

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



## **Appendix 9**

# **DONOVAN SALVAGE WORKS PROPERTY GEORGETOWN, DELAWARE**

**SIRS IDs: DE-0338, DE-0349**

## **GENERAL SITE INFORMATION**

**Site Name: Donovan Salvage Works Property**

**SIRS ID Numbers: DE-0338, DE-0349**

**Site Location and Description:**

The Donovan Salvage Works Property is located at 20262 Donovans Road in Georgetown, Delaware. The site is approximately 70.7 acres in size and is comprised of one tax parcel (#1359008200) (Figure 1). The property currently is owned by Mr. Michael Herbert.

The surrounding land is mainly residences, farmland, and wooded areas. There are two wetlands on the property, Coastal Plain Pond and Atlantic White Cedar. The property is bounded to the north by a wooded area and residences, to the east and south by residences, fields, and woodlands, and to the west by a small wooded area leading to railroad tracks. Donovans Road borders the south edge of the property.

Based on the 2011 Site Inspections, surface water from the Site flows east towards Savannah Ditch and west towards Mifflin Ditch. The Savannah Ditch, located on the eastern edge of the Site, discharges into the Ingram Branch and ultimately into the Delaware Bay, about 21 miles from the Site. The Mifflin Ditch, located on the western edge of the Site, discharges into Deep Creek and ultimately into the Chesapeake Bay. There is also a tax ditch which runs across the southern portion of the Site, and the ground surface is expected to be graded towards the ditch. Therefore, areas surrounding the tax ditch are expected to flow directly into the tax ditch, which eventually discharges to Mifflin Ditch.

The site currently serves as a salvage yard.

**Previous Site Uses:**

The property currently is and has been operating as a salvage yard since the late 1950s. Materials salvaged at the site include automobiles, appliances, and scrap metals. Prior to the salvage yard, a button factory was located 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.

#### ***Preliminary Assessment (DNREC, 2008)***

The State of Delaware Department of Natural Resources and Environmental Control (DNREC) performed a Preliminary Assessment (PA) of the Donovan Salvage Works Property on behalf of the United States Environmental Protection Agency (USEPA) in 2008. DNREC conducted an interview with the current property owner, Michael Herbert, in May 2008. Mr. Herbert indicated that he bought the property from Esther and Harvey Donovan in 2005. Esther and Harvey Donovan reportedly purchased the property in 1967, and at that time the property was operating as a salvage yard. According to Mr. Herbert, no transformers have been accepted at the site. The PA report indicates that several areas of minor staining were observed on the property during the site reconnaissance and that several areas of potential concern were identified based on current and/or past operating practices. Based on this information, DNREC recommended that a Site Inspection (SI) be performed at the property.

#### ***Site Inspection of Donovan Salvage Works Incorporated, Area A (DNREC, 2011)***

The Donovan Salvage Works Incorporated Area A site consists of a 20 acre portion of the 70 acre Donovan Salvage Works Property. DNREC conducted soil sampling activities at the property in November 2010. A total of 66 soil samples were collected from 33 borings using a Geoprobe® rig and direct push sampling techniques, with one shallow sample and one deep sample collected from each location. Compositing shallow soil samples were collected from the top 24 inches of the first core in each borehole. Compositing deep samples were collected from the 24 inches immediately above the soil-groundwater interface. In addition to the soil samples, seven sediment samples were collected from a stream that transects the property. Groundwater samples were also collected from monitor wells installed at the site and analyzed for PCBs; however, PCBs were not detected in any of the groundwater samples.

All soil and sediment samples collected during the SI were first screened in the DNREC-SIRS laboratory for VOCs, pesticides, SVOCs, polycyclic aromatic hydrocarbons (PAHs), PCBs, total petroleum hydrocarbons (TPH), and metals using a portable Gas Chromatography/Mass Spectroscopy (GC/MS) and an X-Ray Fluorescence (XRF) analyzer. Based on the screening

results, 22 soil samples (14 shallow and 8 deep) and one sediment sample were submitted for laboratory analysis including PCBs. Analytical results indicated that PCBs were detected in nine of the shallow samples analyzed and one of the deep samples analyzed. The concentrations of PCBs detected (Aroclor analysis) in the shallow samples ranged from 0.032 mg/kg to 1.1 mg/kg. Aroclor 1260 was detected at a concentration of 0.14 mg/kg in the deep sample. Analytical results for the sediment sample submitted for PCB analysis indicated that Aroclor 1248 was detected at a concentration 0.21 mg/kg.

Based on the results of the SI, DNREC recommended that a Remedial Investigation (RI) be performed at the site to further evaluate the extent of contamination present at the site.

**Site Inspection of Donovan Salvage Works Incorporated, Area B (DNREC, 2011)**

The Donovan Salvage Works Incorporated Area B site consists of a 50 acre portion of the 70 acre Donovan Salvage Works Property. DNREC conducted soil sampling activities at the property in November 2010. A total of 128 soil samples were collected from 64 sample locations using a Geoprobe® rig and direct push sampling techniques, with one shallow sample and one deep sample collected from each boring. Compositing shallow soil samples were collected from the top 24 inches of the first core in each borehole. Compositing deep samples were collected from the 24 inches immediately above the soil-groundwater interface. Groundwater samples were also collected from monitor wells installed at the site and analyzed for PCBs, however, PCBs were not detected in any of the groundwater samples.

All soil samples collected during the SI were first screened in the DNREC-SIRS laboratory for VOCs, pesticides, SVOCs, PAHs, PCBs, TPH, and metals using a portable GC/MS and an XRF analyzer. Based on the screening results, 19 soil samples (13 shallow and 6 deep) were submitted for laboratory analysis including PCBs. Analytical results indicated that PCBs were detected in six of the shallow samples analyzed and none of the deep samples analyzed. The concentrations of PCBs detected (Aroclor analysis) in the shallow samples ranged from 0.029 mg/kg to 1.4 mg/kg.

Based on the results of the SI, DNREC recommended that a RI be performed at the site to further evaluate the extent of contamination present at the site.

**Current Regulatory Status:**

DNREC has completed SIs of the Donovan Salvage Works Property Areas A and B. Based on the results of the SIs, DNREC recommended that RIs be performed at Areas A and B. Review of information from the DNREC Environmental Navigator indicates that a deed restriction has been placed on the property and DNREC will request that the current owner enter the property into the Voluntary Cleanup Program (VCP) to complete the recommended RIs.

## SUMMARY OF SITE PCB INFORMATION

### Site Investigation PCB Findings:

For purposes of the PCB loading estimates, surface soil is defined as 0 to 2 feet below ground surface (bgs). Samples collected from soil depths spanning 2 feet bgs were included in both the surface and subsurface data sets.

PCBs were detected in 15 surface soil samples. A total of 14 of the detections in surface soil had lab data with concentrations ranging from 0.013 mg/kg to 1.4 mg/kg. One additional surface soil detection was only screened and had a low concentration of PCBs with no range of detection provided. In the unsaturated subsurface soil, PCBs were detected in 15 samples. A total of 14 of the detections were lab data, with concentrations ranging from 0.013 mg/kg to 1.4 mg/kg, and an additional unsaturated subsurface soil sample was only screened, with a low concentration of PCBs. In the subsurface saturated soil, PCBs were detected at one location at a concentration of 0.14 mg/kg.

The calculated 95% upper confidence limit (UCL) of the mean of the concentration of total PCBs observed in the surface soil (for overland flow calculations) is 0.6 mg/kg. 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 and Screening Data	Not detected to 1.4 mg/kg
Subsurface Soil (unsaturated)	Figure 3	Method 8082 and Screening Data	Not detected to 1.4 mg/kg
Subsurface Soil (saturated)	Figure 4	Method 8082 and Screening Data	Not detected to 0.14 mg/kg
Groundwater	Figure 5	Method 8082	Not Detected

A summary of all samples collected for PCB analyses are presented in Tables 1 through 3.

### Acreage where PCBs detected:

The estimated area of surface soil impacted by PCBs is 15.3 acres (Figure 2). Subsurface unsaturated soil also has an estimated impacted area of 15.3 acres (Figure 3). For subsurface saturated soil, the area impacted by PCBs is 0.22 acres in the vicinity of DSAGP116 (Figure 4).

The groundwater is not expected to be impacted with PCBs since they were not detected in any of the samples available and reviewed by BrightFields.

**PCB Remediation Status:**

PCB remediation has not taken place at the Donovan Salvage Works Property, although it has been recommended that the owner enter into a VCP agreement and complete a RI.

## **PCB MASS LOADING SUMMARY**

The PCB mass loading rate to surface water via overland flow and groundwater transport was estimated for the Donovan Salvage Works 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 were 0.003 and 1, which correspond to areas utilizing a vegetative cover primarily consisting of grass or grass like plants with greater than 95% coverage and bare ground with no vegetative cover, respectively.

### **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.

**Donovan Salvage Works Property**

<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)	0.36	The soil erodibility factors were selected from the National Resource Conservation Soil Survey Geographic Database (SSURGO) and a raster was generated using the values 0.37 and 0.1, with a weighted average of 0.36.
ls = topographic factor (dimensionless)	0.10	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)	0.31	The cover/management factor C assigned to the erodible area was 0.31. Two individual C factors of 0.003 and 1 were assigned to areas of the site utilizing a vegetative cover primarily consisting of grass or grass like plants with greater than 95% coverage and bare ground with no vegetative cover, respectively. A raster was created using these values, to generate a weighted average of 0.31.
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)	0.50	The average soil loss estimate was generated by ArcGIS using the input factors listed above.
Erodible Area (acres)	14.5	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 Donovan Salvage Works Property is **3.9 grams per year**. Please see attached table for specific variables.

**Uncertainty Analysis Associated with Overland Flow:**

**Specific Areas and Degree of Uncertainty for the Donovan Salvage Works 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>Average Distance to Discharge Points</b>
<b>Site Specific Information</b>	2.57	Screening Data	Soil Database	Based on aerial	Well Scaled Maps; GPS	Approximately 123 feet
<b>Degree of Uncertainty</b>	Moderate to High	High	Low	High	Low to Moderate	Low to Moderate

\* Primary analysis used in the historical samples

Sources of uncertainty for the Donovan Salvage Works Property include: The majority of the data was Immunoassay screening data, some of which did not have a range, and the remaining samples had Aroclor data. Due to limited site access, the coverage/management factor was based on the aerial. The majority of the sample locations were from well scaled maps and some of the locations had GPS coordinates. Based on this evaluation the level of uncertainty associated with overland flow PCB mass loading from the Donovan Salvage Works Property is **Moderate to High.**

**Groundwater Discharge Analysis:**

Groundwater discharge is based on the hydraulic conductivity of the soil, the groundwater gradient, and the cross-sectional area of the aquifer. A breakdown of the individual factors used in the Darcy equation is presented below. A groundwater discharge map is included as Figure 7.

Because PCBs were detected in saturated soil, but not in groundwater, the calculated concentration of PCBs in pore water, based on partitioning, was used to calculate the mass loading.

The calculations are presented in Table B in the groundwater transport calculations attachment.

**Input Factors:**

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

Groundwater Transport Factors	Value Used		Justification/Derivation of Value Used
	min	max	
K = Hydraulic Conductivity (ft/day)	5.7	14	Drilling logs from Geoprobe® borings were used to evaluate the lithology beneath the site. Groundwater being monitored is within a moderately coarse-grained fill unit that overlies the marsh deposit clay. The fill unit ranges in composition from a coarse-grained sandy silt to fine sand. The hydraulic conductivity for coarse sandy silt to fine sand ranges from approximately $2 \times 10^{-3}$ to $5 \times 10^{-3}$ cm/sec (Cernica, 1995). This converts to 5.7 to 14 ft/day.
I = Horizontal Groundwater Gradient	0.0003	0.0007	Based on measurement conducted during the DNREC Site Inspections, the gradient at the site ranged from 0.0003 ft/ft to 0.0007* ft/ft to the north northwest. * - recalculated from data.
Saturated Thickness (ft)	3.1	11.2	Based on the borings logs, the saturated thickness ranged from 3.1 feet > 11.2 feet.
Lateral Discharge Distance (ft)	112	140	The lateral discharge distance was estimated to be equal to the length of the PCB impacted area measured perpendicular to the flow direction.
A= Cross-Sectional Area (ft <sup>2</sup> )	347	1,570	Calculated from the saturated thickness and lateral discharge distance.
Groundwater PCB Concentration (ug/L)	0.03	0.15	The maximum concentration observed in the saturated subsurface soil (0.140 mg/kg) was used to determine the estimated concentration in groundwater.
Distance to Discharge point (ft)	Directly adjacent		Approximate distance from property boundary to closest surface water location.

**Mass Loading Via Groundwater Transport Result:**

The groundwater discharge is 16.8 to 440 L/day (see attached Table A). The maximum detected PCB concentration (0.140 mg/kg) was used to calculate the groundwater concentrations for the loading estimate (Table B). The estimated minimum and maximum contaminant mass loading contributions shown in Table C assume that there are no contaminant losses due to degradation, dispersion, sorption, volatilization, etc.

The total PCB loading via groundwater discharge is estimated to be between **0.001** and **0.024** grams per year (Table C).

**Uncertainty Analysis Associated with Groundwater Transport:**

**Specific Areas and Degree of Uncertainty for the Donovan Salvage Works Property**

	<b>Groundwater PCB Concentration</b>	<b>Sampling Density</b>	<b>Hydraulic Conductivity</b>	<b>Horizontal Groundwater Gradient</b>	<b>Saturated Thickness</b>	<b>Lateral Discharge Distance</b>	<b>Distance to Discharge Point</b>
<b>Site Specific Information</b>	Partitioning based on maximum concentration observed in saturated soil	0.11; Possible data gaps	Based on detailed site logs	Multiple points with numerous groundwater measurements	Good quality logs	Good groundwater gradient defined and a moderate number of samples collected onsite	Directly Adjacent
<b>Degree of Uncertainty</b>	Moderate	High	Moderate	Low to Moderate	Moderate	Low to Moderate	Low

Based on this evaluation, the level of uncertainty associated with groundwater transport PCB mass loading at the Donovan Salvage Works Property is **Moderate**.

**Site References:**

Delaware Department of Natural Resources and Environmental Control (DNREC), 2008, Preliminary Assessment of Donovan Salvage Works Incorporated, September 2008.

DNREC, 2011, Site Investigation of Donovan Salvage Works Incorporated A, September 2011.

DNREC, 2011, Site Investigation of Donovan Salvage Works Incorporated B, September 2011.

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

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



# Figures



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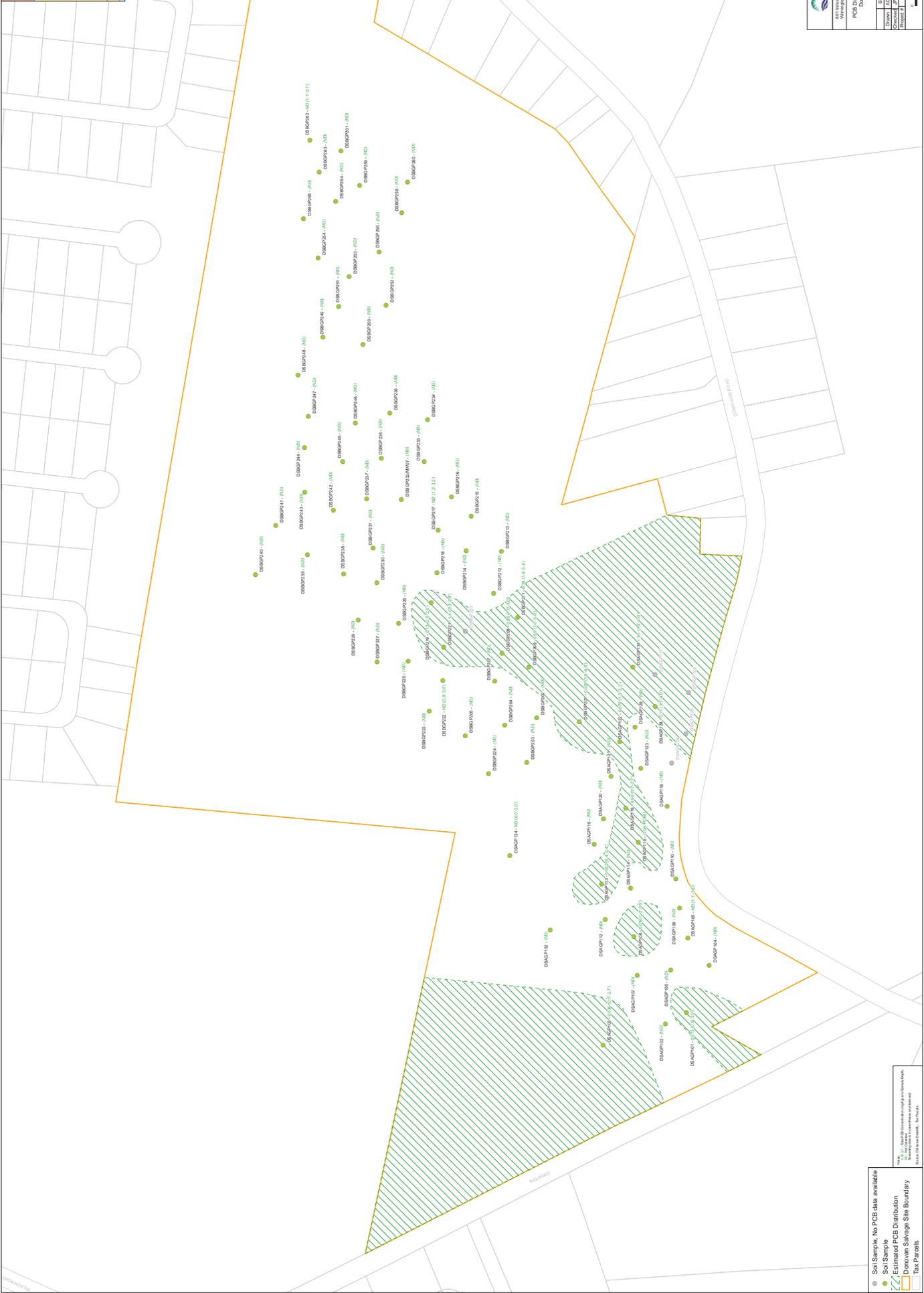
**Historic Sample Location**  
 Donovon Salvage Yards Property  
 Georgetown, Delaware

By	Client	Scale	Project
Drawn	DATE	DATE	NO. 1808-0001
Checked	DATE	DATE	NO. 1808-0001
Project #	0006-00-01	Drawn #	1808-0001

Scale: 1" = 100' (Horizontal)  
 1" = 20' (Vertical)

- Soil Sample
- ▲ Groundwater Sample
- ▲ Sediment Sample
- Ditches
- Donovon Salvage Site Boundary (70.69 acres)

PROJECT: 1808-0001, DATE: 08/15/2018, PROJECT NO.: 1808-0001



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PCB Distribution in Surface Soil (P-2 bp)  
 Donovan Salvage Works Property  
 Geopengen, Luzerne County  
 PA 18202

By:	Notes:	Revised:
Date:	Drawn:	Date:
Checked:	APP:	Drawn:
Project:	0082.00.01	Project:

Scale: 1" = 100'

North Arrow

- Soil Sample, No PCB data available
- Soil Sample
- ▨ Estimated PCB Distribution
- ▭ Tax Parcels

Notes:  
 1. All samples were collected and analyzed in accordance with EPA Method 1631.  
 2. All samples were analyzed for PCBs only.  
 3. PCBs were detected in 10% of the samples.

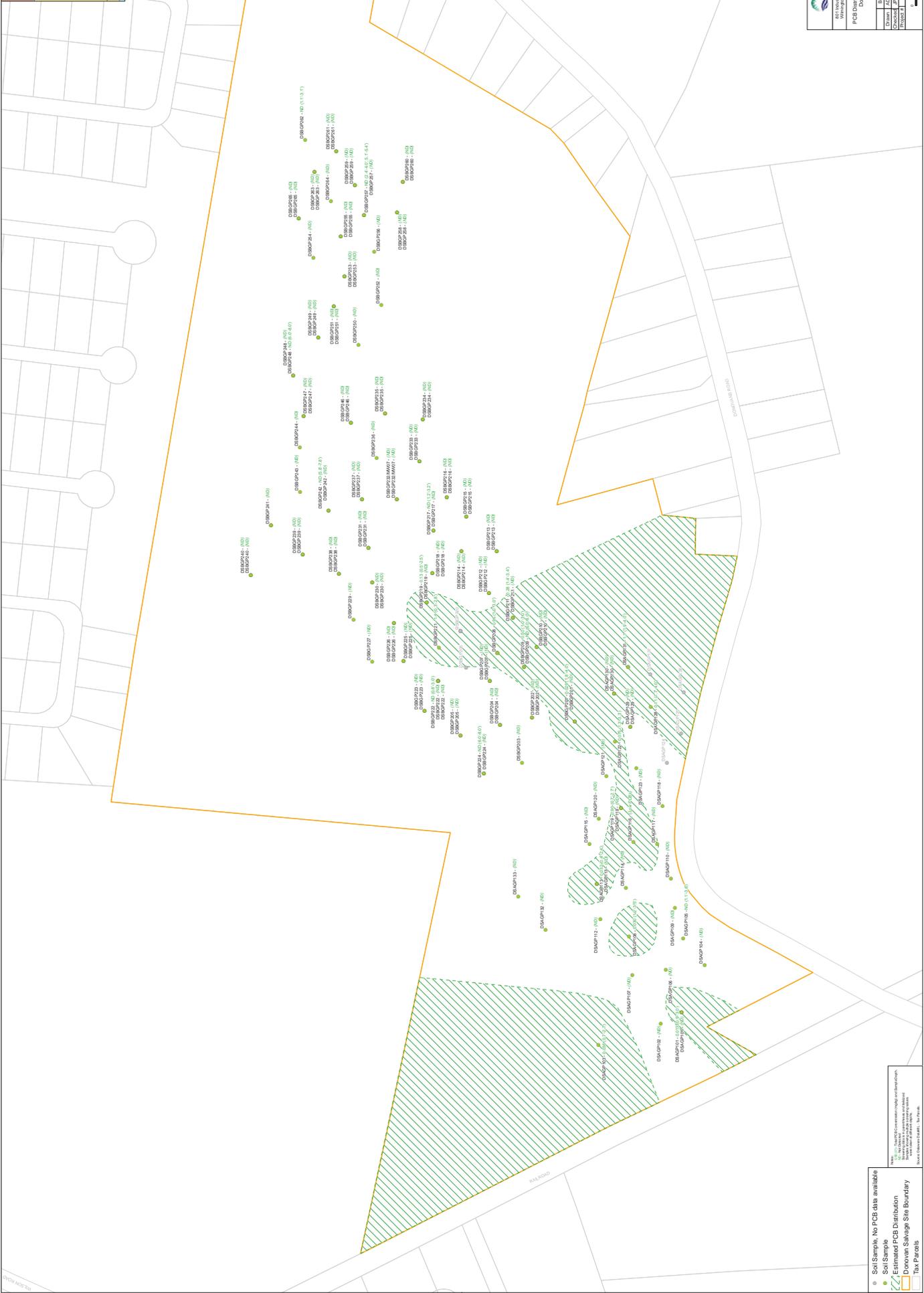


**BrighFields, Inc.**  
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PCB Distribution Subsurface Uncontaminated Soil  
Donovan Salvage Vehicle Property  
Georgetown, Delaware

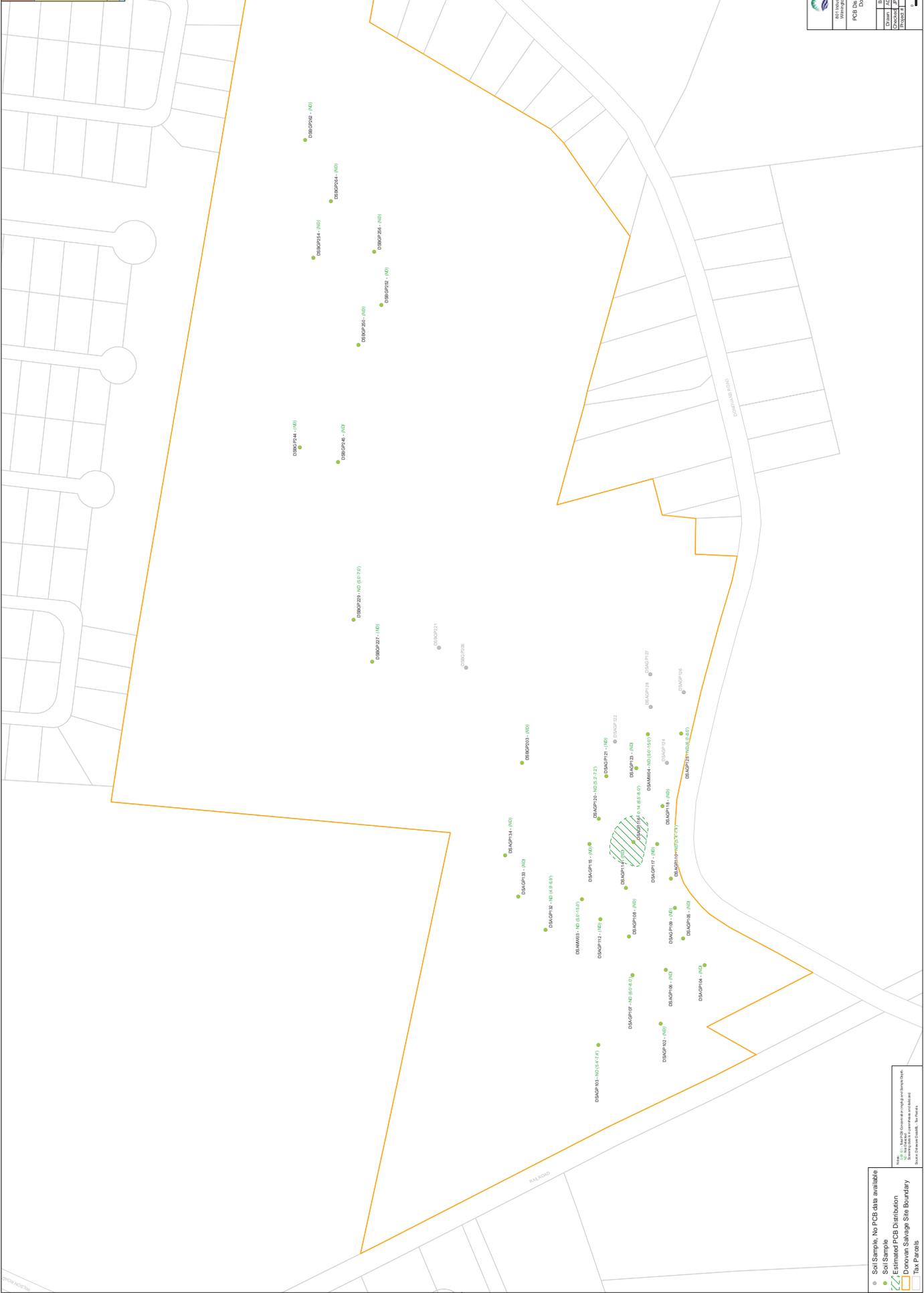
By:	Notes:	Revision:
Drawn:	Checked:	Scale:
Date:	Project:	Sheet:
Project:	Project:	Project:

Scale: 1" = 50' (1:500)



- Soil Sample, No PCB data available
- Soil Sample
- Estimated PCB Distribution
- Tax Parcels

Notes:  
1. This map is based on aerial photography and field data.  
2. The map is not a warranty of any kind.  
3. The map is not a guarantee of any kind.  
4. The map is not a representation of any kind.  
5. The map is not a statement of any kind.



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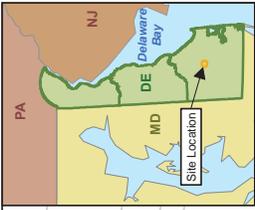
PCB Distribution in Subsurface Salvage Site  
 Donovan Salvage Works Property  
 Geoprocessing Database

By:	Notes:	Revision:
Date:	Drawn:	Scale:
Checked:	APP: 10/20/14	Fig. No.:
Project:	10052.00.01	Sheet:

Scale: 1" = 100'

- Soil Sample, No PCB data available
- Soil Sample
- ▨ Estimated PCB Distribution
- ▭ Donovan Salvage Site Boundary
- ▭ Tax Parcels

Notes:  
 1. All data was collected from aerial photography and ground truthing.  
 2. All data was collected from aerial photography and ground truthing.  
 3. All data was collected from aerial photography and ground truthing.



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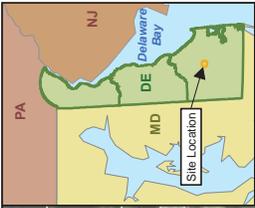
PCB Distribution in Groundwater  
 Donovan Salvage Works Property  
 Georgetown, Delaware

By	Date	Scale	File Name
Drawn ADS	6/19/2014	1:3,000	Fig5GW.mxd
Checked JPR	6/19/2014	Fig. No.	Figure 5
Project #	0985.689.51	Figure 5	0 125 250 Feet



**Groundwater Sample**  
 Donovan Salvage Site Boundary  
 Tax Parcels

Note: ND - Not Detected.  
 Source: Delaware DATABILL - Tax Parcels.



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Soil Loss Estimates  
 Donovan Salvage Works Property  
 Georgetown, Delaware

By	Date	Scale	File Name
ADS	6/19/2014	1:3,000	Fig6SoilLoss.mxd
Checked	KEP	6/19/2014	Fig. No.
Project #	0985.69.51	Figure 6	
	0	125	250
			0



Sources: Delaware Ditchill - Aerial 2012; Tax Parcels

↑ Overland Flow  
 — Ditches  
 □ Donovan Salvage Site Boundary  
 □ Tax Parcels  
 Tons/Year/Acre of Soil Loss Estimated  
 High : 69.15  
 Low : 0



**BrighFields, Inc.**  
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 2000 Northfield Road  
 Whippany, NJ 07981  
 908.666.8000

Groundwater Discharge Map  
 Donoven Salvage Mobile Property  
 Georgetown, Indiana

By:	Notes:	File Name:
Drawn:	03/20/2020	03/20/2020
Checked:	03/20/2020	03/20/2020
Project #:	0002-0013	Project #:

Scale: 1" = 200'  
 North Arrow

- Soil Sample, No PCB data available
- Soil Sample
- Groundwater Discharge Direction
- Groundwater Discharge Limit
- Groundwater Flow Direction
- Estimated PCB Distribution
- Donoven Salvage Site Boundary
- Tax Parcels

Map Scale: 1" = 200'  
 North Arrow

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



# Tables

**Table 1**  
**PCB Screening Results For Soil**  
**Donovan Salvage Works Property (DE-0338, DE-0349)**  
**Wilmington, DE**

Sample Identification	Sample Depth (feet bgs)	Sampling Company	Report Name	Report Date	Total PCBs
					DNREC-SIRS Screening Level (January 2014) (mg/kg) NCA
DSAGP101	0.9'-3.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP103	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP101	5.7'-7.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP102	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP102	6.6'-8.0', 9.0'-9.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP104	1.7'-3.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP104	6.1'-8.1'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP105	1.1'-3.6'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP105	6.1'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP106	NA	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP106	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP107	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP107	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP108	1.2'-3.5'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP108	5.8'-7.8'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP109	1.2'-3.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP109	5.8'-7.8'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP110	0.9'-3.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP110	5.4'-7.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP112	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP112	5.6'-7.6'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP113	0.4'-2.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP113	5.3'-7.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP114	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP114	5.4'-7.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP115	0.6'-2.6'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP115	5.5'-7.5'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP116	0.6'-2.6'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	Low PCBs
DSAGP116	6.5'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP117	2.0'-4.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP117	5.2'-7.2'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP118	1.5'-3.5'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP118	5.0'-7.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP119	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	PCBs Present
DSAGP119	5.4'-7.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP120	0.6'-3.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP120	5.2'-7.2'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP121	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP121	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP123	1.3'-3.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP123	5.3'-7.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP129	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP129	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP130	2.4'-4.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP130	6.4'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP132	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP132	4.9'-6.9'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP133	2.0'-4.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP133	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP134	0.0'-2.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSAGP134	5.3'-7.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND
DSBGP201	1.8'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP201	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP202	1.4'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP202	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP203	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP203	4.9'-6.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP204	0.9'-2.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP204	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP205	1.3'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP205	5.0'-7.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP207	1.2'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP207	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP209	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	PCBs Present
DSBGP209	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP210	2.3'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP210	6.2'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP211	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	Low PCBs
DSBGP211	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP212	0.8'-2.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP212	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP213	1.1'-2.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND

**Table 1**  
**PCB Screening Results For Soil**  
**Donovan Salvage Works Property (DE-0338, DE-0349)**  
**Wilmington, DE**

Sample Identification	Sample Depth (feet bgs)	Sampling Company	Report Name	Report Date	Total PCBs
					DNREC-SIRS Screening Level (January 2014) (mg/kg) NCA
DSBGP213	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP214	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP214	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP215	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP215	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP216	0.8'-2.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP216	6.5'-8.0', 8.5'-9.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP217	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP217	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP218	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP218	5.3'-7.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP219	0.5'-2.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	PCBs Present
DSBGP219	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP222	0.8'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP222	4.3'-5.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP222	5.5'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP223	1.5'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP223	6.4'-8.0', 9.2'-9.6'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP224	0.9'-2.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP224	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP225	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP225	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP226	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP226	7.0'-8.0', 10.6'-11.3', 11.4'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP227	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP227	5.5'-7.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP229	0.4'-2.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP229	5.0'-7.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP230	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP230	5.7'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP231	0.9'-2.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP231	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP232/MW07	0.8'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP232/MW07	6.6'-8.0', 9.7'-10.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP233	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP233	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP234	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP234	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP235	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP235	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP236	0.0'-2.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP236	5.0'-7.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP237	1.9'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP237	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP238	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP238	5.2'-7.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP239	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP239	6.7'-8.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP240	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP240	5.8'-7.6'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP241	1.1'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP241	6.6'-8.0', 9.0'-9.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP242	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP242	5.8'-7.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP243	0.0'-2.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP243	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP244	1.4'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP244	7.0'-8.0', 9.2'-10.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP245	0.8'-2.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP245	9.8'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP246	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP246	10.0'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP247	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP247	7.0'-8.0', 8.6'-9.6'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP248	0.9'-2.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP248	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP249	0.8'-2.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP249	7.0'-9.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP250	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP250	9.0'-11.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP251	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP251	9.5'-11.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND

**Table 1**  
**PCB Screening Results For Soil**  
**Donovan Salvage Works Property (DE-0338, DE-0349)**  
**Wilmington, DE**

Sample Identification	Sample Depth (feet bgs)	Sampling Company	Report Name	Report Date	Total PCBs
					DNREC-SIRS Screening Level (January 2014) (mg/kg) NCA
DSBGP252	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP252	7.0'-8.0', 9.0'-10.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP253	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP253	10.0'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP254	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP254	6.5'-8.0', 9.0'-9.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP255	10.0'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP255	2.0'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP256	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP256	8.3'-10.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP257	2.4'-4.0', 5.1'-5.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	PCBs Present
DSBGP257	8.4'-10.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP258	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP258	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP259	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP259	7.0'-8.0', 8.2'-9.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP260	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP260	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP261	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP261	7.0'-8.0', 9.0'-10.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP262	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP262	9.3'-11.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP263	0.8'-2.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP263	10.0'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP264	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP264	10.0'-12.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP265	0.9'-2.9'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND
DSBGP265	5.7'-7.7'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND

Note: All results reported in mg/kg.

Qualifiers:

- bgs - Below ground surface
- NCA - No criteria available
- NA - Not analyzed
- ND - Not detected

Table 2  
 PCB Analytical Results For Soil  
 Donovan Salvage Works Property (DE-0338, DE-0349)  
 Wilmington, DE

Sample Identification	Sample Depth (feet bgs)	Sampling Company	Report Name	Report Date	Aroclor-1016		Aroclor-1221		Aroclor-1232		Aroclor-1242		Aroclor-1248		Aroclor-1254		Aroclor-1260	
					Screening Level (mg/kg)	0.39	Screening Level (mg/kg)	0.14	Screening Level (mg/kg)	0.14	Screening Level (mg/kg)	0.22	Screening Level (mg/kg)	0.22	Screening Level (mg/kg)	0.11	Screening Level (mg/kg)	0.13
DSAGP101	0.9'-3.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP103	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP105	5.4'-7.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP107	1.1'-3.6'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP108	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP110	1.2'-3.5'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP113	5.4'-7.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP116	0.4'-2.4'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP119	6.5'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP120	0.7'-2.7'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP122	1.3'-3.3'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP125	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP128	1.7'-4.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP131	1.9'-4.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP132	4.9'-6.9'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAGP134	0.0'-2.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAMW03	5.0'-15.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSAMW04	5.0'-15.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	ND	ND												
DSBGP201	1.8'-4.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP208	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP209	1.0'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP211	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP217	1.4'-3.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP217	1.2'-3.2'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP219	0.5'-2.5'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP221	0.3'-2.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP222	0.8'-3.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP224	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP229	5.0'-7.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP242	5.8'-7.8'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP248	6.0'-8.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP257	2.4'-4.0', 5.1'-5.4'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												
DSBGP262	1.1'-3.1'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	ND	ND												

Note: All results reported in mg/kg.

Qualifiers:

- bgs - Below ground surface
- NCA - No criteria available
- ND - Not detected
- J - Estimated value
- Bold and shaded - Exceeds DNREC-SIRS January 2014 Screening Levels

Table 3  
PCB Analytical Results For Groundwater  
Donovan Salvage Works Property (DE-0338, DE-0349)  
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*	Total PCBs DNREC-SIRS Screening Level (January 2014) (ug/L) NCA
DSAMW01	3.0'-13.0'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSAMW02	4.5'-14.5'	DNREC	Site Inspection - Donovan Salvage Works A	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBGP232/MW07	8.0'-18.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBMW05	8.0'-18.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBMW06	8.0'-18.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBMW08	5.0'-15.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBMW09	8.0'-18.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND
DSBMW10	8.0'-18.0'	DNREC	Site Inspection - Donovan Salvage Works B	Sep-11	NA	NA	NA	NA	NA	NA	NA	ND

Note: All results reported in ug/L.

Qualifiers:

- bgs - Below ground surface
- \* - Screening level likely below the routine method detection limit
- NA - Not available from reports provided to Brightfields
- ND - Not detected

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



**BrightFields, Inc.**

# Site Photographs



Along Donovans Road in the southwestern portion of the site with tall trees in the distance over the fence.



The western portion of the site along Donovans Road where the fence ends and a forested area borders the site boundary.

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



# Overland Flow Calculations

**PCB Loading Calculations from the Revised Universal Soil Loss Equation (RUSLE)  
 Donovan Salvage Works Property (DE-0338, DE-0349)  
 Georgetown, DE**

Surface PCB Concentration 0.6 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	0.36	0.01 ton-ac-hr/ ac-ft-tonf-in
	Erodible Area	14.5	Acres
LS	Topographic Factor	0.10	Dimensionless
C	Cover and Management Factor	0.31	Dimensionless
P	Support Practice Factor	1	Dimensionless
A	Average Annual Soil Loss	0.50	ton/ac-yr

**PCB Loading via Overland  
 Flow** 3.9 **grams/year - PCBs**

PCB Mass Loading Phase II  
Donovan Salvage Works Property  
SIRS IDs: DE-0338, DE-0349  
Georgetown, Delaware



# Groundwater Transport Calculations

**PCB Loading Calculations - Groundwater Discharge to Surface Water  
Donovan Salvage Works Property (DE-0338, DE-0349)  
Wilmington, DE**

**TABLE A  
Groundwater Discharge Calculations**

	Hydraulic Conductivity (K) (ft/day)	Horizontal Gradient (i) (ft/ft)	Cross-sectional Area (A) (ft <sup>2</sup> )	Groundwater Discharge*	
				Liters/day	Gallons/day
Minimum	5.7	0.0003	347	16.8	4.4
Maximum	14	0.0007	1,570	440	120

\* - Groundwater Discharge (Q) = KiA

**TABLE B  
Potential Groundwater PCB Concentration Calculation**

Maximum Soil PCB (µg/kg)	f <sub>oc</sub> (fraction of organic carbon)		Pore Water PCB (µg/L)	
			Maximum	Minimum
140	0.01	0.05	0.15	0.03

**TABLE C  
Estimated Mass Loadings of PCBs in Groundwater to the Western  
Boundary Water Body**

Maximum Estimated Groundwater Concentration (µg/L)	Estimated PCB Mass Loading (g/yr)	
	Minimum	Maximum
0.15	0.001	0.024