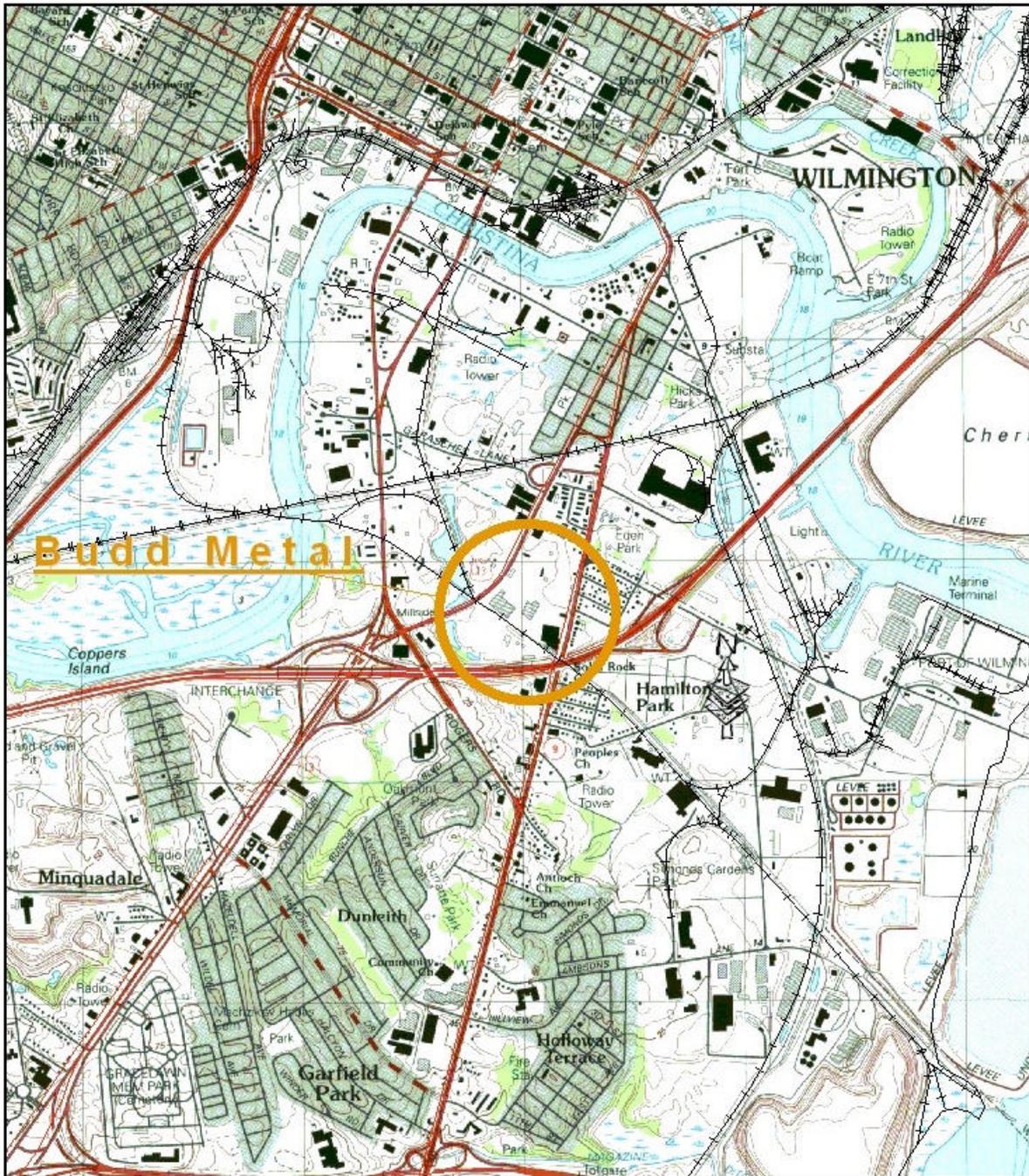
### Public Participation

The Department is actively soliciting written public comments and suggestions on the proposed plan of remedial action. The comment period begins August 14, 2006, and ends at the close of business (4:30 pm) ~~August~~ September 5, 2006.

If you have any questions or concerns regarding the Budd Metal site, or if you would like to review the reports or other information regarding the site, please contact the project manager, Todd A. Keyser, 391 Lukens Drive, New Castle, Delaware 19720, or at 302.395.2600.

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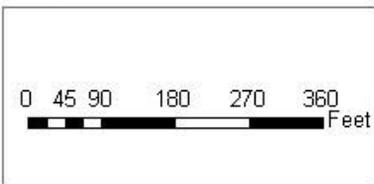
**Figure 1: Site Location**



**DNREC  
SITE INVESTIGATION &  
RESTORATION BRANCH  
391 LUKENS DR  
NEW CASTLE, DE 19720-2774  
302.395.2600**

**Budd Metal  
DE-0278  
New Castle County  
Delaware**

**Figure 2: Site Plan with Operable Units defined**



**DNREC**  
**SITE INVESTIGATION &**  
**RESTORATION BRANCH**  
391 LUKENS DR  
NEW CASTLE, DE 19720-2774  
302.395.2600

**Budd Metal**  
**Operable Units**  
**OU-1, OU-2**  
New Castle County  
Delaware