

## **Appendix 21**

# **NECASTRO AUTO SALVAGE PROPERTY WILMINGTON, DELAWARE**

**SIRS ID: DE-0283**

## **GENERAL SITE INFORMATION**

**Site Name: Necastro Auto Salvage Property**

**SIRS ID Number: DE-0283**

**Site Location and Description:**

The Necastro Auto Salvage property is located at 495 Old Airport Road in New Castle, Delaware, about 500 feet from the intersection of Basin Road and Old Airport Road (Figure 1). The property consists of three tax parcels (#1000800002, #1000800003, and #1000800004) and is approximately 25.9 acres in size. The Necastro Auto Salvage Property was grouped with several other properties into the Old Airport Road Site for a Screening Site Inspection (SSI) performed by DNREC in 1995. The Old Airport Road Site is approximately 115 acres in size and encompasses all of the properties along Old Airport Road bounded by the Christina River to the northwest and by Interstate 95 (I-95) to the southeast.

Due to limited data available on the Necastro Auto Salvage Property, data collected from adjacent properties that comprise the Old Airport Road Site were also mapped and evaluated. Only data collected from the Necastro Auto Salvage Property was utilized in the mass loading calculations.

The Christina River runs along the northwest of the site and is parallel to I-95, which is southeast of the site. The property is bounded by the Christina River to the northwest, Old Airport Road and subsequently I-95 to the southeast. To the north there are also wetlands and to the south there are residences as well as auto collision, auto parts, and auto salvage businesses along Old Airport Road.

There is a small pond called Cress Pond located southwest of the Site which drains to the Christina River. Some of the stormwater from the Site flows southwest into Cress Pond, but the majority of the stormwater is expected to flow northwest directly into the Christina River.

The site is currently an automobile salvage yard.

### **Previous Site Uses:**

Dominic A. Necastro used the property as an automobile salvage yard since the late 1950s. Site operations included bringing automobiles onto the property and stripping them for salvageable parts. According to Vincent Necastro, the nephew of Dominic Necastro, waste fluids from the vehicle were sometimes captured, but excess fluids were frequently allowed to spill onto the ground and were not contained. The vehicles were then stored on the marsh within the site. Periodically sections of vehicles would be removed, fill was placed down in that section, and then the vehicles were replaced on top of the fill. This continued through the early 1990s. In 1985, Dominic Necastro passed away and his wife Charlotte took over the business until 1989. Between 1985 and 1989, approximately 75% of the automobiles on the property were crushed and sold. In 1989, Vincent Necastro became president of the business and was subsequently cited by the State of Delaware Department of Natural Resources and Environmental Control (DNREC) for a large amount of construction waste deposited on the property. The waste was removed from the property and no further action was required regarding the citation.

In 1990, the Estate of Dominic A. Necastro, represented by Mr. Carl Schnee, Esq., requested that a Phase I Preliminary Assessment be conducted on the Necastro Auto Salvage property. A Phase I Assessment was subsequently conducted by Duffield Associates and findings of the Phase I Assessment indicated potential landfilling operations across the entire site, the presence of unlicensed underground storage tanks (USTs) at the site, stained soils, probable groundwater and surface water contamination, and malfunctioning septic systems present at the property.

### **Site Regulatory Status:**

This section briefly summarizes previous investigations performed on the site through the SIRS program. A current SIRS regulatory status is also included.

#### ***Phase I Audit Report (Duffield Associates, 1990)***

The Phase I Audit Report was summarized in the 1990 Phase II Audit Report by WIK Associates, Inc. During the Phase I Audit, Duffield Associates identified concerns throughout the site including staining and a floor drain in the main office/garage, odors near the car stripping building, and reported contamination of the drinking water well for House #3. Ten USTs had been reported across the property, with at least one leaking heating oil UST.

**Phase II Audit Report (WIK Associates, 1990)**

Based on the 1990 Phase I Audit, discussions with State personnel, environmental investigations performed on the adjacent DuPont Company property, and the use of the property at the time, WIK Associates concluded that there may be subsurface contamination. In addition, two composite soil samples (one from zero to five feet and one from five to ten feet) were collected from each of the 14 test pit locations and select samples were analyzed for total petroleum hydrocarbons (TPH) and solvents. Groundwater samples were collected from 11 of the test pits. WIK Associates installed seven groundwater monitoring wells across the site for future groundwater sampling. Overall, analyses showed soil contamination from oil and grease released from automobiles, groundwater contamination from metals and a probable UST release, and solid waste disposal resulting from filling the site. PCBs were not analyzed.

**Potential Hazardous Waste Site Identification Form (USEPA, 1994)**

The *Potential Hazardous Waste Site Identification Form* was completed by a representative of the United States Environmental Protection Agency (USEPA) on March 25, 1994. The form indicates that the property was identified as a potential hazardous waste site based on interviews with operators who had worked at the site periodically for at least 20 years. The former operators indicated that extensive landfilling of waste materials had occurred on the northern portion of the property. The form indicates that approximately 12 acres of landfill was estimated to be present at the property to depths of 15 feet below ground surface (bgs) or more. The operators also indicated that wetlands present at the property had also been filled. The report indicates that stained soil was prevalent at the property and that at least ten USTs were present at the property. The form also indicates that a stream and wetlands are present on the property and that the stream flowed north towards the Christina River.

**Preliminary Assessment for Necastro Auto Salvage (DNREC, 1994)**

In response to the identification of the Necastro property as a potential hazardous waste site by USEPA, a Preliminary Assessment (PA) of the Necastro property was conducted by DNREC in 1994. At the time of the PA, there were two residences and three garages in operation on the Property. The PA indicates that a Phase II investigation of the property completed by WIK Associates, Inc. (WIK) in 1990 found contamination in the soils and groundwater at the property and evidence of extensive landfilling over at least 14 acres. The fill present at the site was found to contain demolition debris, municipal garbage, automobiles, wood, fabric, automobile parts,

motors, tanks, and drums. The PA stated that during the Phase II investigation soil samples were only analyzed for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs), and some samples were analyzed for solvents as well. The PA also mentions a sampling event in 1994 performed by the Delaware Division of Public Health which revealed contaminated wells, which are believed to be from the landfill. Based on this information, DNREC recommended that a site investigation including analysis for metals, semi-volatile organic compounds (SVOCs), and PCBs be performed at the property to further characterize the contamination at the site.

**Draft Screening Site Inspection of Old Airport Road Site, Newport, Delaware (DNREC, 1995)**

In 1995, DNREC submitted the PA for Necastro Auto Salvage and a PA for the Cress Collision Site to USEPA. The Cress Collision Site is located approximately 150 feet southwest of the Necastro property. Realizing that many other properties along Old Airport Road have been used for purposes similar to the use of the Necastro property, USEPA gave approval to DNREC to conduct a Site Screening Investigation (SSI) of the whole area instead of individual properties or activities. The study area for the SSI included 115 acres and encompassed all of the properties along Old Airport Road bounded by the Christina River to the northwest and by I-95 to the southeast. Approximately 58 acres of the study area was suspected to contain fill materials. Test pit excavations revealed fill materials in lower wet areas. The SSI included sampling of shallow soils, deep soils, surface water, sediments, and groundwater and the samples were analyzed for VOCs, SVOCs, Pesticides, PCBs, and metals. PCBs were detected in five surface soil samples, two deep soil samples (collected above the soil to groundwater interface), and five sediment samples. Concentrations of total PCBs detected in the surface samples ranged from 0.087 mg/kg to 3.1 mg/kg. The concentrations of total PCBs detected in the deep soil samples, TP-4 and TP-5, were 0.15 mg/kg and 0.066 mg/kg, respectively. The concentrations of total PCBs detected in the sediment samples ranged from 0.014 mg/kg to 0.44 mg/kg.

The SSI also verified the presence of ten USTs discovered during the 1990 Phase I which were located near buildings and houses on the Necastro property. However, details on the tanks are unknown, including registration status, age, use, capacity, and product stored. It is known that approximately 1,000 gallons of heating oil leaked from one of the USTs.

**Current Regulatory Status:**

Review of information obtained from the DNREC Environmental Navigator indicates that a deed restriction has been placed on the Necastro Auto Salvage Property (Tax Parcel #1000800002).

## SUMMARY OF SITE PCB INFORMATION

### Site Investigation PCB Findings:

Due to limited data available on the Necastro Auto Salvage Property, data collected from adjacent properties that comprise the Old Airport Road Site were also mapped and evaluated. However, only data collected from the Necastro Auto Salvage Property was utilized in the mass loading calculations discussed below.

PCBs were detected in the surface soil at four locations, with concentrations ranging from 0.087 mg/kg (SS-4 from 0 to 2.0 feet below ground surface (bgs)) to 3.1 mg/kg (SS-3 from 0 to 2.0 feet bgs). PCBs were detected in subsurface unsaturated soil at two locations, TP-5 (7 feet bgs) and TP-4 (7.0 feet bgs), at concentrations of 0.066 mg/kg and 0.15 mg/kg, respectively. No soil samples were analyzed for PCBs in the saturated subsurface soil.

Due to the fact that there were only four detections in the subsurface saturated soil, the highest detected value (3.1 mg/kg) was used in the calculations instead of calculating the 95% upper confidence limit (UCL) of the mean of the concentration of total PCBs observed in the surface soil (for overland flow calculations). There were no PCBs detected in groundwater.

<b>Concentrations of PCBs on Site</b>			
<b>Sample Matrix</b>	<b>Corresponding Figure</b>	<b>Analytical Methods</b>	<b>Range of Total PCBs</b>
Surface Soil	Figure 2	Method 8082	Not detected to 3.1 mg/kg
Subsurface Soil (unsaturated)	Figure 3	Method 8082	Not detected to 0.15 mg/kg
Subsurface Soil (saturated)	Figure 4	Not Analyzed	Not Analyzed
Groundwater	Figure 5	Method 8082	Not Detected

A summary of all samples collected for PCB analyses are presented in Tables 1 and 2.

### Acreage where PCBs detected:

The estimated surface soil area impacted by PCBs is 4.58 acres (Figure 2). The estimated subsurface unsaturated soil area impacted by PCBs is 4.58 acres (Figure 3). According the data reviewed and analyzed by BrightFields, no saturated subsurface soil samples were analyzed for PCBs so the respective area impacted by PCBs cannot be determined. Based on the data

reviewed and analyzed by BrightFields, the groundwater is not impacted by PCBs. Therefore, no groundwater loading estimates were prepared for the site.

**PCB Remediation Status:**

BrightFields did not review any documents stating that PCB remediation is required for the Necastro Auto Salvage Property.

## **PCB MASS LOADING SUMMARY**

The PCB mass loading rate to surface water via overland flow was estimated for the Necastro Auto Salvage Property. There were no reported concentrations of PCBs in the groundwater and no samples from the subsurface saturated zone were analyzed for PCBs; therefore, groundwater transport cannot be evaluated as a mechanism of transport for PCBs at the Property. A summary of the results is included below and the details of the calculations are included as attachments to this Appendix.

### **Overland Flow:**

Overland flow has been determined on this site by using the Revised Universal Soil Loss Equation (RUSLE). The RUSLE predicts the long term average annual rate of erosion on an area based on rainfall patterns, soil type, topography, cover/canopy factors and support management practices. These specific factors are site specific and rely on local information of the site. A breakdown of the individual factors is presented below with a brief explanation of their choice.

#### **Ground Cover and Canopy:**

The surface cover and flow paths were assessed through aerial photography and available contour mapping (Delaware Data Mil, 2007). The cover/management factors (C) assigned to the erodible area and associated flow paths was 0.012, which corresponds to a vegetative cover of grass or grass like vegetation over 50% of the area.

#### **Site Sediment and Erosion Control Practices:**

Based on the aerial photography evaluation and review of site documents it does not appear that any sediment and erosion control practices are being implemented on Site.

#### **Input Factors and Results:**

A breakdown of the individual factors is presented below with a brief explanation of their choice.

**Necastro Auto Salvage**

<b>RUSLE Factors</b>	<b>Values Provided</b>	<b>Explanation of choice</b>
R = rainfall-runoff erosivity index (10 <sup>2</sup> ft-tonf-in/ac-hr-yr)	175	An appropriate value for R for the Site was determined using the Isoerodent Map of the Eastern U.S. from the Stormwater Phase II Final Rule Construction Rainfall Erosivity Waiver (USEPA, 2012).
K = soil erodibility (0.01 ton-ac-hr/ac-ft-tonf-in)	0.33	The soil erodibility factor was assigned using surface soil descriptions from soil logs to assess the soil composition and equate them to a corresponding generic soil type and organic material content within the RUSLE program.
ls = topographic factor (dimensionless)	0.04	The topographic factor was derived based on the slope and flow accumulation grids created in ArcGIS. An output LS grid was created and the average value for the grid is provided.
C = cover/management factor (dimensionless)	0.012	The cover/management factor C assigned to the erodible area was 0.012, which corresponds to a vegetative cover of grass or grass like vegetation over 50% of the area.
P = support practice factor (dimensionless)	1	No documentation was provided indicating that any sediment and erosion controls are in place.
A = average annual soil loss estimate (ton/ac-yr)	0.77	The average soil loss estimate was generated by ArcGIS using the input factors listed above.
Erodible Area (acres)	1.0	The erodible area was calculated based on the pervious surfaces within the area of concern polygon for surface soil (Figure 6).

For factors that were not consistent across the site, rasters were used to characterize the variations. Due to the methodology utilized to derive the soil loss estimate, the numbers listed above cannot simply be multiplied.

The total estimated PCB loading via overland flow for the Necastro Auto Salvage Property is **2.2 grams per year**. Please see attached table for specific variables.

**Uncertainty Analysis Associated with Overland Flow:**

**Specific Areas and Degree of Uncertainty for the Necastro Auto Salvage Property**

	<b>Samples Per Acre (site)</b>	<b>Chemical Data Quality*</b>	<b>Soil Type</b>	<b>Site Coverage</b>	<b>Map Quality</b>	<b>Distance to Discharge Point</b>
<b>Site Specific Information</b>	0.5	Lab Data	Detailed site logs	Based on aerial and a limited site assessment	Adequately Scaled Maps; Unscaled Map	Approximately 960 feet
<b>Degree of Uncertainty</b>	High	Moderate	Moderate	Moderate to High	Moderate to High	High

\* Primary analysis used in the historical samples

Sources of uncertainty for the Necastro Auto Salvage Property include; All of the data utilized in the overland flow analysis was Aroclor laboratory data, there was limited access to the site so the site coverage factor was based primarily on an aerial of the site, and the sample locations were from adequately scaled maps and one unscaled map. Based on this evaluation the level of uncertainty associated with overland flow PCB mass loading from the Necastro Auto Salvage Property is **Moderate to High**.

**Groundwater Discharge Analysis:**

No groundwater discharge analysis was performed for this site.

**Site References:**

Delaware Department of Natural Resources and Environmental Control (DNREC), 1994, Preliminary Assessment for Necastro Auto Salvage, June 1994.

DNREC, 1995, Draft Screening Site Inspection of Old Airport Road Site, October 1995.

Delaware Geological Survey, 2013, Delaware Data Mil, <<http://datamil.delaware.gov/geonetwork/srv/en/main.home>>, May 2013.

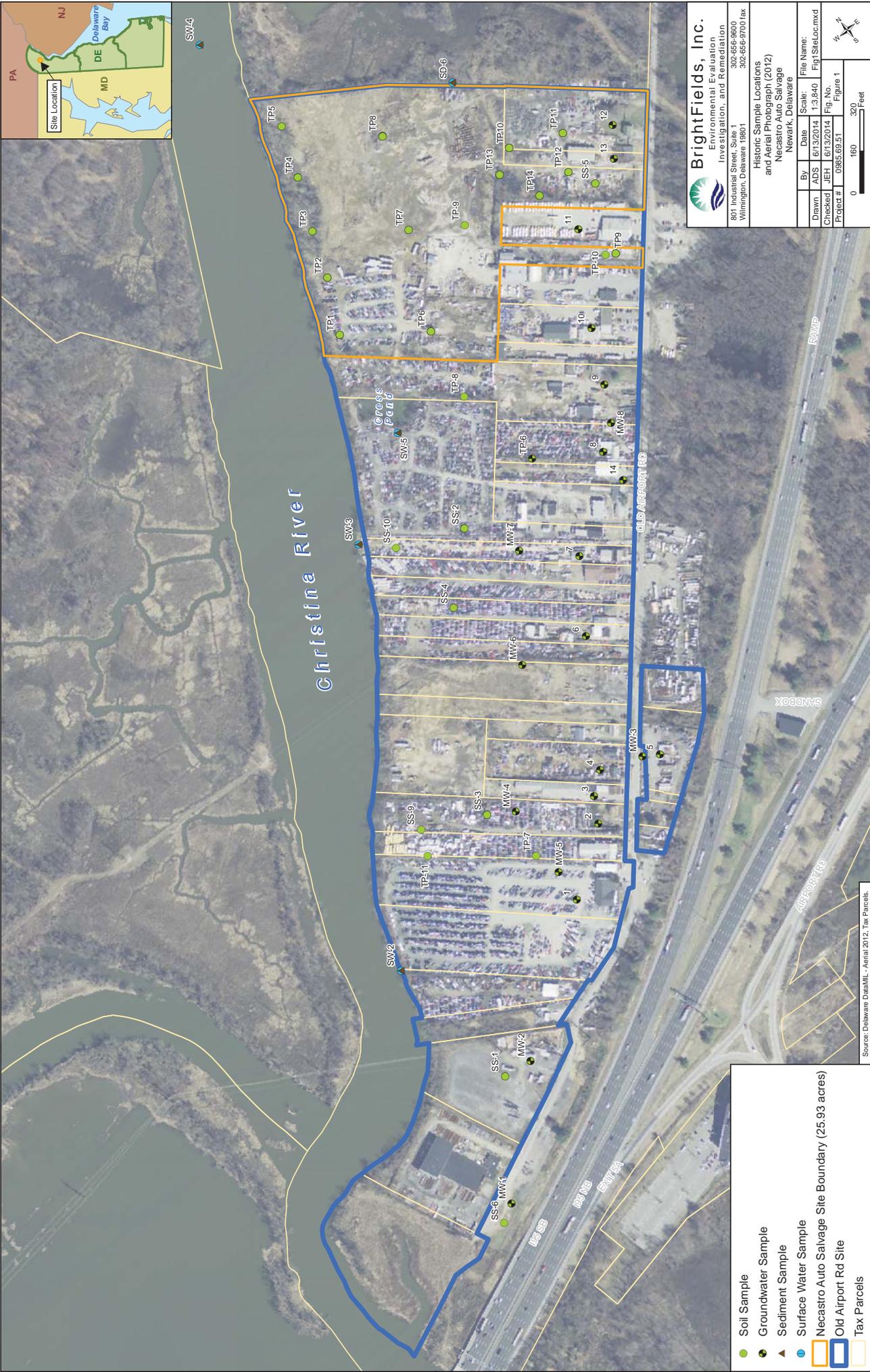
USEPA, 1994, Potential Hazardous Waste Site Identification, March 1994.

WIK Associates, Inc., 1990, Phase II Audit Report, November 1990.

PCB Mass Loading Phase II  
Necastro Auto Salvage Property  
SIRS ID: DE-0283  
Wilmington, Delaware



# Figures



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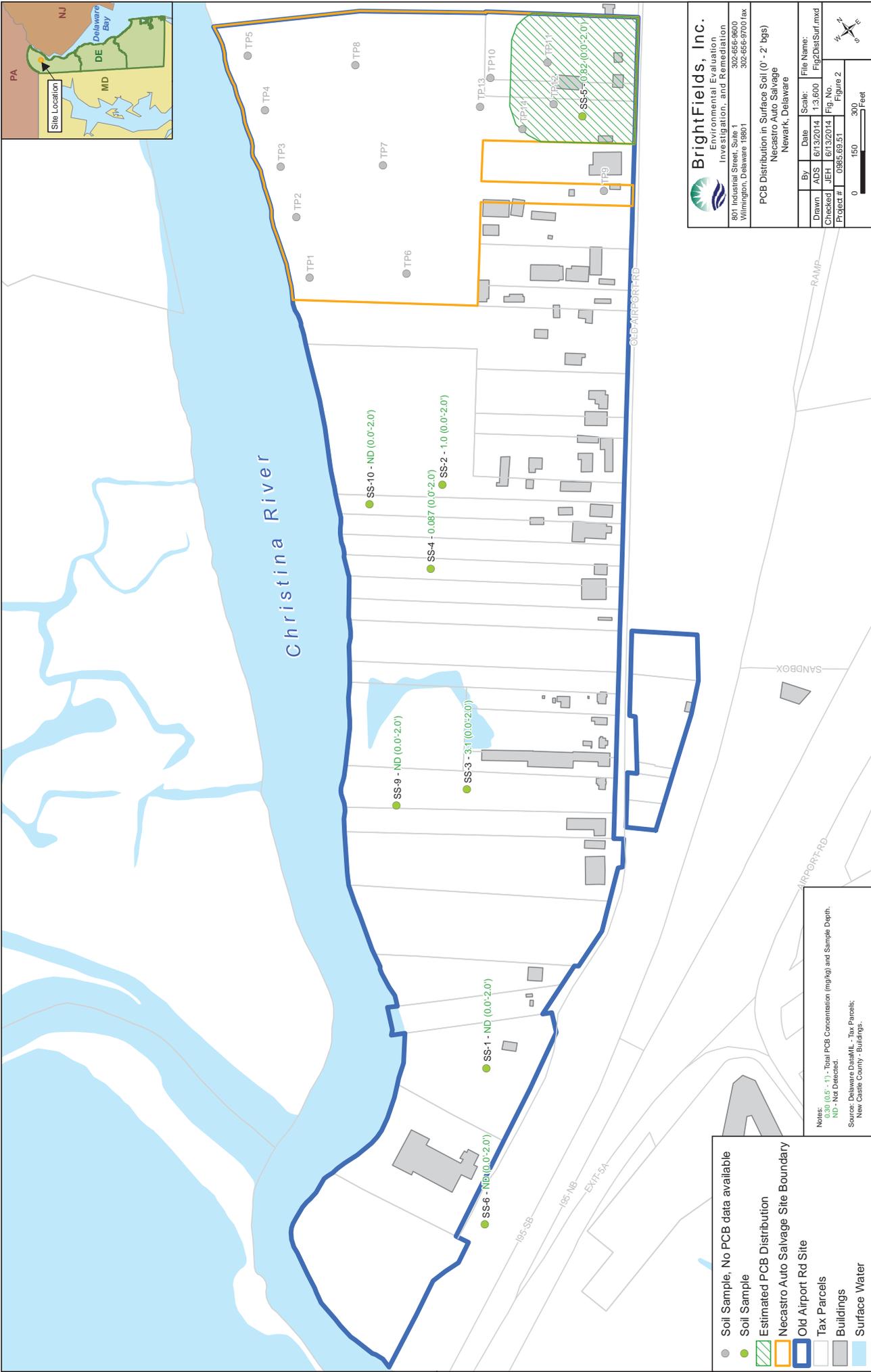
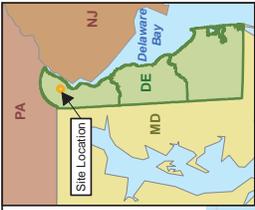
Historic Sample Locations  
 and Aerial Photograph (2012)  
 Necastro Auto Salvage  
 Newark, Delaware

By	Date	File Name:
ADS	6/13/2014	Fig1 SiteLoc.mxd
Checked	JEH	6/13/2014
Project #	0985.69.51	Figure 1

Scale: 0 160 320 Feet

Soil Sample  
 Groundwater Sample  
 Sediment Sample  
 Surface Water Sample  
 Necastro Auto Salvage Site Boundary (25.93 acres)  
 Old Airport Rd Site  
 Tax Parcels

Source: Delaware DataML - Aerial 2012, Tax Parcels  
 Source: Delaware DataML - Aerial 2012, Tax Parcels



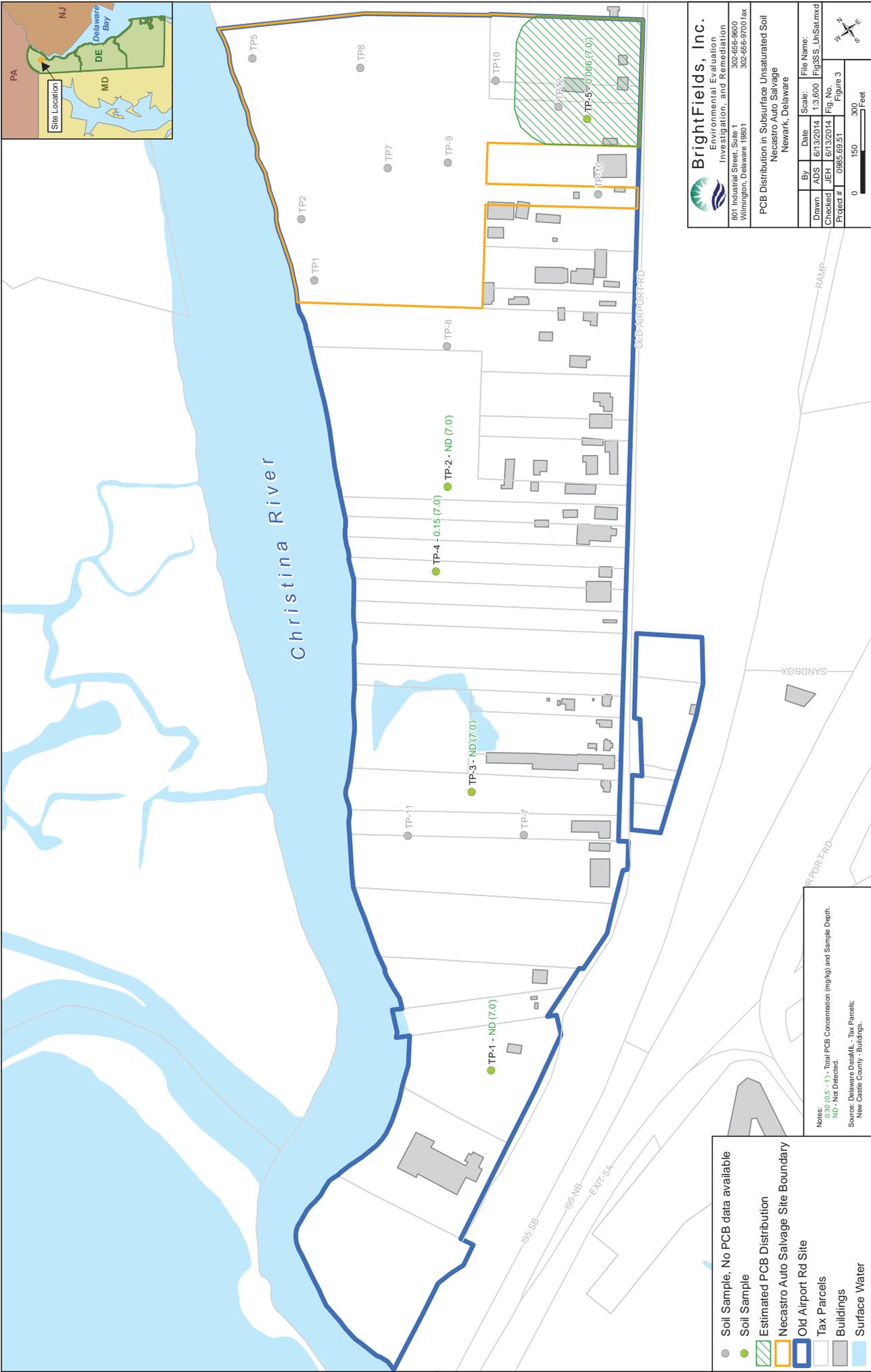
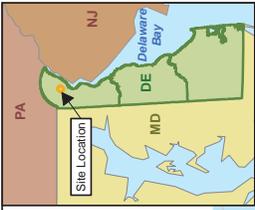
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PCB Distribution in Surface Soil (0' - 2' bgs)  
 Necastro Auto Salvage  
 Newark, Delaware

By	Date	Scale	File Name
ADS	6/13/2014	1:3,000	Fig2BstSurf.mxd
Checked	JEH	6/13/2014	Fig. No.
Project #	0985.68.51		Figure 2
	0	150	300
			Feet

Notes:  
 0.30 (0.5 - 1) - Total PCB Concentration (mg/kg) and Sample Depth.  
 ND - ND Detected.  
 Source: Delaware DataMIL - Tax Parcels;  
 New Castle County - Buildings.

- Soil Sample, No PCB data available
- Soil Sample
- Estimated PCB Distribution
- Necastro Auto Salvage Site Boundary
- Old Airport Rd Site
- Tax Parcels
- Buildings
- Surface Water



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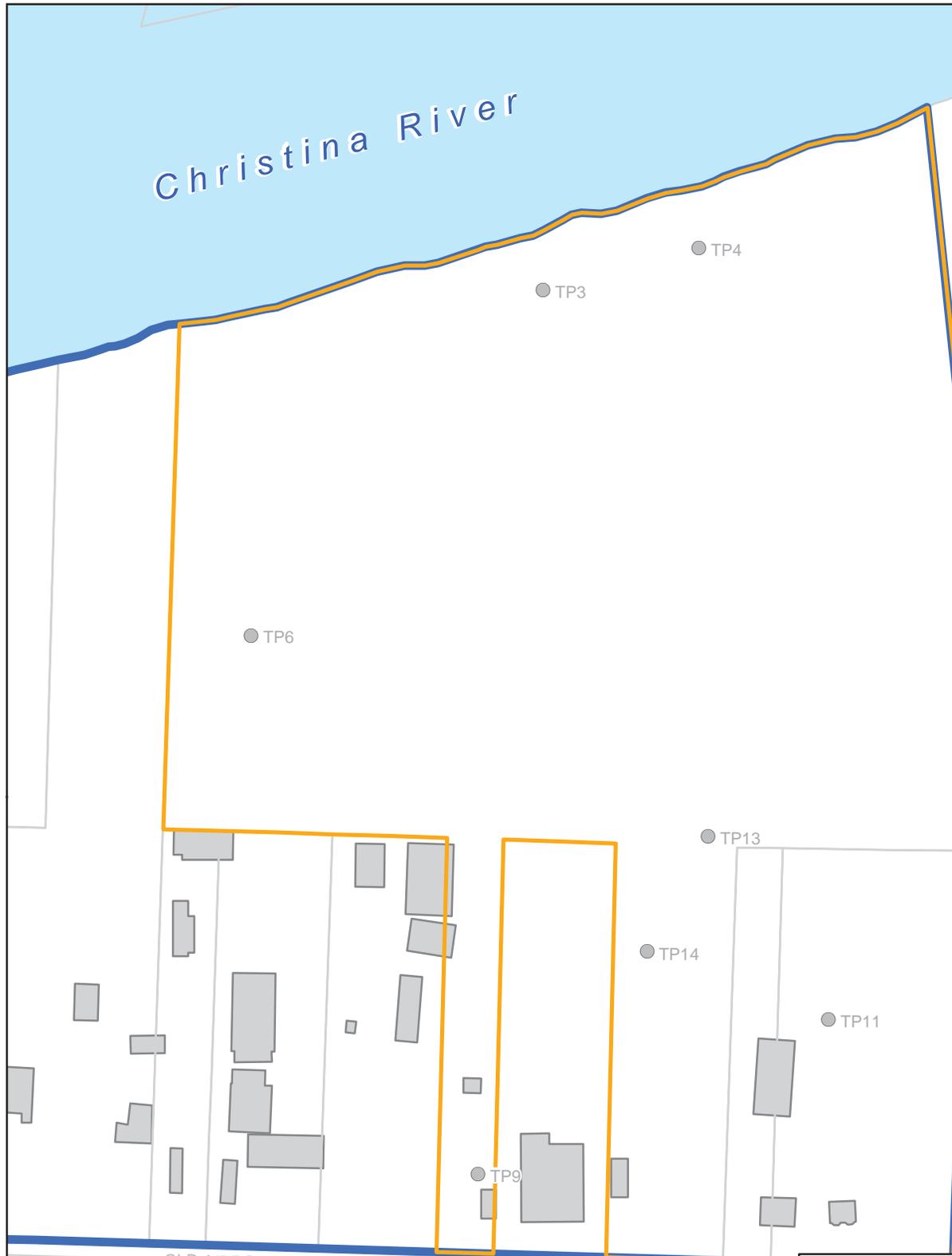
PCB Distribution in Subsurface Unsaturated Soil  
 Necastro Auto Salvage  
 Newark, Delaware

By	Date	Scale:	File Name:
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Checked	JEH	6/13/2014	Fig. No.
Project #	0985.68.51		Figure 3
	0	150	300
			Feet

Notes:  
 0.30 (0.5 - 1) - Total PCB Concentration (mg/kg) and Sample Depth.  
 ND - ND Detected.  
 Source: Delaware DataMIL - Tax Parcels;  
 New Castle County - Buildings.

- Soil Sample, No PCB data available
- Soil Sample
- ▨ Estimated PCB Distribution
- ▭ Necastro Auto Salvage Site Boundary
- ▭ Old Airport Rd Site
- ▭ Tax Parcels
- ▭ Buildings
- ▭ Surface Water

Christina River



- Soil Sample, No PCB data available
- ▨ Estimated PCB Distribution
- ▭ Necastro Auto Salvage Site Boundary
- ▭ Old Airport Rd Site
- ▭ Tax Parcels
- ▭ Buildings
- ▭ Surface Water

Source: Delaware DataMIL - Tax Parcels;  
New Castle County - Buildings.

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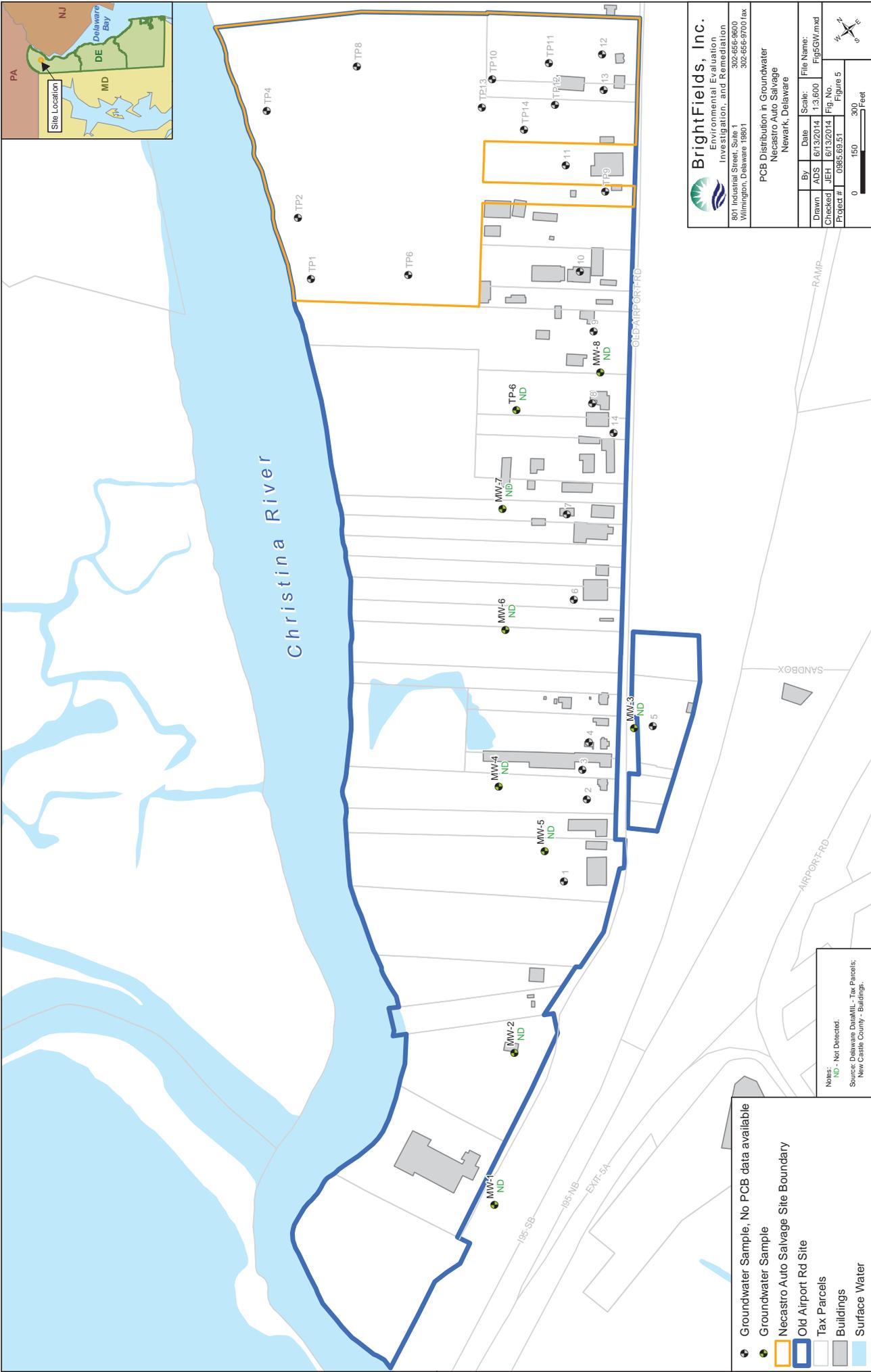
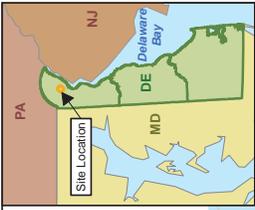
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PCB Distribution in Subsurface Saturated Soil  
Necastro Auto Salvage  
Newark, Delaware

	By	Date	Scale:	File Name:
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Checked	JEH	6/13/2014	Fig. No.	
Project #	0985.69.51		Figure 4	





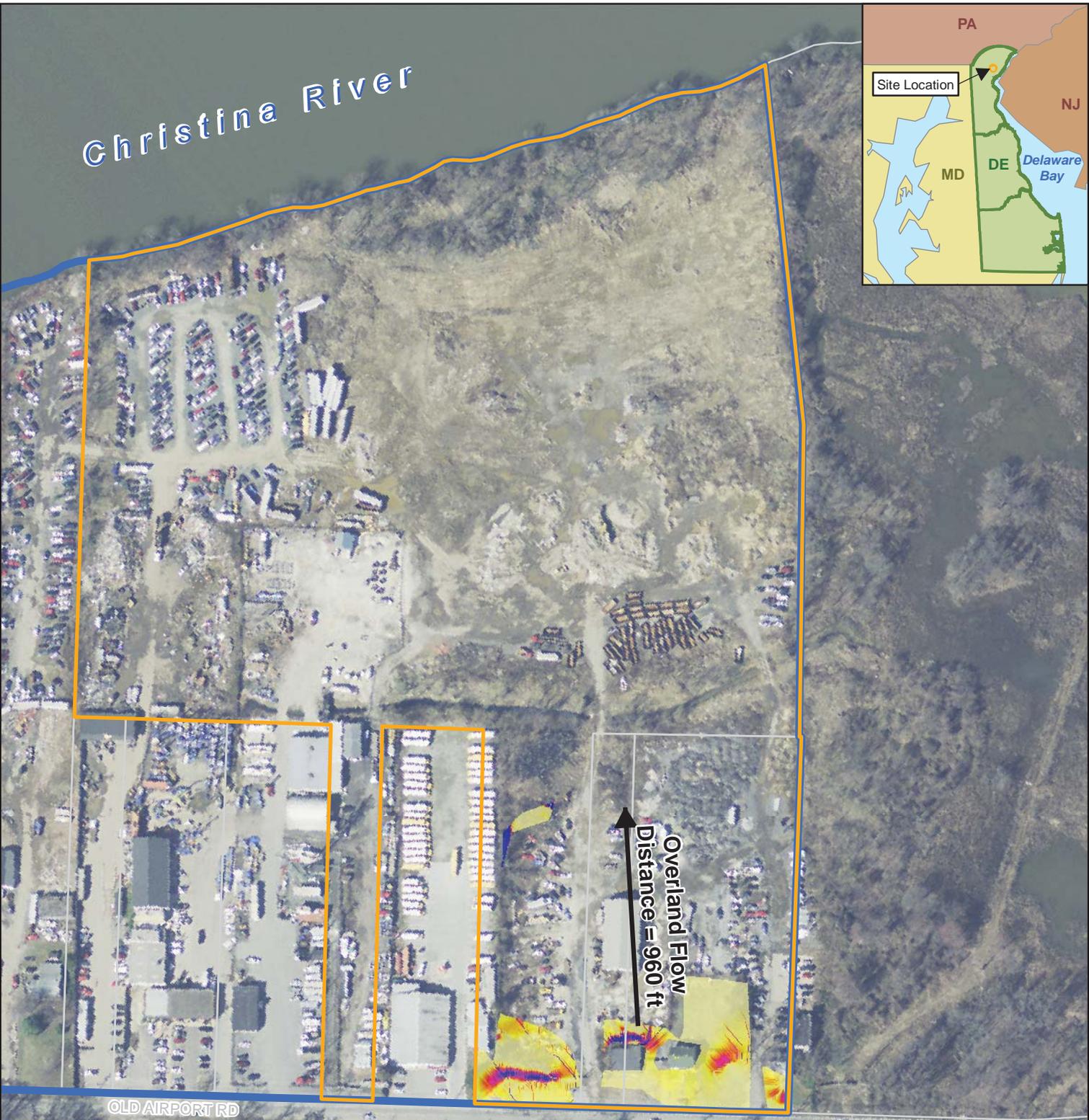
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**PCB Distribution in Groundwater  
 Necastro Auto Salvage  
 Newark, Delaware**

By	Date	Scale	File Name:
ADS	6/13/2014	1:3,000	Fig5GW.mxd
Checked	JEH	6/13/2014	Fig. No.
Project #	0985.69.51	Figure 5	
	0	150	300
			Feet

Fig. 5: PCB Distribution in Groundwater, Necastro Auto Salvage Site - PCB Data (Not Detected) - 6/13/2014

Christina River



OLD AIRPORT RD

-  Overland Flow
-  Necastro Auto Salvage Site Boundary
-  Old Airport Rd Site
-  Tax Parcels
-  High : 49.3  
Low : 0

Source: Delaware DataMIL - Aerial 2012, Tax Parcels.

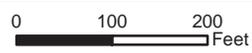


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Soil Loss Estimates  
Necastro Auto Salvage  
Newark, Delaware

	By	Date	Scale:	File Name:
Drawn	ADS	6/18/2014	1:2,400	Fig6SoilLoss.mxd
Checked	KEP	6/18/2014	Fig. No.	
Project #	0985.69.51		Figure 6	



PCB Mass Loading Phase II  
Necastro Auto Salvage Property  
SIRS ID: DE-0283  
Wilmington, Delaware



# Tables

Table 1  
PCB Analytical Results For Soil  
Necastro Auto Salvage Property (DE-0283)  
Wilmington, DE

Sample Identification	Sample Depth (feet bgs)	Sampling Company	Report Name	Report Date	Aroclor-1016 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.39	Aroclor-1221 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.14	Aroclor-1232 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.14	Aroclor-1242 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.22	Aroclor-1248 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.22	Aroclor-1254 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.11	Aroclor-1260 DNREC-SIRS Screening Level (January 2014) (mg/kg) 0.22
SS-1	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.037	U	0.037	U	0.037	U	0.037
SS-2	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.033	U	0.033	U	0.033	U	0.062
SS-3	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.037	UJ	0.037	UJ	0.037	J	0.037
SS-4	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.033	UL	0.033	UL	0.033	J	0.033
SS-5	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.036	U	0.036	U	0.036	U	0.6
SS-6	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.033	U	0.033	U	0.033	U	0.033
SS-9	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.037	R	0.037	R	0.037	R	0.037
SS-10	0.0'-2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.042	UL	0.042	UL	0.042	UL	0.042
TP-1	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.035	U	0.035	U	0.035	U	0.035
TP-2	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.036	UL	0.036	UL	0.036	UL	0.036
TP-3	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.035	U	0.035	U	0.035	U	0.035
TP-4	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.036	UL	0.036	UL	0.036	UL	0.036
TP-5	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.031	U	0.031	U	0.031	J	0.041

Note: All results reported in mg/kg.

Qualifiers:

- bgs - Below ground surface
- NA - Not analyzed
- R - Unusable result
- J - Estimated value
- U - Not detected. The associated number indicates approximate sample concentration necessary to be detected
- UJ - Not detected. Quantitation limit may be inaccurate or imprecise
- UL - Not detected. Quantitation limit is probably higher
- Bold and shaded - Exceeds DNREC-SIRS January 2014 Screening Levels

Table 2  
 PCB Analytical Results For Groundwater  
 Necastro Auto Salvage Property (DE-0283)  
 Wilmington, DE

Sample Identification	Screen Depth (feet bgs)	Sampling Company	Report Name	Report Date	Aroclor-1016 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.11	Aroclor-1221 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.004*	Aroclor-1232 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.004*	Aroclor-1242 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.034*	Aroclor-1248 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.034*	Aroclor-1254 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.031*	Aroclor-1260 DNREC-SIRS Screening Level (January 2014) (ug/L) 0.034*
MW-1	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.95	1.9	0.95	0.95	0.95	0.95	0.95
MW-2	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	1	2	1	1	1	1	1
MW-3	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	1	2	1	1	1	1	1
MW-4	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.95	1.9	0.95	0.95	0.95	0.95	0.95
MW-5	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.93	1.9	0.93	0.93	0.93	0.93	0.93
MW-6	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	1	2	1	1	1	1	1
MW-7	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.98	2	1	1	1	1	1
MW-8	>2.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	0.98	2	1	1	1	1	1
TP-6	7.0'	DNREC	Draft SSI Report for Old Airport Road Site, DE-283	Oct-95	1	2	1	1	1	1	1

Note: All results reported in ug/L.

Qualifiers:

- bgs- Below ground surface
- \* - Screening level likely below the routine method detection limit
- U - Sample not detected above the laboratory method detection limit
- J - Estimated value
- UU - Not detected. Quantitation limit may be inaccurate or imprecise

PCB Mass Loading Phase II  
Necastro Auto Salvage Property  
SIRS ID: DE-0283  
Wilmington, Delaware



**BrightFields, Inc.**

# Site Photographs



Building at the entrance to the site surrounded by overgrown weeds.



Vegetation lining the eastern corner near the site entrance.



The southern property boundary with tall grasses, weeds, and trees lining the property's fence.



Looking into the site from the eastern corner with a tree line in the distance.

PCB Mass Loading Phase II  
Necastro Auto Salvage Property  
SIRS ID: DE-0283  
Wilmington, Delaware



# Overland Flow Calculations

**PCB Loading Calculations from the Revised Universal Soil Loss Equation (RUSLE)  
Necastro Auto Salvage Property (DE-0283)  
Newport, DE**

Surface PCB Concentration 3.1 mg/kg

<b>Symbol</b>	<b>Factor</b>	<b>Value</b>	<b>Units</b>
R	Rainfall/Runoff Erosivity Index	175	10 <sup>2</sup> ft-tonf-in/ac-hr-yr
K	Soil Erodibility	0.33	0.01 ton-ac-hr/ ac-ft-tonf-in
	Erodible Area	1	Acres
LS	Topographic Factor	0.040	Dimensionless
C	Cover and Management Factor	0.012	Dimensionless
P	Support Practice Factor	1	Dimensionless
A	Average Annual Soil Loss	0.77	ton/ac-yr

**PCB Loading via Overland  
Flow** 2.2 **grams/year - PCBs**

PCB Mass Loading Phase II  
Necastro Auto Salvage Property  
SIRS ID: DE-0283  
Wilmington, Delaware



# **Groundwater Transport Calculations (Not Applicable)**