PCB Mass Loading
Public Works Yard (Formerly DE-1090)
SIRB ID: DE-1377
Wilmington, Delaware

BrightFields, Inc.

Site Photographs

BrightFields, Inc.

PCB Mass Loading Evaluation
Justison Landing Redevelopment (Public Works Yard)

View of former Public Works Yard and current Parcel 1
with redeveloped Parcel 2 in the background.

Justison Street bisecting the site. Parcel 4 is shown to the right.

BrightFields, Inc.

PCB Mass Loading Evaluation
Justison Landing Redevelopment (Public Works Yard)

Former Parcel 3 area utilized as a staging area during redevelopment activities with a base asphalt layer from the former parking lot.

Sediment migrating into drainage basin from ongoing construction activities.

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Overland Flow Calculations

(Not Applicable)

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Groundwater Transport Calculations

PCB Loading Calculations - Groundwater Discharge to Surface Water
Former Public Works Yard
Wilmington, DE
DE-1090

TABLE A
Groundwater Discharge Calculations

Location	Hydraulic Conductivity (K) (ft/day)	Horizontal Gradient (i) (ft/ft)	Cross-sectional Area (A) (ft2)	Groundwater Discharge*	
				Liters/day	Gallons/ day
Area A (RHQ1)					
Minimum	5.67	0.0057	600	550	150
Maximum	14.2	0.0095	720	2,750	730
Area B (PWY)					
Minimum	5.67	0.0057	1,800	1,600	440
Maximum	14.2	0.0095	1,800	6,900	1,800
TOTAL					
Minimum	5.67	0.0057	2,400	2,200	590
Maximum	14.2	0.0095	2,500	9,700	2,500

* - Groundwater Discharge (Q) = KiA

TABLE B
Potential Groundwater PCB Concentration Calculation

Location	Maximum Soil PCB (µg/kg)	f_{OC} (fraction of organic carbon)		Groundwater PCB Concentration (µg/L)	
				Minimum	Maximum
Area A				0.086	0.086
Area B				0.086	0.086

TABLE C
Estimated Mass Loadings of PCBs in Groundwater to Surface Water

Location	Detected Groundwater Concentration (µg/L)	Estimated PCB Mass Loading (g/yr)	
		Minimum	Maximum
Area A	0.086	0.02	0.1
Area B	0.086	0.05	0.2
TOTAL		0.07	0.3