

May 31, 2012

Mr. Andrew Fan
US EPA Region III, 3WC23
1650 Arch Street
Philadelphia, PA 19103-2029

Ms. Barbara Brown
Project Coordinator
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, Maryland 21230

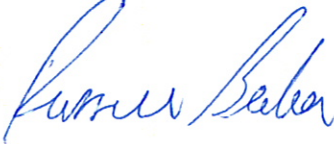
**Re: Consent Decree, Civil Action Nos. JFM-97-558, JFM-97-559
*Coke Oven Area Interim Measures Progress Report April 2012***

Dear Mr. Fan and Ms. Brown:

Enclosed with this correspondence is the ***Coke Oven Area Interim Measures Progress Report April 2012*** completed for the RG Steel Sparrows Point Facility in accordance with the requirements outlined in US EPA's September 2, 2010 approval letter for the Coke Oven Area Interim Measures work associated with the referenced Consent Decree. The report summarizes implementation progress for the approved interim measures (IMs) that have been developed to address identified environmental conditions at the Coke Oven Area through April 30, 2012.

Please contact me at (410) 388-6622 should questions arise during your review of the enclosed progress report.

Sincerely,



Russell Becker
Division Manager, Environmental Engineering and Affairs

Enclosure

COKE OVEN AREA INTERIM MEASURES PROGRESS REPORT

(APRIL 2012)

Prepared for

RG Steel Sparrows Point, LLC
Sparrows Point, Maryland



May 31, 2012

URS

URS Corporation
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
Project no. 15302745

Introduction

In accordance with the United States Environmental Protection Agency's (US EPA)'s September 2, 2010 letter, this document is the monthly progress report for April 2012 for the US EPA-approved interim measures (IMs) that have been developed to address identified environmental conditions at the Coke Oven Area (COA) Special Study Area at the RG Steel Sparrows Point Facility (formerly Severstal Sparrows Point Facility) located in Sparrows Point, Maryland. This progress report summarizes IM progress for April 2012.

For mutual ease of understanding, and as agreed during the June 3, 2010 teleconference with US EPA, the following designations are applied in this document to the six (6) IM "Cells" (**Figure 1**) at the COA:

- Cell 1: Prototype Air Sparge/Soil Vapor Extraction (AS/SVE) System in the Former Benzol Processing Area,
- Cell 2: AS/SVE and Dual Phase Groundwater Extraction System in Former Coal Storage Area,
- Cell 3: AS/SVE System in "Cove" Area,
- Cell 4: In-Situ Anaerobic Bio-treatment Area,
- Cell 5: Groundwater Extraction at the Turning Basin Area, and
- Cell 6: Light Non-Aqueous Phase Liquid (LNAPL) Recovery at the Former Benzol Processing Area.

As of April 30, 2012, Cells 1, 3, 4 and 6 continue to be operational. The fifth amendment dosing event at Cell 4 occurred from April 24 to 26, 2012. The remaining Cells (Cells 2 and 5) are in various stages of evaluation, design, and under permitting considerations by Maryland Department of the Environment (MDE).

Cell 1: Prototype AS/SVE System in the Former Benzol Processing Area

Cell 1 consists of a prototype IM, which includes AS/SVE coupled with vapor destruction via an electric catalytic oxidation (CATOX) unit. **Figure 2** shows the system layout of Cell 1 and locations of the major design components including the air sparging wells and vapor collection trenches.

April 2012 Operational Performance

Operational performance of Cell 1 during this reporting period is summarized in **Table 1**. In summary, the CATOX unit operated for 714 hours (99.2 %) during this reporting period. Operations were in conformance with the manufacturer's specifications at all times that soil gases were collected in accordance with the May 20, 2011 modified permit-to-construct conditions.

The hydrocarbon removal rate was calculated to be approximately 0.01 pounds per operating hour (estimated monthly total of 8.5 pounds). **Table 1** also includes a cumulative summary of operational performance since system startup on August 3, 2010. In total, Cell 1 has destroyed approximately 9,193 pounds of recovered hydrocarbons. **Figure 3** presents a graph of the cumulative estimated monthly hydrocarbon recovery in Cell 1 since the startup of the IM system.

Soil gas samples were collected for laboratory and/or field instrument (e.g., photoionization detector [PID]) analysis to monitor CATOX unit performance. One (1) untreated soil gas sample was collected in a Tedlar[®] bag and submitted to TestAmerica Laboratories, Inc. in Knoxville, Tennessee (TestAmerica) for analysis by US EPA Method TO-15. The influent soil gas hydrocarbon concentration collected on April 18, 2012 was 7.08 parts per million by volume (ppmv) as summarized in **Table 2**.

Hydrocarbon removal calculations were based entirely on the analytical results and the average daily field-measured influent flow rates. The mass removal calculations assume that the sample collected on April 18, 2012 is representative of hydrocarbon concentrations for the entire month of April. This assumption is based on the fact that the same sparge wells (AS-1 thru AS-8) and extraction wells (V-1 thru V-6) were online when the system was operational.

April 2012 Groundwater Monitoring Results

Groundwater samples were collected on April 19, 2012 from the following wells:

- BP-MW-09 (upgradient of Cell 1),

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- CO18-PZM006 (upgradient of Cell 1 at edge of berm), and
- CO02-PZM006 (downgradient of Cell 1).

The groundwater samples were submitted to Microbac Laboratories, Inc. of Baltimore, Maryland (Microbac) for the analyses shown in **Table 3**. These data indicate benzene is the most prevalent volatile organic compound (VOC) constituent.

Figure 4 presents a graph of the total measured VOC concentration in Cell 1 groundwater for each well on a monthly basis since the startup of the IM system. Since system startup in August 2010, a decreasing total VOC concentration trend is documented at well CO18-PZM006 while a generally decreasing trend is observed at wells BP-MW-09 and C002-PZM006. The identified trend for these monitoring wells will continue to be monitored and assessed during system operation in future months.

Cell 3: AS/SVE System in the “Cove” Area

Cell 3 consists of an AS/SVE system coupled with vapor destruction via an electric CATOX unit. **Figure 1** shows the location of the Cell 3 AS/SVE treatment area at the COA. The major design components are described in the Cell 3 final design report (*Coke Oven Area Interim Measures Cell 3 “Cove” Area Air Sparge/Soil Vapor Extraction System Design*), submitted to US EPA on March 1, 2011.

April 2012 Operational Performance

Operational performance of Cell 3 during this reporting period is summarized in **Table 4**. In summary, the CATOX unit operated for 716 hours (99.4 %) during March. Operations were in conformance with the manufacturer’s specifications at all times that soil gases were collected in accordance with the May 20, 2011 modified permit-to-construct conditions.

The hydrocarbon removal rate was calculated to be approximately 0.06 pounds per operating hour (estimated monthly total of 41.8 pounds). **Table 4** also includes a cumulative summary of operational performance since system startup on June 24, 2011. In total, Cell 3 has destroyed approximately 554 pounds of recovered hydrocarbons. **Figure 3** presents a graph of the cumulative estimated monthly hydrocarbon recovery in Cell 3 since the startup of the IM system.

Soil gas samples were collected for laboratory and/or field instrument (e.g., PID) analysis to monitor CATOX unit performance. One (1) untreated soil gas sample was collected in a Tedlar[®] bag and submitted to TestAmerica. The influent soil gas hydrocarbon concentration collected on April 18, 2012 was 39.9 ppmv as summarized in **Table 5**.

Hydrocarbon removal calculations were based entirely on the analytical results and the average daily field-measured influent flow rates. The mass removal calculations assume that the sample collected on April 18, 2012 is representative of hydrocarbon concentrations for the entire month of April. This assumption is based on the fact that the same sparge wells (AS-2 thru AS-12) and extraction wells (V-2 thru V-4) were online when the system was operational.

April 2012 Cell 3 Groundwater Monitoring

Groundwater samples were collected on April 19, 2012 from the following wells (**Figure 1**):

- MW-CELL3-1 (downgradient of Cell 3),
- MW-CELL3-2 (upgradient of Cell 3),

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- MW-CELL3-3 (upgradient of Cell 3, and
- CO30-PZM015 (downgradient of Cell 3).

The groundwater samples were submitted to Microbac for the analyses shown in **Table 6**. These data indicate that benzene is the most prevalent VOC constituent.

Figure 5 presents a graph of the total measured VOC concentration in Cell 3 groundwater for each well on a monthly basis relative to the baseline concentrations collected in February 2011. Since system startup on June 24, 2011, a generally decreasing VOC concentration trend is documented for each of the sampled wells. The trends for these monitoring wells will continue to be monitored and assessed during system operation in future months.

Cell 4: In-Situ Anaerobic Bio-treatment Area

Cell 4 consists of an in-situ anaerobic bio-treatment system including extraction and mixing of groundwater in an above ground storage tank containing a nutrient amendment solution and reinjection of groundwater. A schematic layout of the Cell 4 system is shown on **Figure 6**. The major design components are described in the Cell 4 final design report (*Coke Oven Area Interim Measures Cell 4 In-Situ Anaerobic Bio-Treatment System Design*), submitted to US EPA on March 31, 2011.

April 2012 Operations

The fifth amendment dosing event occurred from April 24 to 26, 2012. Sixty (60) pounds of amendment (VB591®) was mixed into 300 gallons of Cell 4 groundwater. Extracted groundwater from wells OBS-8 and MW-CELL4-6 was mixed with amendment and circulated back in to the groundwater at wells MW-CELL4-1, OBS-10, EXT-2, MW-CELL4-2 and MW-CELL4-3. Overall, a total of approximately 13,800 gallons of groundwater (including the 300 gallons of amendment mixture) were re-circulated in the Cell 4 bio-treatment area.

Dosing Event Observations

A double-diaphragm dosing pump was used to transfer the groundwater-amendment mixture from the poly tank into the groundwater flow line so that the amendment mixture was evenly and continuously distributed into the groundwater flow from wells OBS-8 and MW-CELL4-6 to the five (5) recirculation wells. The pump rates from both OBS-8 and MW-CELL4-6 were maintained around 4 to 6 gallons per minute (gpm). No water was extracted from monitoring well MW-CELL4-7 due to its low recharge rate.

Prior to the third dosing event in November 2011, PVC adapter fittings were welded to the tops of each recirculation well to pressurize the wells and allow for a uniform distribution of approximately 1.5 to 2.5 gpm of amended groundwater to each well. The extracted groundwater flow rate was limited by the five (5) recirculation wells' capacity to receive the groundwater as back pressure across the system quickly increased with time. The two (2) hoses (rated for 34 psi maximum pressure) connecting the extraction manifold to the recirculation manifold used during the previous four (4) dosing events were replaced by high-pressure water hose prior to the fifth dosing event. The high-pressure water hose allowed the submersible pumps to run at full capacity, rather than having them throttled back due to increasing back pressure concerns. This allowed for approximately 4,500 more gallons to be pumped and recirculated through the Cell 4 system as compared to the fourth dosing event in February 2012.

April 2012 Groundwater Monitoring Results

Groundwater samples were collected on April 23 and 27, 2012 (before and after nutrient amendment, respectively) for comparison purposes. Groundwater samples were collected from the following wells (**Figure 7**):

- OBS-6
- OBS-8
- EXT-2
- AS-2
- MW-CELL4-1
- MW-CELL4-3
- MW-CELL4-4
- MW-CELL4-5
- MW-CELL4-6
- MW-CELL4-7

The groundwater samples were submitted to Microbac for the analyses shown in **Table 7**. These data indicate naphthalene is the most prevalent VOC constituent.

Figure 8 presents a graph of the total VOC concentrations in Cell 4 groundwater on a monthly basis, as well as before and after the dosing events. With the exception of MW-CELL4-1 and MW-CELL4-5, a generally decreasing trend is observed at all monitored Cell 4 wells since system dosing was initiated in July 2011. Trends for these monitoring wells will continue to be monitored and assessed during system operation in future months.

Cell 6: LNAPL Extraction at the Former Benzol Processing Area

The Cell 6 LNAPL monitoring and recovery system was monitored approximately once every two weeks during April (three [3] site visits). **Table 8** summarizes LNAPL occurrence and recovery observed during the reporting period along with the cumulative LNAPL recovery since the beginning of the project. **Figure 9** illustrates the well locations.

During April, approximately 210 gallons (1,538 pounds) of LNAPL were recovered, bringing the total recovered LNAPL to 7,150 gallons (52,386 pounds) as of April 27, 2012. The LNAPL was recovered from the following wells:

Well	LNAPL Recovery (gal / lbs)		Notes
	During April 2012	Total thru April 27, 2012	
BP-MW-05	172.7 / 1,265	5,831 / 42,722	(c)
RW-04	12.4 / 91	956 / 7,008	(c)
BP-MW-08	24.9 / 182	349 / 2,554	(c)
BP-MW-11	0 / 0	7.8 / 57	(a)
RW-03	0 / 0	4.0 / 29	(b)
RW-01	0 / 0	1.3 / 10	(b)
RW-02	0 / 0	0.8 / 5.9	(b)

- (a) Recovery system moved from BP-MW-11 to BP-MW-08 on September 8, 2010.
- (b) Manual bailing.
- (c) Cumulative totals included estimated recovery from 12/28/11 to 1/18/12.

The wells are presented in **Table 8** generally in the order of decreasing LNAPL occurrence/recovery. During the reporting period, the range of LNAPL thicknesses varied as summarized below (wells are not listed if LNAPL was not present):

- RW-04 (0.04 to 1.76 ft),
- BP-MW-05 (0.28 to 0.90 ft),
- BP-MW-08 (0.07 to 0.45 ft),
- BP-MW-11 (0.40 to 0.55 ft),
- BP-MW-10 (0.42 to 1.33 ft),
- RW-02 (0.09 to 0.13 ft),
- RW-03 (0.17 to 0.35 ft)

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- RW-01 (0.19 to 0.23 ft), and
- BP-MW-07 (0.02 to 0.02 ft)

No LNAPL was observed in wells RW-05, BP-MW-06, BP-MW-09, or CO19-PZM004.

For all wells in which LNAPL accumulated, **Table 9** provides well-specific details concerning the measured depths to LNAPL, the water table, and calculated LNAPL thicknesses.

Tables

Table 1
Summary of Operating Conditions
Cell 1: Prototype AS/SVE System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Cell 1 April 2012 Estimated Hydrocarbon Recovery

Parameter	Units	Quantity
Total CATOX Operating Time (April 1 - April 30, 2012)	hours	714
Overall CATOX Operational Time	%	99.2
Estimated Total Hydrocarbons Destroyed	pounds	8.48
Estimated Hydrocarbon Removal Rate	pounds/hour	0.01

Cell 1 Cumulative Summary of Estimated Hydrocarbon Recovery

Parameter	Units	Quantity
Total ICE/CATOX Operating Time (August 3, 2010 - April 30, 2012)	hours	11,527
Overall ICE/CATOX Operational Time	%	75.5
Estimated Total Hydrocarbons Destroyed	pounds	9,193
Estimated Average Hydrocarbon Removal Rate	pounds/hour	0.80

Table 2
Summary of Soil Gas Analytical Results (April 2012)
Cell 1: Prototype AS/SVE System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

		Sample ID	CATOX Influent
		Date	4/18/2012
		Time	13:25
		Dilution Factor	297.73
Analyte	Units		
TO-15 Volatile Organics			
trans-1,3-Dichloropropene	ppb	< 60 U	
Acetone	ppb	< 1,500 U	
Ethylbenzene	ppb	< 60 U	
2-Hexanone	ppb	< 150 U	
Methylene Chloride	ppb	< 150 U	
Benzene	ppb	5,500	
1,1,2,2-Tetrachloroethane	ppb	< 60 U	
Tetrachloroethene	ppb	< 60 U	
Toluene	ppb	990	
1,1,1-Trichloroethane	ppb	< 60 U	
1,1,2-Trichloroethane	ppb	< 60 U	
Trichloroethene	ppb	< 60 U	
Vinyl Chloride	ppb	< 60 U	
o-Xylene	ppb	180	
m-Xylene & p-Xylene	ppb	410	
2-Butanone (MEK)	ppb	< 300 U	
4-Methyl-2-pentanone (MIBK)	ppb	< 150 U	
Bromoform	ppb	< 60 U	
Carbon Disulfide	ppb	< 150 U	
Carbon tetrachloride	ppb	< 60 U	
Chlorobenzene	ppb	< 60 U	
Chloroethane	ppb	< 60 U	
Chloroform	ppb	< 60 U	
1,1-Dichloroethane	ppb	< 60 U	
1,2-Dichloroethane	ppb	< 60 U	
1,1-Dichloroethene	ppb	< 60 U	
trans-1,2-Dichloroethene	ppb	< 60 U	
1,2-Dichloropropane	ppb	< 60 U	
cis-1,3-Dichloropropene	ppb	< 60 U	
Total Volatile Organics	ppb	7,080	

Notes:

BOLD = Analyte detected

ppb = parts per billion

</U = Analyte not detected above corresponding laboratory reporting limit

Table 3
Summary of Groundwater Analytical Results (April 2012)
Cell 1: Prototype AS/SVE System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Sample ID	CO02-PZM006	CO18-PZM006	BP-MW-09
Date	4/19/2012	4/19/2012	4/19/2012
Time	13:19	14:02	14:42
Analyte	Units		
Water Quality Parameters			
Temperature	deg C	21.63	27.98
pH	std units	7.80	6.85
ORP	mV	-257	-201
Conductivity	mS/cm	3.35	5.10
Turbidity	NTU	--	--
Dissolved Oxygen	mg/L	0.08	0.11
Volatile Organics			
Vinyl Chloride	µg/L	< 5,000 U	< 1,000 U
Chloroethane	µg/L	< 5,000 U	< 1,000 U
1,1-Dichloroethene	µg/L	< 5,000 U	< 1,000 U
Acetone	µg/L	< 120,000 U	< 25,000 U
Carbon Disulfide	µg/L	< 5,000 U	< 1,000 U
Methylene Chloride	µg/L	< 25,000 U	< 5,000 U
trans-1,2-Dichloroethene	µg/L	< 5,000 U	< 1,000 U
1,1-Dichloroethane	µg/L	< 5,000 U	< 1,000 U
2-Butanone (MEK)	µg/L	< 25,000 U	< 5,000 U
Chloroform	µg/L	< 5,000 U	< 1,000 U
1,1,1-Trichloroethane	µg/L	< 5,000 U	< 1,000 U
Carbon Tetrachloride	µg/L	< 5,000 U	< 1,000 U
Benzene	µg/L	350,000	96,000
1,2-Dichloroethane	µg/L	< 5,000 U	< 1,000 U
Trichloroethene	µg/L	< 5,000 U	< 1,000 U
1,2-Dichloropropane	µg/L	< 5,000 U	< 1,000 U
Methyl Isobutyl Ketone (MIBK)	µg/L	< 25,000 U	< 5,000 U
cis-1,3-Dichloropropene	µg/L	< 5,000 U	< 1,000 U
Toluene	µg/L	< 5,000 U	7,200
trans-1,3-Dichloropropene	µg/L	< 5,000 U	< 1,000 U
1,1,2-Trichloroethane	µg/L	< 5,000 U	< 1,000 U
2-Hexanone (MBK)	µg/L	< 25,000 U	< 5,000 U
Tetrachloroethene	µg/L	< 5,000 U	< 1,000 U
Chlorobenzene	µg/L	< 5,000 U	< 1,000 U
1,1,1,2-Tetrachloroethane	µg/L	< 5,000 U	< 1,000 U
Ethylbenzene	µg/L	< 5,000 U	< 1,000 U
Bromoform	µg/L	< 5,000 U	< 1,000 U
1,1,1,2,2-Tetrachloroethane	µg/L	< 5,000 U	< 1,000 U
Total Xylenes	µg/L	< 15,000 U	< 3,000 U
Total Volatile Organics	µg/L	350,000	103,200

Notes:

- = Not Measured
- Bold** = Analyte Detected
- deg C = degrees Celcius
- mg/L = Milligram per liter
- mS/cm = Microsiemens per Centimeter
- mV = Millivolts
- NTU = Nephelometric Turbidity Units
- ORP = Oxidation Reduction Potential
- std units = standard units
- </U = Analyte not detected above corresponding laboratory reporting limit
- µg/L = Micrograms per liter

Table 4
Summary of Operating Conditions
Cell 3: AS/SVE System in the "Cove" Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Cell 3 April 2012 Estimated Hydrocarbon Recovery

Parameter	Units	Quantity
Total CATOX Operating Time (April 1 - April 30, 2012)	hours	716
Overall CATOX Operational Time	%	99.5
Estimated Total Hydrocarbons Destroyed	pounds	41.84
Estimated Hydrocarbon Removal Rate	pounds/hour	0.06

Cell 3 Cumulative Summary of Estimated Hydrocarbon Recovery

Parameter	Units	Quantity
Total CATOX Operating Time (June 24, 2011 - April 30, 2012)	hours	6,102
Overall CATOX Operational Time	%	75.9
Estimated Total Hydrocarbons Destroyed	pounds	554.0
Estimated Hydrocarbon Removal Rate	pounds/hour	0.09

Table 5
Summary of Soil Gas Analytical Results (April 2012)
Cell 3: AS/SVE System in the "Cove" Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

	Sample ID	CATOX Influent
	Date	4/18/2012
	Time	14:30
	Dilution Factor	1395.25
Analyte	Units	
TO-15 Volatile Organics		
trans-1,3-Dichloropropene	ppb	< 280 U
Acetone	ppb	< 7,000 U
Ethylbenzene	ppb	< 280 U
2-Hexanone	ppb	< 700 U
Methylene Chloride	ppb	< 700 U
Benzene	ppb	37,000
1,1,2,2-Tetrachloroethane	ppb	< 280 U
Tetrachloroethene	ppb	< 280 U
Toluene	ppb	2,500
1,1,1-Trichloroethane	ppb	< 280 U
1,1,2-Trichloroethane	ppb	< 280 U
Trichloroethene	ppb	< 280 U
Vinyl Chloride	ppb	< 280 U
o-Xylene	ppb	< 280 U
m-Xylene & p-Xylene	ppb	440
2-Butanone (MEK)	ppb	< 1,400 U
4-Methyl-2-pentanone (MIBK)	ppb	< 700 U
Bromoform	ppb	< 280 U
Carbon Disulfide	ppb	< 700 U
Carbon tetrachloride	ppb	< 280 U
Chlorobenzene	ppb	< 280 U
Chloroethane	ppb	< 280 U
Chloroform	ppb	< 280 U
1,1-Dichloroethane	ppb	< 280 U
1,2-Dichloroethane	ppb	< 280 U
1,1-Dichloroethene	ppb	< 280 U
trans-1,2-Dichloroethene	ppb	< 280 U
1,2-Dichloropropane	ppb	< 280 U
cis-1,3-Dichloropropene	ppb	< 280 U
Total Volatile Organics	ppb	39,940

Notes:

BOLD = Analyte detected

ppb = parts per billion

</U = Analyte not detected above corresponding laboratory reporting limit

Table 6
Summary of Groundwater Analytical Results (April 2012)
Cell 3: AS/SVE System in the "Cove" Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Sample ID	CO30-PZM015	MW-CELL 3-1	MW-CELL 3-2	MW-CELL 3-3	
Date	4/19/2012	4/19/2012	4/19/2012	4/19/2012	
Time	10:30	12:37	11:15	11:55	
Analyte	Units				
Water Quality Parameters					
Temperature	deg C	17.40	17.58	17.55	18.00
pH	std units	10.93	11.83	11.56	12.16
ORP	mV	-262	-320	-362	-276
Conductivity	mS/cm	5.80	5.53	4.57	7.80
Turbidity	NTU	--	--	--	--
Dissolved Oxygen	mg/L	1.02	0.10	0.11	0.40
Volatile Organics					
Vinyl Chloride	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Chloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1-Dichloroethene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Acetone	µg/L	< 25,000 U	< 1,200 U	< 2,500 U	< 2,500 U
Carbon Disulfide	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Methylene Chloride	µg/L	< 5,000 U	< 250 U	< 500 U	< 500 U
trans-1,2-Dichloroethene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1-Dichloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
2-Butanone (MEK)	µg/L	< 5,000 U	< 250 U	< 500 U	< 500 U
Chloroform	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1,1-Trichloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Carbon Tetrachloride	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Benzene	µg/L	49,000	5,300	11,000	5,400
1,2-Dichloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Trichloroethene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,2-Dichloropropane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Methyl Isobutyl Ketone (MIBK)	µg/L	< 5,000 U	< 250 U	< 500 U	< 500 U
cis-1,3-Dichloropropene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Toluene	µg/L	3,800	440	830	480
trans-1,3-Dichloropropene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1,2-Trichloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
2-Hexanone (MBK)	µg/L	< 5,000 U	< 250 U	< 500 U	< 500 U
Tetrachloroethene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Chlorobenzene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1,1,2-Tetrachloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Ethylbenzene	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Bromoform	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
1,1,2,2-Tetrachloroethane	µg/L	< 1,000 U	< 50 U	< 100 U	< 100 U
Xylenes, Total	µg/L	< 3,000 U	160	< 300 U	300
Total Volatile Organics	µg/L	52,800	5,900	11,830	6,180

Notes:

- = Not Measured
- Bold** = Analyte Detected
- deg C = degrees Celcius
- mg/L = Milligram per liter
- mS/cm = Microsiemens per Centimeter
- mV = Millivolts
- NTU = Nephelometric Turbidity Units
- ORP = Oxidation Reduction Potential
- std units = standard units
- </U = Analyte not detected above corresponding laboratory reporting limit
- µg/L = Micrograms per liter

**Table 7
Summary of Groundwater Analytical Results (April 2012)
Cell 4: In-Situ Anaerobic Bio-Treatment Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC**

Sample ID		OBS-6	OBS-6	OBS-6	OBS-6	OBS-6	OBS-6	OBS-6	OBS-6	OBS-6	OBS-7	OBS-7	OBS-7	OBS-7	OBS-7	OBS-7
Date		04/23/12	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/26/12	04/26/12	04/27/12	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/26/12
Time		10:40	12:48	17:12	9:08	15:03	17:04	10:08	14:02	10:01	12:22	17:06	9:00	14:51	16:55	10:01
Units																
Water Quality Parameters																
Temperature	deg C	.. ^[1]	17.02	17.02	17.79	17.66	18.34	16.44	17.75	14.85	17.75	17.67	18.37	18.46	18.20	16.39
pH	std units	11.44	11.58	12.03	12.08	12.07	12.08	12.21	12.17	11.95	11.57	11.52	11.54	11.53	11.56	11.71
ORP	mV	-289	-157	-201	-199	-178	-173	-186	-166	-305	-217	-198	-198	-196	-173	-194
Conductivity	mS/cm	0.138	2.90	2.30	2.28	2.30	2.29	2.35	2.31	2.55	1.70	1.70	1.74	1.82	1.82	1.88
Turbidity	NTU	0.10	65.7	55.8	20.5	9.95	6.39	2.73	3.43	1.44	9.95	14.70	3.39	4.96	5.81	3.99
Dissolved Oxygen	mg/L	0.00	1.37	1.96	1.33	1.64	5.01	2.31	7.11	0.51	6.82	3.42	7.02	1.94	7.24	4.22
Volatile Organics																
Vinyl Chloride	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Chloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Acetone	µg/L	< 12,000 U	--	--	--	--	--	--	--	< 12,000 U	--	--	--	--	--	--
Carbon Disulfide	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Methylene Chloride	µg/L	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
2-Butanone (MEK)	µg/L	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	--	--	--	--	--	--
Chloroform	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Benzene	µg/L	< 500 U	--	--	--	--	--	--	--	2,400	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Trichloroethene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Methyl Isobutyl Ketone (MIBK)	µg/L	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Toluene	µg/L	< 500 U	--	--	--	--	--	--	--	1,700	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
2-Hexanone (MBK)	µg/L	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	--	--	--	--	--	--
Tetrachloroethene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Chlorobenzene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Ethylbenzene	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Bromoform	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	< 500 U	--	--	--	--	--	--	--	< 500 U	--	--	--	--	--	--
Xylenes, Total	µg/L	< 1,500 U	--	--	--	--	--	--	--	< 1,500 U	--	--	--	--	--	--
Semi-Volatiles																
Naphthalene	µg/L	5,000	--	--	--	--	--	--	--	12,000	--	--	--	--	--	--
Total Volatile Organics	µg/L	5,000	--	--	--	--	--	--	--	16,100	--	--	--	--	--	--
Wet Chemistry																
Ferric Iron	mg/L	0.18	--	--	--	--	--	--	--	0.29	--	--	--	--	--	--
Ferrous Iron	mg/L	< 0.10 U	--	--	--	--	--	--	--	0.26	--	--	--	--	--	--
Nitrite-N	mg/L	0.13	--	--	--	--	--	--	--	0.37	--	--	--	--	--	--
Nitrate-N	mg/L	< 0.050 U	--	--	--	--	--	--	--	< 0.050 U	--	--	--	--	--	--
Nitrate/Nitrite-N	mg/L	< 0.050 U	--	--	--	--	--	--	--	0.083	--	--	--	--	--	--
Orthophosphate as P	mg/L	0.020	--	--	--	--	--	--	--	0.028	--	--	--	--	--	--
Sulfate as SO4	mg/L	240	--	--	--	--	--	--	--	650	--	--	--	--	--	--
Total Kjeldahl Nitrogen	mg/L	31	--	--	--	--	--	--	--	84	--	--	--	--	--	--
Metals																
Iron, Total	mg/L	0.18	--	--	--	--	--	--	--	0.55	--	--	--	--	--	--

Notes:
 [1] Temperature meter not functioning properly. Could not Read.
 -- = Not Measured
Bold = Analyte Detected
 deg C = degrees Celcius
 mg/L = Milligram per liter
 mS/cm = Microsiemens per Centimeter
 mV = Millivolts
 NTU = Nephelometric Turbidity Units
 ORP = Oxidation Reduction Potential
 std units = standard units
 </U = Analyte not detected above corresponding laboratory reporting limit
 µg/L = Micrograms per liter

Table 7
Summary of Groundwater Analytical Results (April 2012)
Cell 4: In-Situ Anaerobic Bio-Treatment Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Sample ID		OBS-7	OBS-8	OBS-8	EXT-2	EXT-2	AS-2	AS-2	AS-2	AS-2	AS-2	AS-2	AS-2	AS-2	AS-2	Cell 4-1	
Date		04/26/12	04/23/12	04/27/12	04/23/12	04/27/12	04/23/12	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/26/12	04/26/12	04/26/12	04/27/12	04/23/12
Time		13:49	9:30	11:03	11:45	13:00	11:46	12:06	17:00	8:56	14:46	16:51	9:06	13:40	14:00	10:45	
Units																	
Water Quality Parameters																	
Temperature	deg C	17.59	14.1	14.87	15.01	15.91	_ [1]	16.79	17.70	18.16	18.84	18.87	16.51	17.73	18.29	14.87	
pH	std units	11.62	11.80	11.58	11.40	10.87	10.34	11.08	11.26	11.23	11.24	11.23	11.37	11.35	11.39	11.28	
ORP	mV	-186	-290	-238	-257	-172	-185	-146	-163	-163	-160	-161	-150	-137	-187	-274	
Conductivity	mS/cm	1.84	0.225	1.72	0.211	1.54	0.335	3.25	3.15	3.24	3.25	3.27	3.33	3.36	3.46	0.161	
Turbidity	NTU	2.78	0.04	1.85	11.00	46.1	0.46	22.1	9.89	14.10	7.63	41.9	9.89	11.30	17.80	9.56	
Dissolved Oxygen	mg/L	3.07	0.00	0.00	0.00	1.28	0.00	2.88	1.32	1.97	1.77	2.58	3.05	2.35	5.00	0.00	
Volatile Organics																	
Vinyl Chloride	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Chloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1-Dichloroethene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Acetone	µg/L	--	< 12,000 U	< 2,500 U	< 12,000 U	< 2,500 U	< 12,000 U	--	--	--	--	--	--	--	< 12,000 U	< 2,500 U	
Carbon Disulfide	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Methylene Chloride	µg/L	--	< 2,500 U	< 500 U	< 2,500 U	< 500 U	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	< 500 U	
trans-1,2-Dichloroethene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1-Dichloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
2-Butanone (MEK)	µg/L	--	< 2,500 U	< 500 U	< 2,500 U	< 500 U	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	< 500 U	
Chloroform	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1,1-Trichloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Carbon Tetrachloride	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Benzene	µg/L	--	< 500 U	880	660	780	4,500	--	--	--	--	--	--	--	4,200	3,200	
1,2-Dichloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Trichloroethene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,2-Dichloropropane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Methyl Isobutyl Ketone (MIBK)	µg/L	--	< 2,500 U	< 500 U	< 2,500 U	< 500 U	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	< 500 U	
cis-1,3-Dichloropropene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Toluene	µg/L	--	< 500 U	590	500	530	3,700	--	--	--	--	--	--	--	3,200	1,900	
trans-1,3-Dichloropropene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1,2-Trichloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
2-Hexanone (MBK)	µg/L	--	< 2,500 U	< 500 U	< 2,500 U	< 500 U	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	< 500 U	
Tetrachloroethene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Chlorobenzene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1,1,2-Tetrachloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Ethylbenzene	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Bromoform	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
1,1,2,2-Tetrachloroethane	µg/L	--	< 500 U	< 100 U	< 500 U	< 100 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 100 U	
Xylenes, Total	µg/L	--	< 1,500 U	720	< 1,500 U	620	2,000	--	--	--	--	--	--	--	2,000	1,300	
Semi-Volatiles																	
Naphthalene	µg/L	--	2,100	5,100	6,200	4,600	18,000	--	--	--	--	--	--	--	15,000	9,100	
Total Volatile Organics	µg/L	--	2,100	7,290	7,360	6,530	28,200	--	--	--	--	--	--	--	24,400	15,500	
Wet Chemistry																	
Ferric Iron	mg/L	--	0.20	0.32	0.33	0.74	0.39	--	--	--	--	--	--	--	0.27	1.7	
Ferrous Iron	mg/L	--	0.17	0.21	0.16	0.43	0.22	--	--	--	--	--	--	--	0.24	0.15	
Nitrite-N	mg/L	--	0.063	0.088	0.031	0.15	0.12	--	--	--	--	--	--	--	0.091	0.022	
Nitrate-N	mg/L	--	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	--	--	--	--	--	--	--	< 0.050 U	< 0.050 U	
Nitrate/Nitrite-N	mg/L	--	< 0.050 U	< 0.050 U	< 0.050 U	0.051	< 0.050 U	--	--	--	--	--	--	--	0.075	< 0.050 U	
Orthophosphate as P	mg/L	--	0.023	0.066	0.095	3.9	0.040	--	--	--	--	--	--	--	0.040	0.13	
Sulfate as SO4	mg/L	--	330	470	960	570	1,400	--	--	--	--	--	--	--	1,400	600	
Total Kjeldahl Nitrogen	mg/L	--	40	54	110	61	670	--	--	--	--	--	--	--	750	60	
Metals																	
Iron, Total	mg/L	--	0.37	0.53	0.48	1.2	0.61	--	--	--	--	--	--	--	0.51	1.8	

Notes:
[1] Temperature meter not functioning properly.
-- = Not Measured
Bold = Analyte Detected
deg C = degrees Celcius
mg/L = Milligram per liter
mS/cm = Microsiemens per Centimeter
mV = Millivolts
NTU = Nephelometric Turbidity Units
ORP = Oxidation Reduction Potential
std units = standard units
<U = Analyte not detected above corresponding laboratory reporting limit
µg/L = Micrograms per liter

**Table 7
Summary of Groundwater Analytical Results (April 2012)
Cell 4: In-Situ Anaerobic Bio-Treatment Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC**

Sample ID	Cell 4-1	Cell 4-3	Cell 4-3	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-4	Cell 4-5	Cell 4-5	Cell 4-5	
Date	04/27/12	04/23/12	04/27/12	04/23/12	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/25/12	04/26/12	04/26/12	04/27/12	04/23/12	04/24/12	04/25/12
Time	10:10	14:00	13:15	9:45	11:57	16:56	8:35	14:40	16:46	8:16	13:31	10:50	14:10	12:37	14:58	
Units																
Water Quality Parameters																
Temperature	deg C	17.49	..[1]	18.49	15.47	18.14	18.74	17.47	20.42	20.02	16.60	17.98	17.50	14.77	17.68	18.18
pH	std units	10.83	9.38	11.96	12.07	11.01	11.14	10.96	11.25	11.25	11.27	11.22	11.66	11.90	11.31	11.59
ORP	mV	-127	-244	-161	-284	-233	-199	-207	-206	-225	-201	-195	-264	-261	-185	-205
Conductivity	mS/cm	1.62	81.1	1.59	0.168	1.96	1.60	1.55	1.55	1.57	1.56	1.55	1.66	0.261	2.65	2.05
Turbidity	NTU	22.1	4.14	28.3	2.31	3.97	7.47	3.66	3.01	3.63	1.04	7.65	2.80	15.70	6.36	
Dissolved Oxygen	mg/L	4.00	0.00	0.85	0.00	7.14	1.58	8.95	3.22	6.47	3.39	7.75	5.41	0.00	7.16	2.73
Volatile Organics																
Vinyl Chloride	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Chloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1-Dichloroethene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Acetone	µg/L	< 2,500 U	< 2,500 U	< 2,500 U	< 2,500 U	--	--	--	--	--	--	--	< 2,500 U	< 12,000 U	--	--
Carbon Disulfide	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Methylene Chloride	µg/L	< 500 U	< 500 U	< 500 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 2,500 U	--	--
trans-1,2-Dichloroethene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1-Dichloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
2-Butanone (MEK)	µg/L	< 500 U	< 500 U	< 500 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 2,500 U	--	--
Chloroform	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1,1-Trichloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Carbon Tetrachloride	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Benzene	µg/L	1,300	430	930	930	--	--	--	--	--	--	--	1,200	2,100	--	--
1,2-Dichloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Trichloroethene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,2-Dichloropropane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Methyl Isobutyl Ketone (MIBK)	µg/L	< 500 U	< 500 U	< 500 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 2,500 U	--	--
cis-1,3-Dichloropropene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Toluene	µg/L	1,000	330	600	630	--	--	--	--	--	--	--	830	1,900	--	--
trans-1,3-Dichloropropene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1,2-Trichloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
2-Hexanone (MBK)	µg/L	< 500 U	< 500 U	< 500 U	< 500 U	--	--	--	--	--	--	--	< 500 U	< 2,500 U	--	--
Tetrachloroethene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Chlorobenzene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1,1,2-Tetrachloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Ethylbenzene	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Bromoform	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
1,1,2,2-Tetrachloroethane	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	--	--	--	--	--	--	--	< 100 U	< 500 U	--	--
Xylenes, Total	µg/L	1,100	440	700	730	--	--	--	--	--	--	--	1,000	< 1,500 U	--	--
Semi-Volatiles																
Naphthalene	µg/L	7,500	4,600	4,600	5,900	--	--	--	--	--	--	--	7,900	10,000	--	--
Total Volatile Organics	µg/L	10,900	5,800	6,830	8,190	--	--	--	--	--	--	--	10,930	14,000	--	--
Wet Chemistry																
Ferric Iron	mg/L	1.4	0.39	0.60	0.25	--	--	--	--	--	--	--	0.30	0.49	--	--
Ferrous Iron	mg/L	< 0.10 U	0.22	< 0.10 U	0.27	--	--	--	--	--	--	--	0.11	0.57	--	--
Nitrite-N	mg/L	0.11	0.025	0.091	0.14	--	--	--	--	--	--	--	0.061	0.26	--	--
Nitrate-N	mg/L	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	--	--	--	--	--	--	--	< 0.050 U	< 0.050 U	--	--
Nitrate/Nitrite-N	mg/L	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	--	--	--	--	--	--	--	< 0.050 U	< 0.050 U	--	--
Orthophosphate as P	mg/L	0.63	0.088	0.51	0.038	--	--	--	--	--	--	--	0.034	0.039	--	--
Sulfate as SO4	mg/L	530	490	530	830	--	--	--	--	--	--	--	440	1,400	--	--
Total Kjeldahl Nitrogen	mg/L	53	54	60	36	--	--	--	--	--	--	--	56	92	--	--
Metals																
Iron, Total	mg/L	1.4	0.61	0.60	0.52	--	--	--	--	--	--	--	0.41	1.1	--	--

Notes:
 [1] Temperature meter not functioning properly.
 -- = Not Measured
Bold = Analyte Detected
 deg C = degrees Celcius
 mg/L = Milligram per liter
 mS/cm = Microsiemens per Centimeter
 mV = Millivolts
 NTU = Nephelometric Turbidity Units
 ORP = Oxidation Reduction Potential
 std units = standard units
 </U = Analyte not detected above corresponding laboratory reporting limit
 µg/L = Micrograms per liter

Table 7
Summary of Groundwater Analytical Results (April 2012)
Cell 4: In-Situ Anaerobic Bio-Treatment Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Sample ID	Cell 4-5	Cell 4-5	Cell 4-5	Cell 4-5	Cell 4-6	Cell 4-6	Cell 4-7	Cell 4-7	Influent	Influent	Influent	Influent	Influent	Influent	Influent	
Date	04/25/12	04/26/12	04/26/12	04/26/12	04/23/12	04/27/12	04/23/12	04/27/12	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/26/12	04/26/12	
Time	16:59	10:05	13:56	12:20	12:55	11:57	13:10	11:30	12:52	17:19	9:13	15:07	17:08	10:10	14:06	
Units																
Water Quality Parameters																
Temperature	deg C	18.07	16.22	17.44	17.76	..[1]	15.05	16.05	17.63	17.36	17.68	18.10	18.77	19.01	16.95	18.91
pH	std units	11.57	11.67	11.69	11.54	11.17	11.72	12.32	12.49	11.50	11.49	11.46	11.49	11.51	11.60	11.53
ORP	mV	-178	-191	-186	-254	-211	-217	-265	-191	-192	-184	-184	-183	-177	-178	-177
Conductivity	mS/cm	2.00	2.00	1.95	2.72	0.441	1.85	0.753	3.36	1.71	1.70	1.69	1.76	1.78	1.77	1.79
Turbidity	NTU	6.20	3.05	3.07	2.28	0.04	2.28	0.98	10.10	8.68	5.35	7.60	6.88	1.70	5.22	1.67
Dissolved Oxygen	mg/L	7.08	4.99	5.58	4.72	0.00	0.00	0.00	5.27	3.66	3.52	3.92	6.80	6.78	8.01	5.70
Volatile Organics																
Vinyl Chloride	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	< 12,000 U	< 2,500 U	< 2,500 U	< 12,000 U	< 12,000 U	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Methylene Chloride	µg/L	--	--	--	< 2,500 U	< 500 U	< 500 U	< 2,500 U	< 2,500 U	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
2-Butanone (MEK)	µg/L	--	--	--	< 2,500 U	< 500 U	< 500 U	< 2,500 U	< 2,500 U	--	--	--	--	--	--	--
Chloroform	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	2,200	680	770	1,000	940	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Methyl Isobutyl Ketone (MIBK)	µg/L	--	--	--	< 2,500 U	< 500 U	< 500 U	< 2,500 U	< 2,500 U	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Toluene	µg/L	--	--	--	2,000	450	510	670	560	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
2-Hexanone (MBK)	µg/L	--	--	--	< 2,500 U	< 500 U	< 500 U	< 2,500 U	< 2,500 U	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	< 500 U	< 100 U	< 100 U	< 500 U	< 500 U	--	--	--	--	--	--	--
Xylenes, Total	µg/L	--	--	--	< 1,500 U	560	680	< 1,500 U	< 1,500 U	--	--	--	--	--	--	--
Semi-Volatiles																
Naphthalene	µg/L	--	--	--	10,000	4,300	6,100	14,000	13,000	--	--	--	--	--	--	--
Total Volatile Organics	µg/L	--	--	--	14,200	5,990	8,060	15,670	14,500	--	--	--	--	--	--	--
Wet Chemistry																
Ferric Iron	mg/L	--	--	--	0.74	0.16	0.30	0.33	0.26	--	--	--	--	--	--	--
Ferrous Iron	mg/L	--	--	--	0.36	< 0.10 U	0.11	0.24	0.21	--	--	--	--	--	--	--
Nitrite-N	mg/L	--	--	--	0.23	0.047	0.039	0.12	0.13	--	--	--	--	--	--	--
Nitrate-N	mg/L	--	--	--	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	--	--	--	--	--	--	--
Nitrate/Nitrite-N	mg/L	--	--	--	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	--	--	--	--	--	--	--
Orthophosphate as P	mg/L	--	--	--	0.045	0.017	0.027	0.023	0.017	--	--	--	--	--	--	--
Sulfate as SO4	mg/L	--	--	--	1,300	310	500	1,000	720	--	--	--	--	--	--	--
Total Kjeldahl Nitrogen	mg/L	--	--	--	83	40	58	59	70	--	--	--	--	--	--	--
Metals																
Iron, Total	mg/L	--	--	--	1.1	0.16	0.41	0.57	0.47	--	--	--	--	--	--	--

Notes:
[1] Temperature meter not functioning properly.
-- = Not Measured
Bold = Analyte Detected
deg C = degrees Celcius
mg/L = Milligram per liter
mS/cm = Microsiemens per Centimeter
mV = Millivolts
NTU = Nephelometric Turbidity Units
ORP = Oxidation Reduction Potential
std units = standard units
<U = Analyte not detected above corresponding laboratory reporting limit
µg/L = Micrograms per liter

Table 7
Summary of Groundwater Analytical Results (April 2012)
Cell 4: In-Situ Anaerobic Bio-Treatment Area
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

Sample ID	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	
Date	04/24/12	04/24/12	04/25/12	04/25/12	04/25/12	04/26/12	04/26/12	
Time	12:57	17:23	9:17	15:12	17:13	10:14	14:10	
Units								
Water Quality Parameters								
Temperature	deg C	17.24	17.81	18.45	19.03	18.95	17.20	18.62
pH	std units	9.69	9.72	9.86	9.80	9.86	9.58	11.49
ORP	mV	-179	-169	-182	-169	-170	-148	-186
Conductivity	mS/cm	2.19	2.23	1.88	2.17	2.06	3.10	1.78
Turbidity	NTU	49.90	54.4	30.0	66.8	31.8	114.0	17
Dissolved Oxygen	mg/L	3.15	3.19	3.04	5.80	7.12	8.97	3.30
Volatile Organics								
Vinyl Chloride	µg/L	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--
Carbon Disulfide	µg/L	--	--	--	--	--	--	--
Methylene Chloride	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	--	--	--	--
2-Butanone (MEK)	µg/L	--	--	--	--	--	--	--
Chloroform	µg/L	--	--	--	--	--	--	--
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	--	--
Carbon Tetrachloride	µg/L	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--	--
Methyl Isobutyl Ketone (MIBK)	µg/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
Toluene	µg/L	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	--	--
2-Hexanone (MBK)	µg/L	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--
Xylenes, Total	µg/L	--	--	--	--	--	--	--
Semi-Volatiles								
Naphthalene	µg/L	--	--	--	--	--	--	--
Total Volatile Organics	µg/L	--	--	--	--	--	--	--
Wet Chemistry								
Ferric Iron	mg/L	--	--	--	--	--	--	--
Ferrous Iron	mg/L	--	--	--	--	--	--	--
Nitrite-N	mg/L	--	--	--	--	--	--	--
Nitrate-N	mg/L	--	--	--	--	--	--	--
Nitrate/Nitrite-N	mg/L	--	--	--	--	--	--	--
Orthophosphate as P	mg/L	--	--	--	--	--	--	--
Sulfate as SO4	mg/L	--	--	--	--	--	--	--
Total Kjeldahl Nitrogen	mg/L	--	--	--	--	--	--	--
Metals								
Iron, Total	mg/L	--	--	--	--	--	--	--

Notes:
[1] Temperature meter not functioning properly.
-- = Not Measured
Bold = Analyte Detected
deg C = degrees Celcius
mg/L = Milligram per liter
mS/cm = Microsiemens per Centimeter
mV = Millivolts
NTU = Nephelometric Turbidity Units
ORP = Oxidation Reduction Potential
std units = standard units
</U = Analyte not detected above corresponding
laboratory reporting limit
µg/L = Micrograms per liter

Table 8
LNAPL Occurrence and Recovery
Cell 6: LNAPL Recovery System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
RG Steel-Sparrows Point, LLC

Well	LNAPL Occurrence During April 2012 (ft)	Total LNAPL Recovery Period		Cumulative Total LNAPL Recovered thru April 27, 2012 (d)		Estimated LNAPL Recovered During April 2012	
		Begin	End	(gal)	(lbs) (a)	(gal)	(lbs) (a)
RW-04	0.04 to 1.76	23-Jul-10	On-going (b)	956	7,008	12.4	91
BP-MW-05	0.28 to 0.90	28-Jan-10	On-going (b)	5,831	42,722	172.7	1,265
BP-MW-08	0.07 to 0.45	8-Sep-10	On-going (b)	349	2,554	24.9	182
BP-MW-11	0.40 to 0.55	23-Jul-10	8-Sep-10	7.8	57	0	0
RW-02	0.09 to 0.13	1/28/2011	On-going (c)	0.8	5.9	0	0
RW-03	0.17 to 0.35	11/24/2010	On-going (c)	4.0	29	0	0
RW-01	0.19 to 0.23	28-Oct-10	On-going (c)	1.3	10	0	0
BP-MW-10	0.42 to 1.33	na	na	0	0	0	0
BP-MW-07	0.02 to 0.02	na	na	0	0	0	0
RW-05	none	na	na	0	0	0	0
BP-MW-06	none	na	na	0	0	0	0
BP-MW-09	none	na	na	0	0	0	0
CO19-PZM004	none	na	na	0	0	0	0
Total Recovery:				7,150	52,386	210	1,538

Notes:

- (a) Weight is calculated based on average BP-MW-05 and BP-MW-08 oil density of 0.878 grams per cubic centimeter, measured by EA (2009) by ASTM method D1481.
- (b) Skimmer
- (c) Bailing
- (d) Cumulative recovery volumes are calculated using an estimated recovery from 12/28/11 to 1/18/12.

Table 9
Depths (feet) to Water and LNAPL
Cell 6: LNAPL Recovery System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
RG Steel-Sparrows Point, LLC

Date	RW-01			RW-02			RW-03		
	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness
4/6/2012	11.83	12.02	0.19	12.13	12.22	0.09	9.87	10.04	0.17
4/18/2012	12.06	12.29	0.23	12.40	12.53	0.13	9.87	10.04	0.17
4/27/2012	11.90	12.11	0.21	12.26	12.39	0.13	9.91	10.26	0.35
Date	RW-04			BP-MW-05			BP-MW-07		
	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness
4/6/2012	10.34	10.38	0.04	11.65	12.4	0.75	11.65	11.67	0.02
4/18/2012	10.54	10.58	0.04	11.88	12.78	0.90	11.85	11.87	0.02
4/27/2012	10.34	12.10	1.76	11.76	12.04	0.28	11.55	11.57	0.02
Date	BP-MW-08			BP-MW-10			BP-MW-11		
	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness
4/6/2012	12.33	12.45	0.12	9.33	9.86	0.53	11.73	12.28	0.55
4/18/2012	12.43	12.50	0.07	9.60	10.02	0.42	11.96	12.44	0.48
4/27/2012	12.75	13.20	0.45	9.35	10.68	1.33	11.65	12.05	0.40

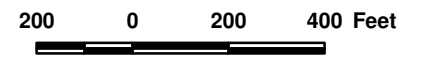
Figures



- Legend**
- New Monitoring Well
 - Existing Monitoring Well
 - AS/SVE Treatment Area
 - Special Study Area

INTERIM MEASURES TREATMENT CELLS

- "Cell 1": Prototype AS/SVE System in Benzol Area
- "Cell 2": AS/SVE and Dual Phase GW Treatment/Injection System in the Former Coal Storage Area
- "Cell 3": AS/SVE System in the "Cove" Area
- "Cell 4": In-Situ Anaerobic Bio-treatment System in the Coal Tar Area
- "Cell 5": Groundwater Extraction/Treatment/Injection at the Turning Basin Area
- "Cell 6": LNAPL Recovery at the Former Benzol Processing Area










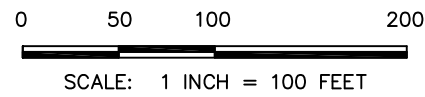
CLIENT: Sparrows Point	LOCATION: Baltimore, MD
DATE: 11/21/2011	FILE: G:\Projects\SparrowsPoint\Projects\2011\CokeOven-and-CokePoint-6Prototype Cells_rev4.mxd
GIS: AER	 12420 Milestone Center Drive Germantown, MD 20876
CHECKED: RL	
SENIOR: BE	

Figure 1
Interim Measures Treatment Areas

Image source: World Imagery, ESRI, GeoEye, 2009.

LEGEND:

- V-1  TRENCH VAPOR EXTRACTION RISER
- EXT-1  SVE PILOT TEST EXTRACTION WELL
- OBS-1  SVE PILOT TEST OBSERVATION WELL
- CO18-PZM006  EXISTING MONITORING WELL
- AS-2  AIR SPARGE WELL
-  VAPOR COLLECTION TRENCHES
-  FORMER STRUCTURES (DEMOLISHED)



URS
 335 COMMERCE DRIVE, SUITE 300
 FORT WASHINGTON, PA 19034
 PHONE: (215) 367-2500 FAX: (215) 367-1000

Job:	15302307.11001
Prepared by:	JES
Checked by:	JH
Date:	10/27/10

AS-BUILT LAYOUT PLAN
 CELL 1: FORMER BENZOL PROCESSING AREA
 RG STEEL SPARROWS POINT, LLC FACILITY
 BALTIMORE, MARYLAND

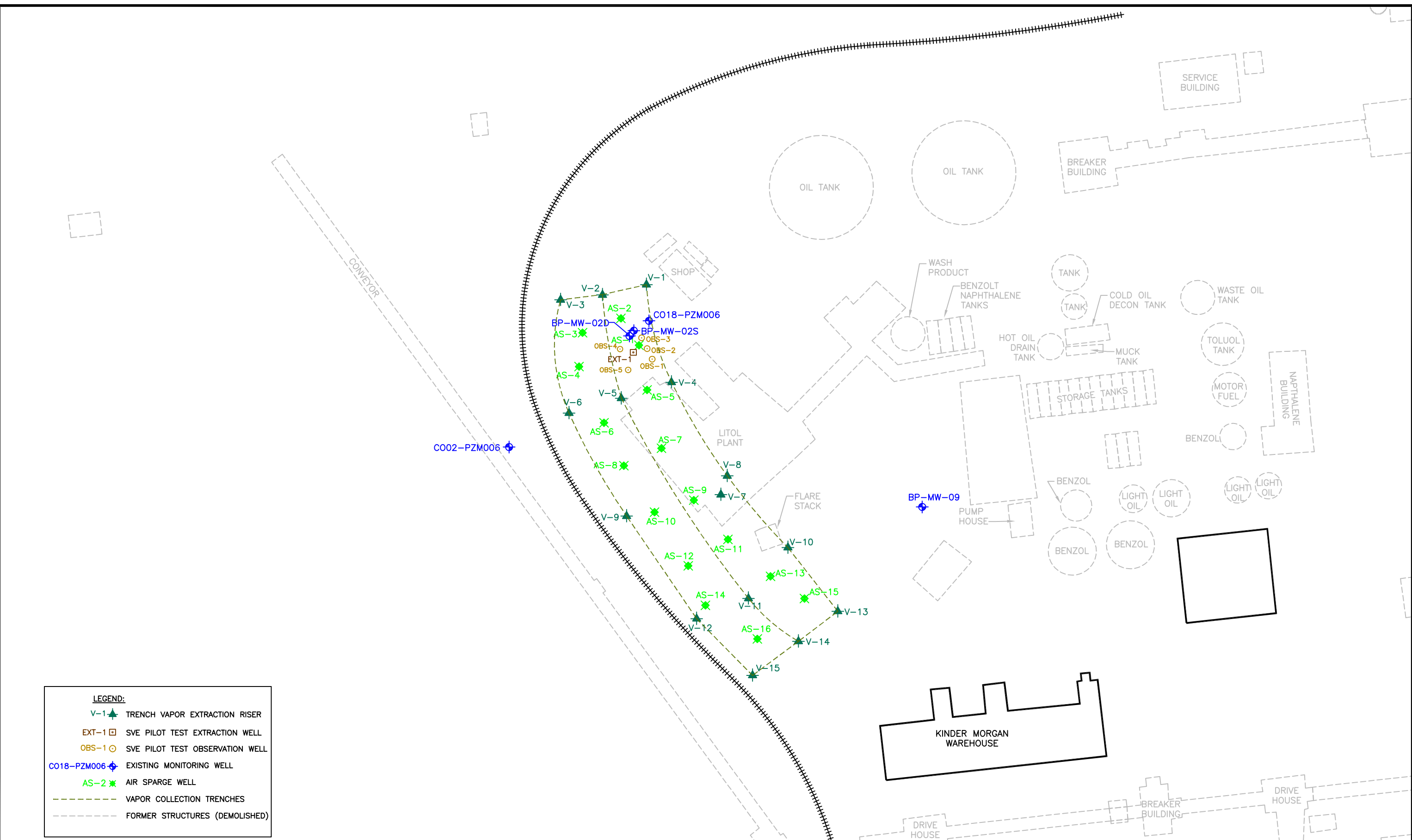


Figure 3
Cumulative Summary of Estimated Hydrocarbon Recovery
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC

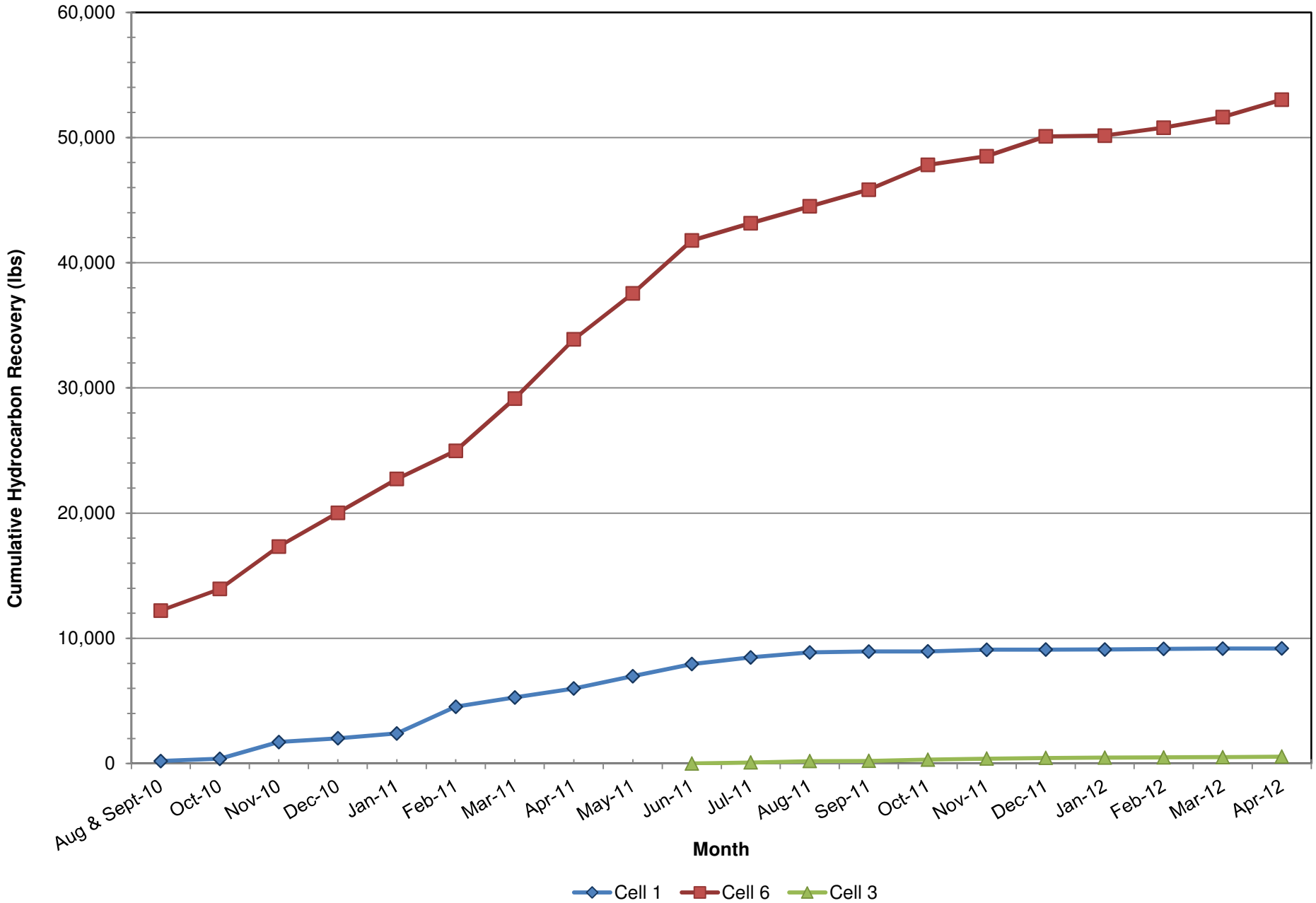


Figure 4
Measured Groundwater VOC Concentration by Month
Cell 1: Prototype AS/SVE System in the "Cove" Area
RG Steel Sparrows Point, LLC

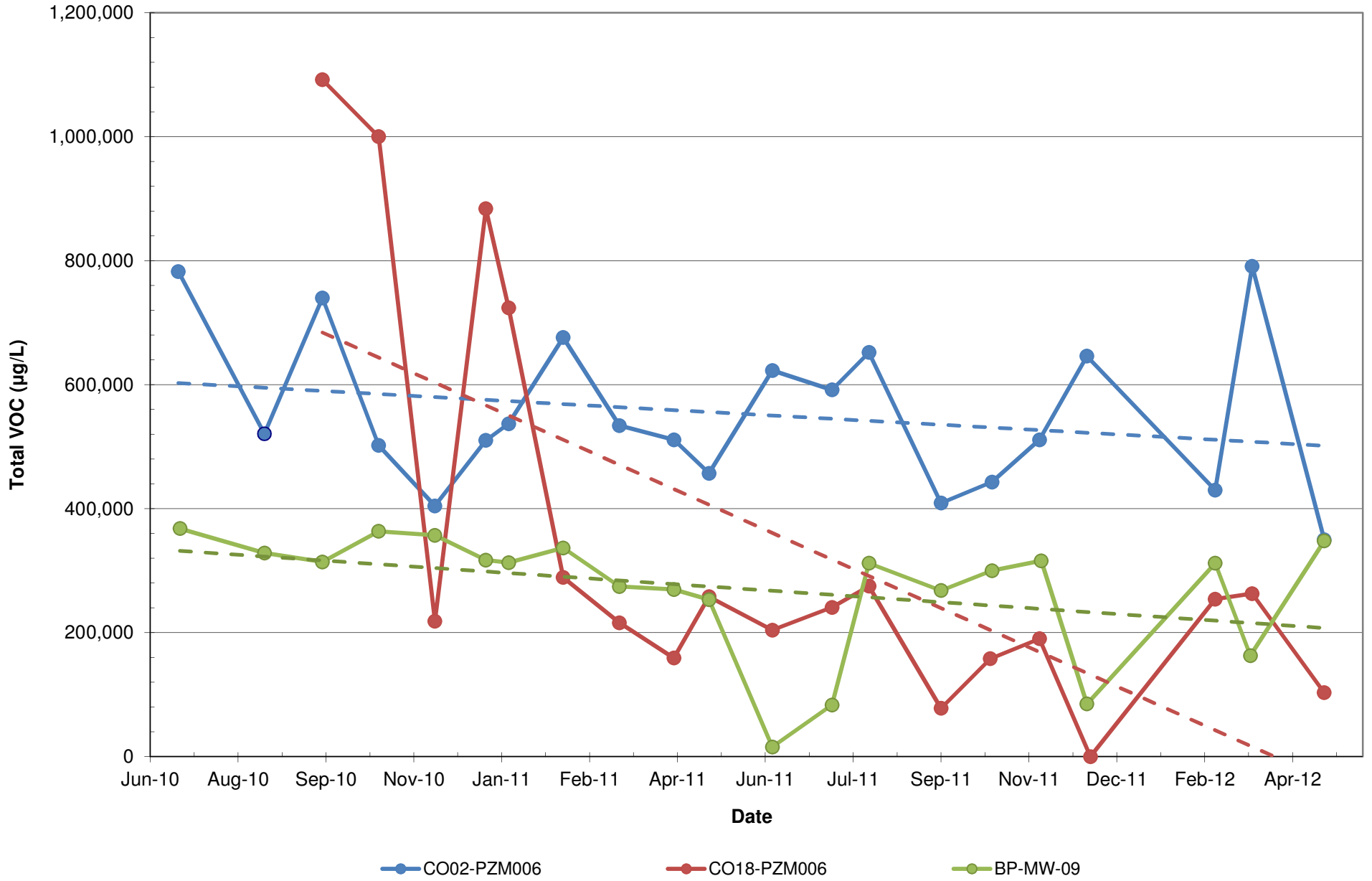


Figure 5
Measured Groundwater VOC Concentration by Month
Cell 3: Prototype AS/SVE System in the "Cove" Area
RG Steel Sparrows Point, LLC

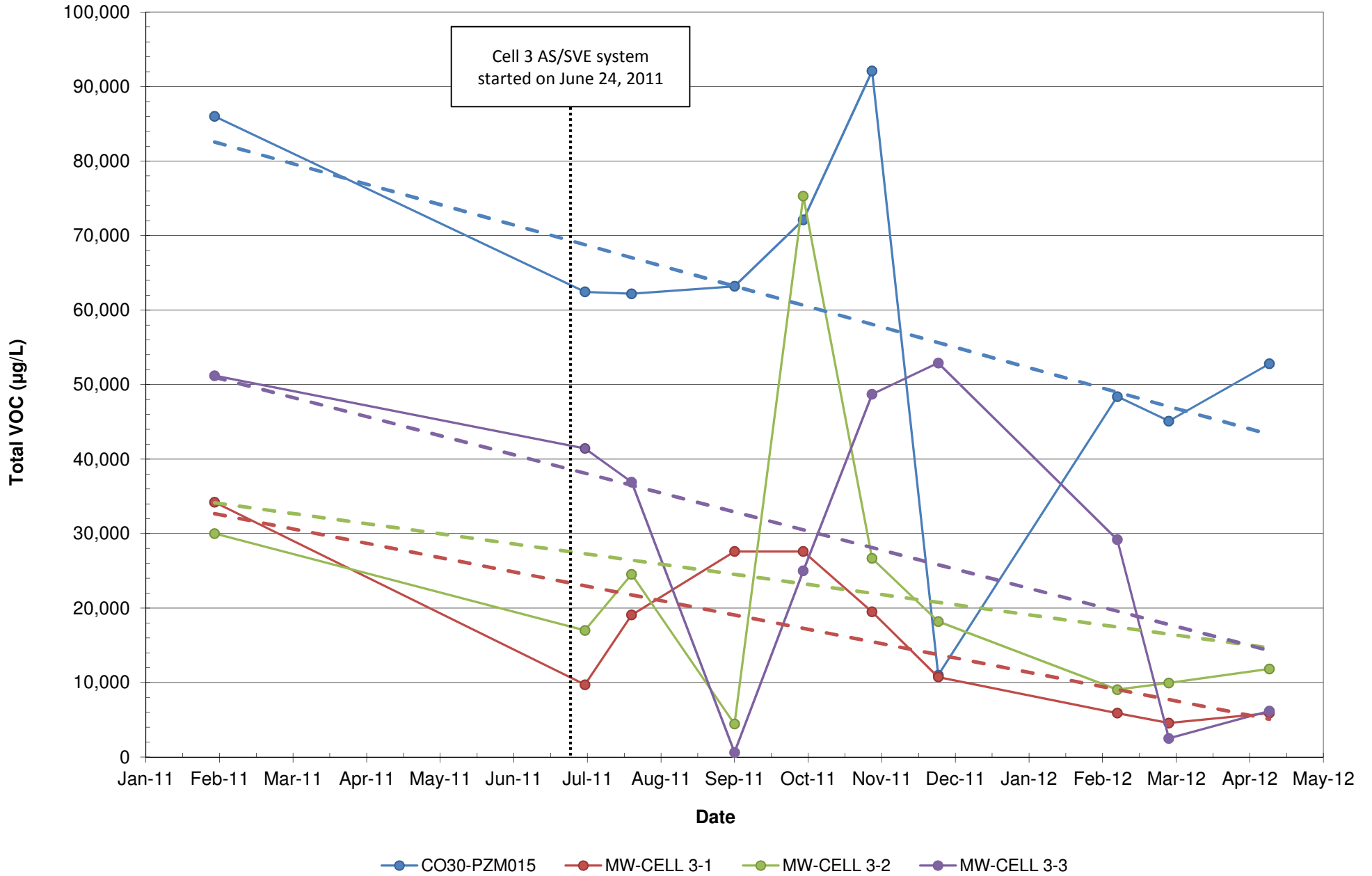
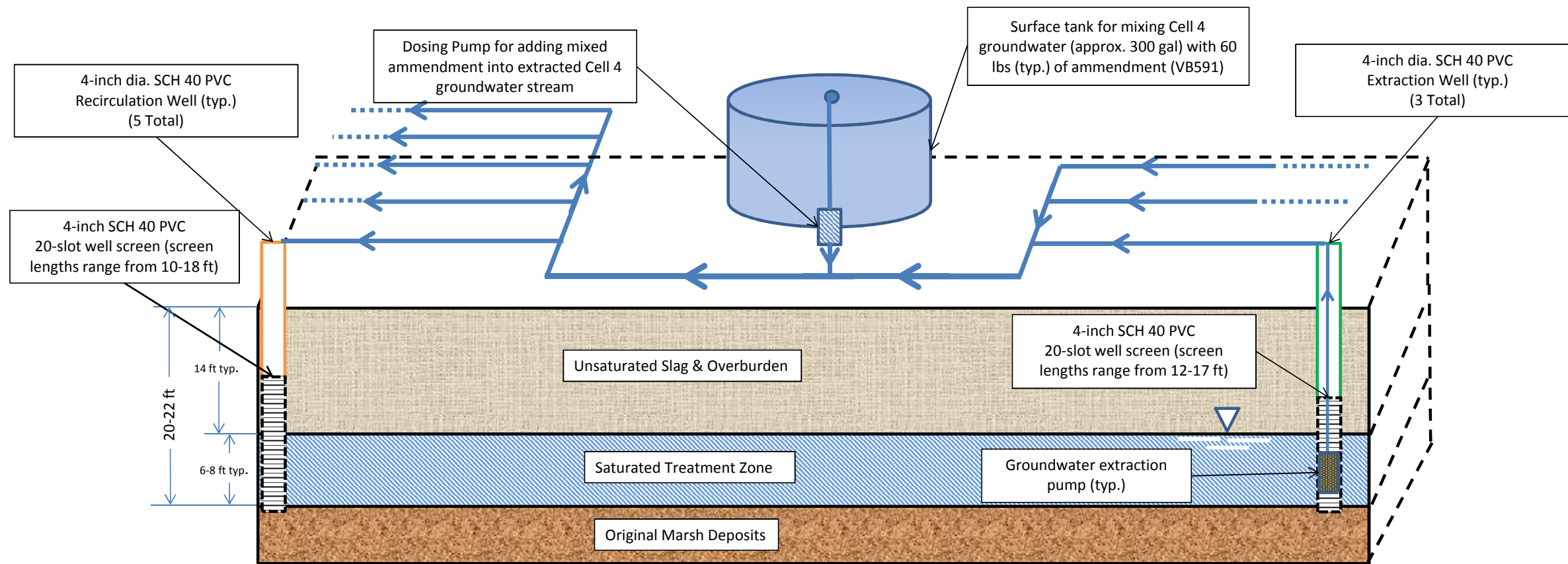
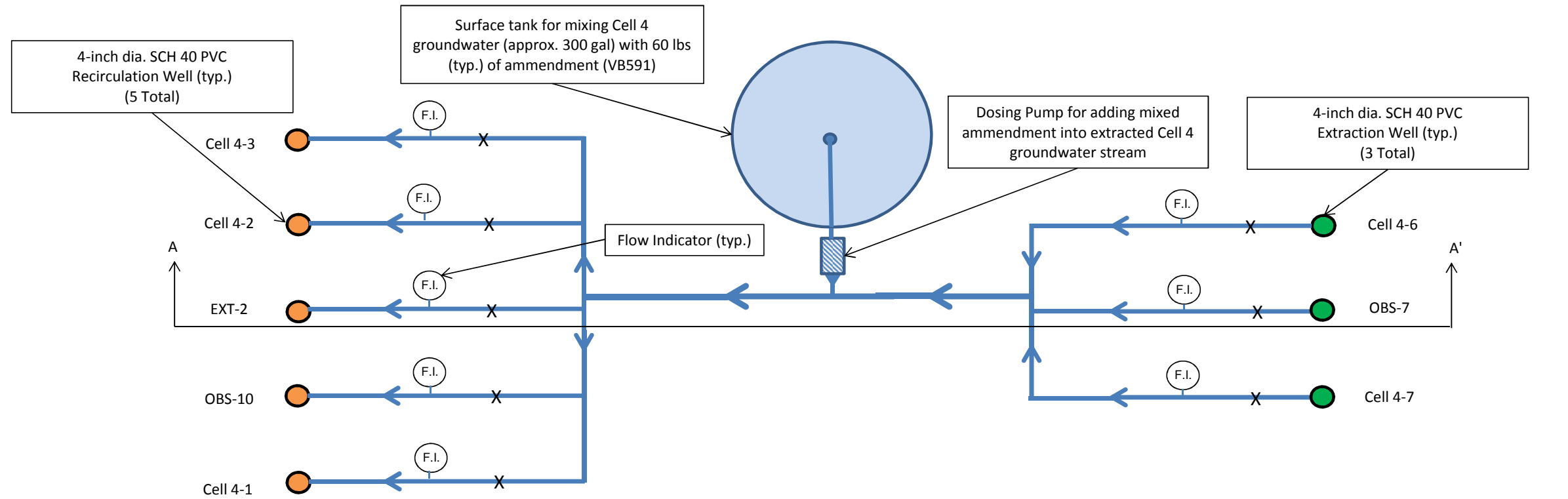


Figure 6
Schematic Layout and Sections
Cell 4 In-Situ Anaerobic Bio-Treatment System
Former Coke Oven Area Interim Remedial Measures
RG Steel Sparrows Point, LLC



Section A-A' (not to scale)

Cell 4

In-Situ Anaerobic Bio-System

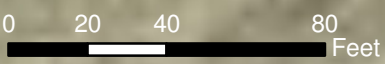


Image source: World Imagery, ESRI, GeoEye, 2009.

Legend

- Extraction Well (Existing)
- Extraction Well (New)
- Recirculation Well (Existing)
- Recirculation Well (New)
- ⊕ Monitoring Well (Existing)
- ⊕ Monitoring Well (New)
- ➔ Groundwater Flow Direction


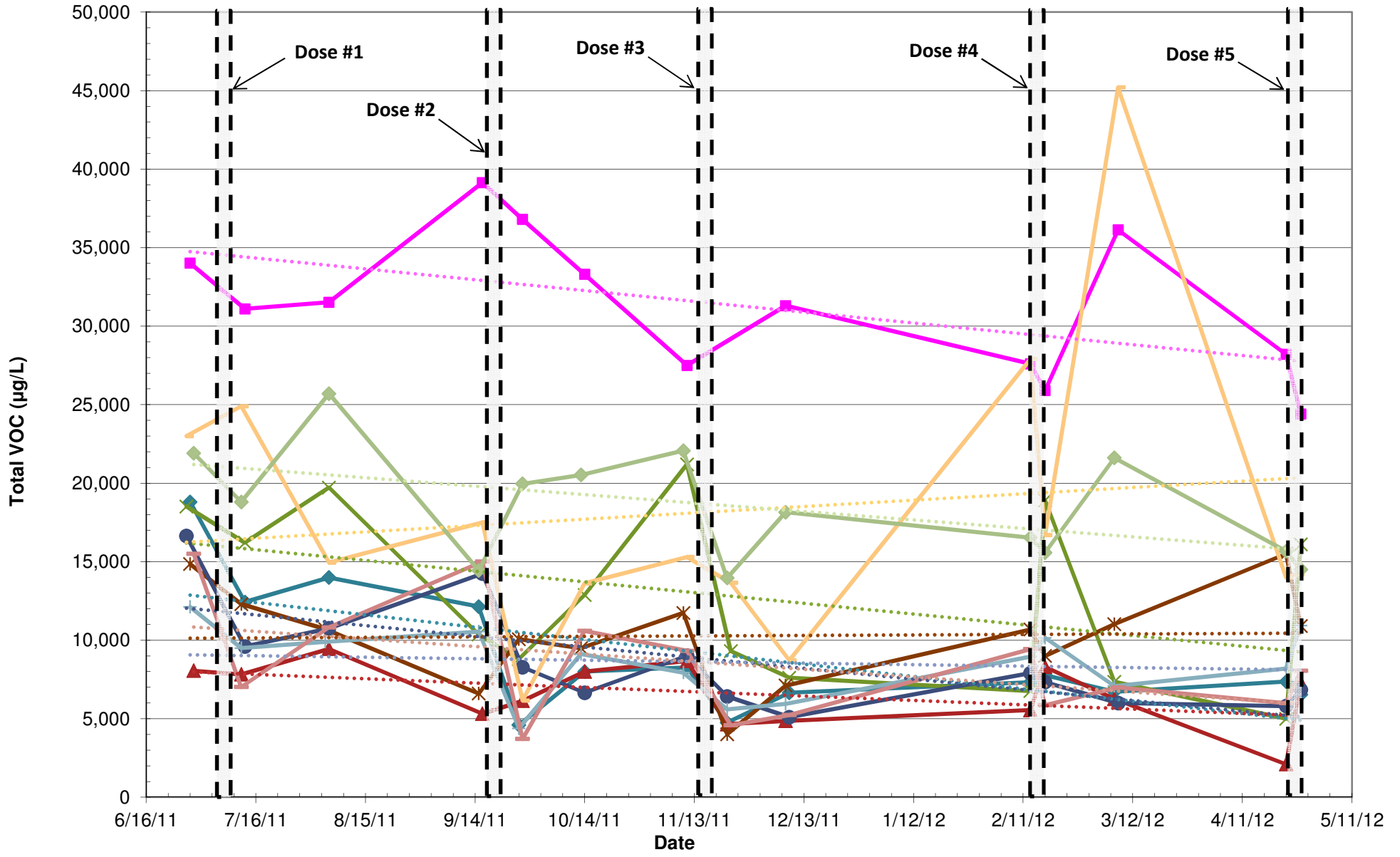
CLIENT	Severstal Sparrows Point, LLC		
LOCATION	Baltimore, MD		
 12420 Milestone Center Drive Germantown, MD 20876	GIS BY	JK/aer	11/18/2011
	CHK BY	BE	11/18/2011
	PM	BE	11/18/2011



Figure 7
Cell 4 Wells

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Figure 8
Measured Groundwater VOC Concentration per Month
Cell 4: In-Situ Anaerobic Bio-Treatment Area
RG Steel Sparrows Point, LLC



AS-2 EXT-2 OBS-6 OBS-8 Cell 4-1 Cell 4-3 Cell 4-4 Cell 4-5 Cell 4-6 Cell 4-7



CLIENT Sparrows Point

LOCATION Baltimore, MD

URS
200 Orchard Ridge Drive
Gaithersburg, MD 20878

GIS BY	JK	10/13/10
CHK BY	BE	10/14/10
PM	BE	10/14/10



Figure 9
LNAPL Monitoring and Recovery Wells

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