

COKE OVEN AREA INTERIM MEASURES PROGRESS REPORT (JANUARY 2011)

Prepared for

Severstal-Sparrows Point, LLC
Sparrows Point, Maryland



February 28, 2011

URS

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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 January 2011 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 Severstal Sparrows Point Facility located in Sparrows Point, Maryland. This progress report summarizes IM progress for January 2011.

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 in Coal Tar 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.

Cells 1, 4 and 6 had either continuing operations or design work completed during January 2011 and are addressed in this progress report. The other Cells are in various stages of evaluation, design, and under permitting considerations by Maryland Department of the Environment (MDE). The work for the other cells is being conducted in accordance with the requirements outlined in the revised approval letter received from US EPA on January 13, 2011.

Cell 1 operation was temporarily suspended from December 14th to January 23rd to support system modifications required for cold weather operation and to complete maintenance repairs of the internal combustion engine (ICE) remediation unit. Details of system winterization are described in this progress report.

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Evaluation and design work for the in-situ enhanced anaerobic bioremediation system at Cell 4 continued during January 2011.

Cell 6 was operational in January 2011 and continued to effectively remove LNAPL from the recovery wells.

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

The US EPA's March 2, 2010 letter approved the AS/SVE interim measure for Cell 1 as originally proposed by Severstal. This cell consists of a prototype IM, which includes AS/SVE coupled with vapor destruction via an ICE unit. Design of this system includes air sparging groundwater wells and vapor collection trenches as shown schematically on **Figure 2**.

Figure 3 shows the system layout of Cell 1, which consists of the following major components:

- Three (3) generally parallel and interconnected vapor collection trenches approximately 500 feet long and 60 feet apart, fitted with perforated 4-inch DR-17 high-density polyethylene (HDPE) pipe. 15 vertical extraction risers are connected to a common suction header,
- 16 air sparge wells located between the trenches,
- At-grade, 4-inch DR-17 HDPE sparge and suction headers fitted with control valves for 2-inch DR-17 HDPE sparge and suction laterals,
- One (1) ICE unit for extraction vacuum and vapor destruction, which is equipped with an integral Becker KDT series air compressor for sparge air, and
- Perimeter slag berm for system demarcation and protection from vehicular traffic.

January 2011 Operational Performance

Operational performance of Cell 1 during this reporting period is summarized in **Table 1**. In summary, the ICE operated for 175 hours during this reporting period and was available for approximately 24% of the month (January 24th through January 31st). The unit was offline during the other portion of the month to complete system modifications to support cold-weather operation (as described in detail below). Hydrocarbon removal rates averaged approximately 2.24 pounds per operating hour (approximately 54 pounds per operating day for a total of 393 pounds) during this period. Methodology used to compute hydrocarbon removal rates is in accordance with procedures described in Attachment 1 of the November 2010 Progress Report. A new catalytic converter was installed after the system was suspended for winterization modifications, increasing the hydrocarbon destruction efficiency greater than 99%.

Soil gas and ICE exhaust gas samples were collected to evaluate system performance. Calibrated field instruments (e.g., photoionization detector [PID]) and ICE system-calculated

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vapor concentrations were also used to evaluate system performance. The untreated soil gas samples were collected in Tedlar[®] bags and the ICE exhaust sample collected in a 6-liter SUMMA can. All gas samples were submitted to TestAmerica Laboratories, Inc. Knoxville, Tennessee laboratory for analysis by US EPA Method TO-15. These data are summarized in **Table 2**.

From **Table 2**, influent soil gas hydrocarbon concentrations, collected on January 24 and 31, 2011, were 3,800 and 10,297 parts per million by volume (ppmv), respectively. The ICE exhaust sample collected on January 31, 2011 exhibited hydrocarbon concentrations of 72 ppmv; demonstrating a hydrocarbon destruction efficiency greater than 99%.

January 2011 Groundwater Monitoring Results

Groundwater samples were collected on January 11, 2011 from the following wells:

- BP-MW-09 (upgradient of Cell 1),
- 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 for the analyses shown in **Table 3**. These data indicate benzene is the most prevalent volatile organic compound (VOC) constituent.

Figure 3A presents a graph of the total measured volatile organic compound (VOC) concentration in Cell 1 for each well by month since the startup of the IM system. A generally decreasing total VOC concentration trend is documented since system start-up in August 2010. The identified trend for these monitoring wells will continue to be monitored and assessed during system operation in future months.

Cell 1 System Modifications

Cell 1 operation was suspended from December 14th, 2010 to January 23, 2011 to modify the collection system piping and ICE unit for cold-weather operation. System modifications have been installed and include:

- 1) Relocation of the ICE unit and associated influent and effluent piping to the central portion of the test area,

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- 2) Installation of sloping and intermediate collection containers (sumps) to facilitate condensate removal from the soil gas collection piping (suction headers and lateral lines), and
- 3) Installation of appropriate insulation and protection for the collection lines and ICE unit.

The suction lines were sloped downward from the suction headers to condensate collection containers prior to entering the ICE unit's moisture-separator tank. The condensate containers include secondary containment and were constructed in an insulated encasement below grade (to minimize freezing) along the route of the suction header lines to the ICE unit. The ICE unit was moved to the middle of the prototype test area to allow for appropriate sloping of the collection lines. **Figure 4** shows photographs of the Cell 1 winterization modifications, which were substantially completed and the system re-started on January 24, 2011.

As indicated during our conference call in December 2010, modifications to the Cell 1 prototype system are also currently being designed to support continued longer-term operation of the AS/SVE system. Data collected during the operational period indicates that remedial actions in this area will be more efficiently conducted with the use of an electrically powered air compressor and catalytic oxidizer vapor destruction unit. Design of these system modifications is underway and will be installed in the coming months, along with appropriate modifications to the existing air permit. The existing ICE unit will continue to operate in the intervening period. The system modifications will also include measures to either maximize hydrocarbon concentration in the extracted soil gas or maximize the treatment area to increase the effectiveness of the remedial measure.

Cell 4: In-Situ Anaerobic Bio-treatment Area in Coal Tar Area

US EPA's March 2, 2010 letter approved the in-situ bio-treatment concept for Cell 4 (**Figure 5**), as originally proposed by Severstal. As discussed in September's progress report, baseline groundwater data and a microbial conditions evaluation using Bio-Trap[®] Samplers (Bio-Traps) were performed in July 2010 as the first step to developing a preliminary conceptual design.

Severstal is continuing efforts toward designing, installing and operating the planned in-situ enhanced anaerobic bioremediation system at Cell 4. These activities include:

1. Design and install a groundwater re-circulation system to deliver bio-nutrients to the subsurface.
2. Supplement the depleted nutrients that are necessary to support general microbial activities, including nitrate and phosphorous. Commercially available bio-nutrients (such as VB591 from BioNutra[®] Tech) are being evaluated.

In accordance with EPA's January 13, 2011 letter, Severstal plans to submit the proposed final design for Cell 4 by April 1, 2011 and complete construction and begin operation by July 3, 2011.

Cell 6: LNAPL Extraction at the Former Benzol Processing Area

The Cell 6 LNAPL monitoring and recovery system was monitored approximately weekly during January (four site visits). **Table 4** summarizes LNAPL occurrence and recovery observed during the reporting period and **Figure 6** illustrates the well locations.

During January, approximately 369 gallons (2,702 pounds) of LNAPL was recovered, bringing the total recovered LNAPL to 2,986 gallons (21,877 pounds) as of January 28, 2011. The LNAPL was recovered from the following wells:

Well	LNAPL Recovery (gal / lbs.)		Notes
	During January 2011	Total thru January 28, 2011	
BP-MW-05	361 / 2,645	2,558 / 18,743	
RW-04	2 / 15	266 / 1,949	
BP-MW-08	5 / 37	152 / 1,114	
BP-MW-11	0 / 0	8 / 57	(a)
RW-1	0.3 / 2	0.9 / 7	(b)
RW-2	0.1 / 1	0.1 / 1	(b)
RW-3	0.3 / 2	0.8 / 6	(b)

(a) Recovery system moved from BP-MW-11 to BP-MW-08 on September 8, 2010.

(b) Manual bailing.

The wells are presented in **Table 4** in the order of decreasing LNAPL occurrence/recovery. During the reporting period, the range of LNAPL thicknesses has varied as summarized below (wells are not listed if LNAPL was not present):

- BP-MW-05 (1.30 to 1.40 feet),
- BP-MW-07 (0.01 to 0.03 feet),
- BP-MW-08 (0.33 to 1.67 feet),
- BP-MW-11 (0.20 to 0.24 feet),
- BP-MW-10 (0.18 to 0.47 feet),
- RW-1 (0.13 to 0.13 feet),
- RW-2 (0.27 to 0.45 feet),
- RW-3 (0.38 to 0.65 feet), and

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- RW-4 (0.10 to 0.10 feet).

LNAPL was not observed in wells RW-5, BP-MW-06, BP-MW-09, or CO19-PZM004.

For all wells in which LNAPL accumulated, **Table 5** 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
Severstal Sparrows Point, LLC

Parameter	Units	Quantity
Total ICE Operating Time (January 1 - January 31, 2011)	hours	175
Overall ICE Operational Time	%	23.6
Estimated Total Hydrocarbons Destroyed	pounds	393
Estimated Hydrocarbon Removal Rate	pounds/hour	2.24

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

Sample ID		ICE Influent	ICE Influent	ICE Exhaust
Date		1/24/2011	1/31/2011	1/31/2011
Time		15:42	13:35	13:45
Dilution Factor		180965.10	295439.60	4168.73
Analyte	Units			
TO-15 Volatile Organics				
trans-1,3-Dichloropropene	ppb	< 36,000 U	< 59,000 U	< 830 U
Acetone	ppb	< 900,000 U	< 150,000 U	< 21,000 U
Ethylbenzene	ppb	< 36,000 U	< 59,000 U	< 830 U
2-Hexanone	ppb	< 90,000 U	< 15,000 U	< 2,100 U
Methylene Chloride	ppb	< 90,000 U	< 15,000 U	< 2,100 U
Benzene	ppb	3,500,000	8,600,000	59,000
1,1,2,2-Tetrachloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
Tetrachloroethene	ppb	< 36,000 U	< 59,000 U	< 830 U
Toluene	ppb	300,000	1,400,000	11,000
1,1,1-Trichloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
1,1,2-Trichloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
Trichloroethene	ppb	< 36,000 U	< 59,000 U	< 2,100 U
Vinyl Chloride	ppb	< 36,000 U	< 59,000 U	< 830 U
o-Xylene	ppb	< 36,000 U	67,000	< 830 U
m-Xylene & p-Xylene	ppb	< 36,000 U	230,000	2,400
2-Butanone (MEK)	ppb	< 180,000 U	< 300,000 U	< 4,200 U
4-Methyl-2-pentanone (MIBK)	ppb	< 90,000 U	< 150,000 U	< 2,100 U
Bromoform	ppb	< 36,000 U	< 59,000 U	< 830 U
Carbon Disulfide	ppb	< 90,000 U	< 150,000 U	< 2,100 U
Carbon tetrachloride	ppb	< 36,000 U	< 59,000 U	< 830 U
Chlorobenzene	ppb	< 36,000 U	< 59,000 U	< 830 U
Chloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
Chloroform	ppb	< 36,000 U	< 59,000 U	< 830 U
1,1-Dichloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
1,2-Dichloroethane	ppb	< 36,000 U	< 59,000 U	< 830 U
1,1-Dichloroethene	ppb	< 36,000 U	< 59,000 U	< 830 U
trans-1,2-Dichloroethene	ppb	< 36,000 U	< 59,000 U	< 830 U
1,2-Dichloropropane	ppb	< 36,000 U	< 59,000 U	< 830 U
cis-1,3-Dichloropropene	ppb	< 36,000 U	< 59,000 U	< 830 U
Total Volatile Organics	ppb	3,800,000	10,297,000	72,400
Hydrocarbons				
Methane	%	0.30	< 0.18 U	

Notes:
<Blank> = Not measured
BOLD = Analyte detected
ppb = parts per billion
</U = Analyte not detected above corresponding Reporting Limit
% = Percent

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

Analyte	Sample ID Date Units	MDE GW Stds ⁽¹⁾	CO02-PZM006	CO18-PZM006	BP-MW-09
			1/11/2011	1/11/2011	1/11/2011
Water Quality Parameters					
Temperature	deg C	NA	13.76	20.84	14.42
pH	std units	NA	7.64	6.92	11.43
ORP	mV	NA	-339	-150	-427
Conductivity	mS/cm	NA	1.420	2.400	2.250
Turbidity	NTU	NA	Clear	Clear	Clear
DO	mg/L	NA	0.00	0.85	0.00
Volatile Organics					
Acetone	µg/L	550	< 25,000 U	< 25,000 U	< 25,000 U
Benzene	µg/L	5	510,000	660,000	220,000
Bromoform	µg/L	80	< 5,000 U	< 5,000 U	< 5,000 U
2-Butanone (MEK)	µg/L	700	< 25,000 U	< 25,000 U	< 25,000 U
Carbon Disulfide	µg/L	100	< 5,000 U	< 5,000 U	< 5,000 U
Carbon Tetrachloride	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
Chlorobenzene	µg/L	100	< 5,000 U	< 5,000 U	< 5,000 U
Chloroethane	µg/L	3.6	< 5,000 U	< 5,000 U	< 5,000 U
Chloroform	µg/L	80	< 5,000 U	< 5,000 U	< 5,000 U
1,1-Dichloroethane	µg/L	90	< 5,000 U	< 5,000 U	< 5,000 U
1,2-Dichloroethane	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
1,1-Dichloroethene	µg/L	7	< 5,000 U	< 5,000 U	< 5,000 U
trans-1,2-Dichloroethene	µg/L	100	< 5,000 U	< 5,000 U	< 5,000 U
1,2-Dichloropropane	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
cis-1,3-Dichloropropene	µg/L	0.44	< 5,000 U	< 5,000 U	< 5,000 U
trans-1,3-Dichloropropene	µg/L	0.44	< 5,000 U	< 5,000 U	< 5,000 U
Ethylbenzene	µg/L	700	< 5,000 U	< 5,000 U	< 5,000 U
2-Hexanone (MBK)	µg/L	NA	< 25,000 U	< 25,000 U	< 25,000 U
4-Methyl-2-Pentanone (MIBK)	µg/L	630	< 25,000 U	< 25,000 U	< 25,000 U
Methylene Chloride	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
1,1,1,2-Tetrachloroethane	µg/L	NA	< 5,000 U	< 5,000 U	< 5,000 U
1,1,2,2-Tetrachloroethane	µg/L	0.05	< 5,000 U	< 5,000 U	< 5,000 U
Tetrachloroethene	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
Toluene	µg/L	1,000	27,000	64,000	57,000
Xylenes, Total	µg/L	10,000	< 15,000 U	< 15,000 U	36,000
1,1,1-Trichloroethane	µg/L	200	< 5,000 U	< 5,000 U	< 5,000 U
1,1,2-Trichloroethane	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
Trichloroethene	µg/L	5	< 5,000 U	< 5,000 U	< 5,000 U
Vinyl Chloride	µg/L	2	< 5,000 U	< 5,000 U	< 5,000 U
Total Volatile Organics	µg/L	--	537,000	724,000	313,000

Notes:

- = Not measured
- Bold** = Analyte Detected
- deg C = Degree Celcius
- mg/L = milligrams per liter
- mS/cm = Microsiemens per Centimeter
- mV = Millivolts
- NA = Standard not available or not currently established
- NTU = Nephelometric Turbidity Units
- ORP = Oxidation Reduction Potential
- std units = Standard units
- </U = Analyte not detected above corresponding Reporting Limit
- µg/L = micrograms per liter
- * = revised laboratory report

Table 4
LNAPL Occurrence and Recovery
Cell 6: LNAPL Recovery System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
Severstal Sparrows Point, LLC

Well	LNAPL Occurrence During January 2011 (ft)	Total LNAPL Recovery Period		Total LNAPL Recovered thru January 28, 2011		LNAPL Recovered During January 2011	
		Begin	End	(gal)	(lbs) (a)	(gal)	(lbs) (a)
BP-MW-05	1.30 to 1.40	28-Jan-10	On-going (b)	2,558	18,743	361	2,645
RW-04	0.10 to 0.10	23-Jul-10	On-going (b)	266	1,949	2	15
BP-MW-08	0.33 to 1.67	8-Sep-10	On-going (b)	152	1,114	5	37
BP-MW-11	0.20 to 0.24	23-Jul-10	8-Sep-10	8	57	0	0
RW-1	0.13 to 0.13	28-Oct-10	On-going (c)	0.9	7	0.3	2
RW-3	0.38 to 0.65	11/24/2010	On-going (c)	0.8	6	0.3	2
RW-2	0.27 to 0.45	1/28/2011	On-going (c)	0.1	1	0.1	1
BP-MW-10	0.18 to 0.47	na	na	0	0	0	0
BP-MW-07	0.01 to 0.03	na	na	0	0	0	0
RW-5	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

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.

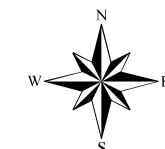
(b) Skimmer

(c) Bailing

Table 5
Depths (feet) to Water and LNAPL
Cell 6: LNAPL Recovery System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
Severstal 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
1/7/2011	--	--	--	12.43	12.70	0.27	--	--	--
1/14/2011	12.25	12.38	0.13	12.65	12.95	0.30	10.35	10.73	0.38
1/20/2011	12.35	12.48	0.13	12.75	13.06	0.31	10.35	10.73	0.38
1/28/2011	12.36	12.49	0.13	12.75	13.20	0.45	10.40	11.05	0.65
	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
1/7/2011	--	--	--	--	--	--	--	--	--
1/14/2011	10.78	10.79	0.01	12.00	13.40	1.40	11.96	11.98	0.02
1/20/2011	10.88	10.89	0.01	12.15	13.45	1.30	12.05	12.08	0.03
1/28/2011	10.81	10.81	0.00	12.10	13.40	1.30	12.02	12.03	0.01
	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
1/7/2011	12.53	14.20	1.67	--	--	--	--	--	--
1/14/2011	13.03	13.38	0.35	11.21	11.68	0.47	11.45	11.69	0.24
1/20/2011	13.13	13.79	0.66	11.31	11.78	0.47	11.55	11.78	0.23
1/28/2011	13.20	13.53	0.33	10.88	11.06	0.18	12.35	12.55	0.20

Figures



Legend

◆ Existing Monitoring Well

INTERIM MEASURES TREATMENT CELLS

"Cell 1": Prototype AS/SVE System in Benzol Area

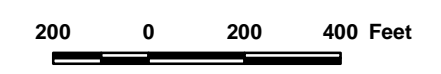
"Cell 2": AS/SVE and Dual Phase GW Treatment/Injection System in the Former Coal Storage Area

"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

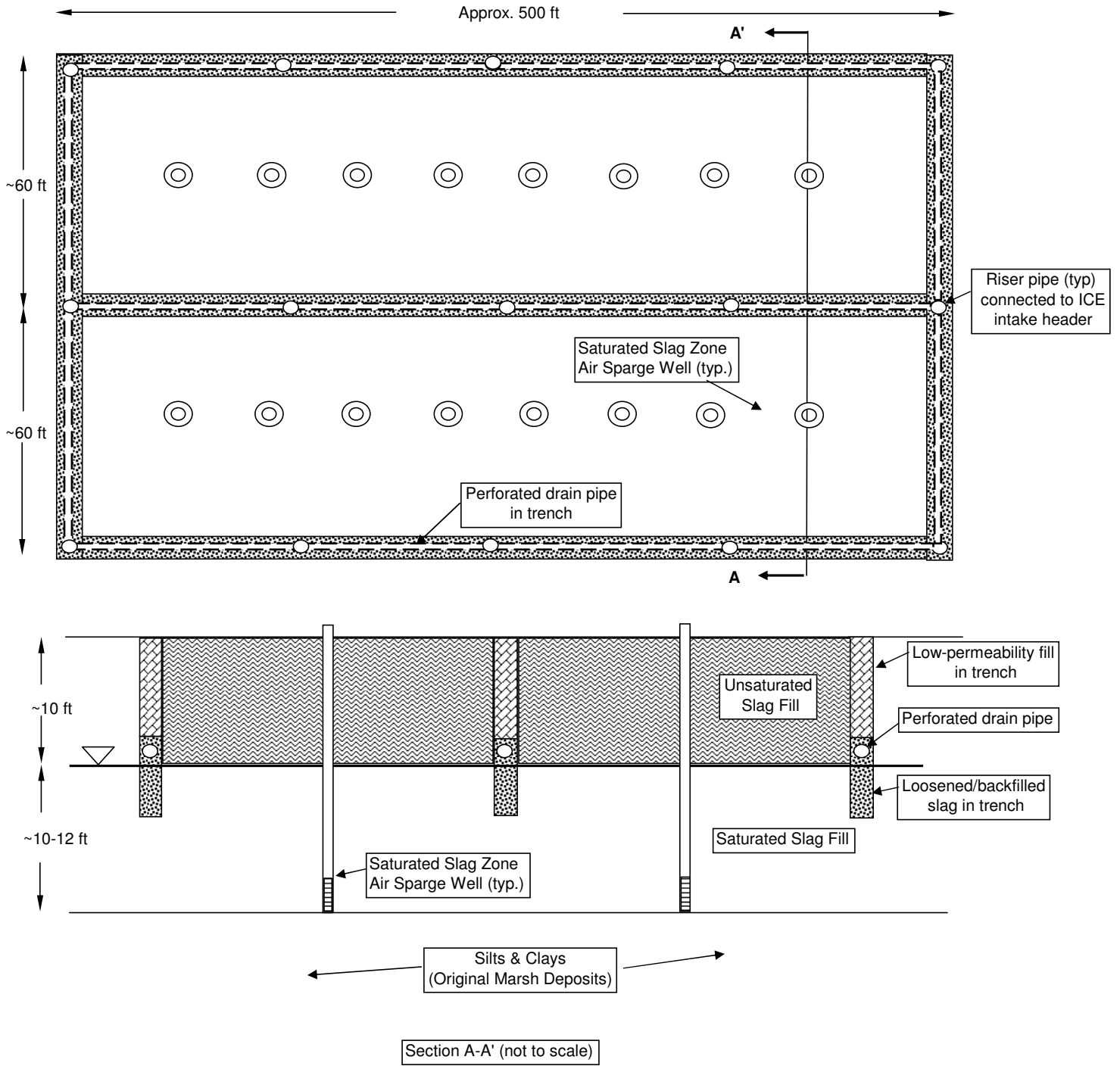


CLIENT: Sparrows Point	LOCATION: Baltimore, MD
DATE: 06/11/10	FILE: G:\Projects\SparrowsPoint\Projects\2010\CokeOven-and-CokePoint-6Prototype Cells_rev1.mxd
200 Orchard Ridge Drive Gaithersburg, MD 20878	








Figure 1
Interim Measures Treatment Areas

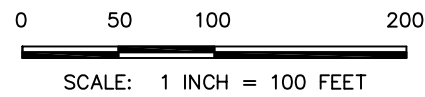
Image source: World Imagery, ESRI, GeoEye, 2009.

Figure 2
Schematic Diagram
Cell 1: Prototype AS/SVE System in Former Benzol Processing Area
Former Coke Oven Area Interim Remedial Measures
Severstal Sparrows Point, LLC



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)



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 335 COMMERCE DRIVE, SUITE 300
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Job:	15302307.11001
Prepared by:	JES
Checked by:	JH
Date:	10/27/10

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

FIGURE 3

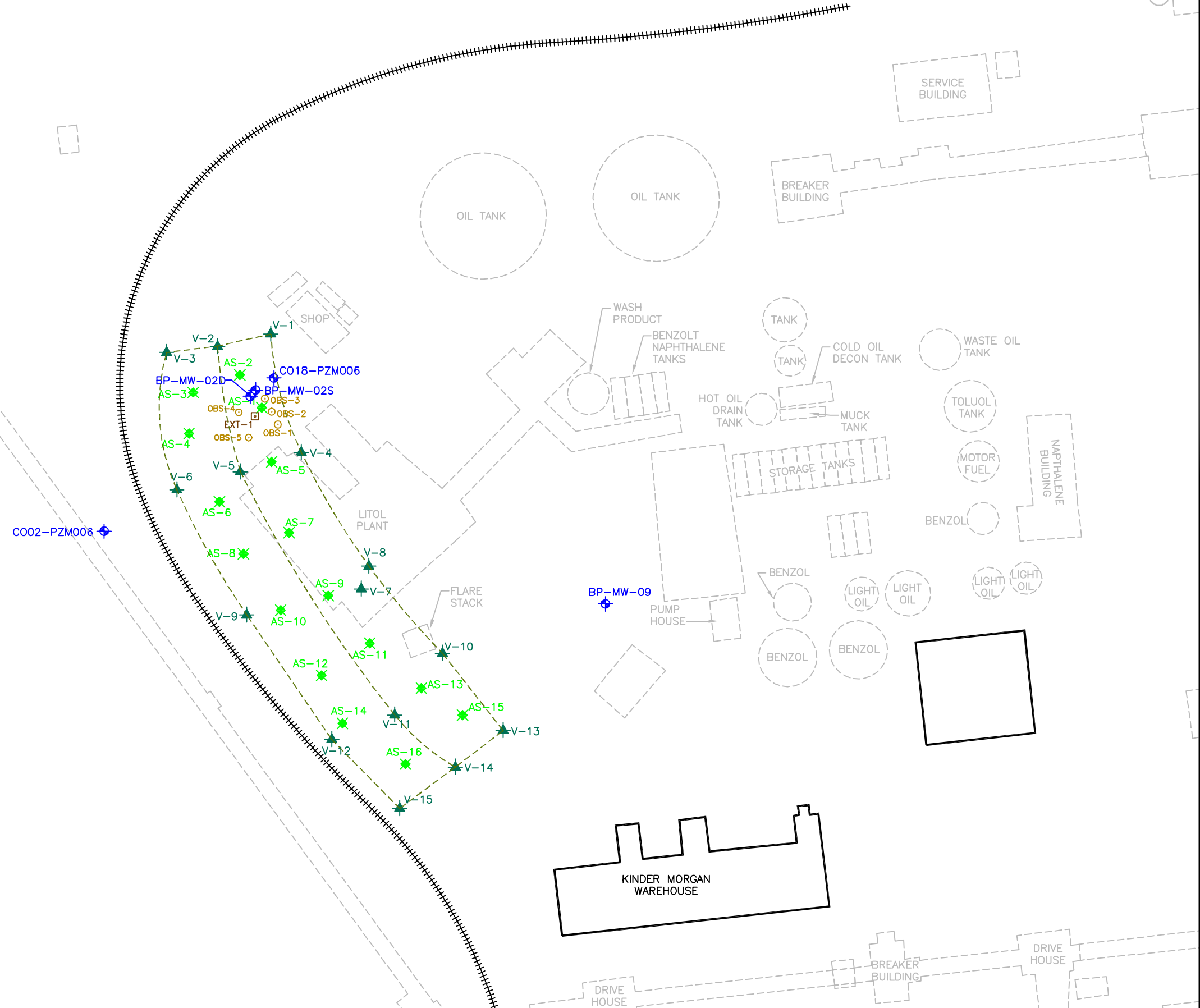


Figure 3A
Measured Groundwater VOC Concentration per Month
Cell 1: Prototype AS/SVE System in Former Benzol Processing Area
Severstal Sparrows Point, LLC

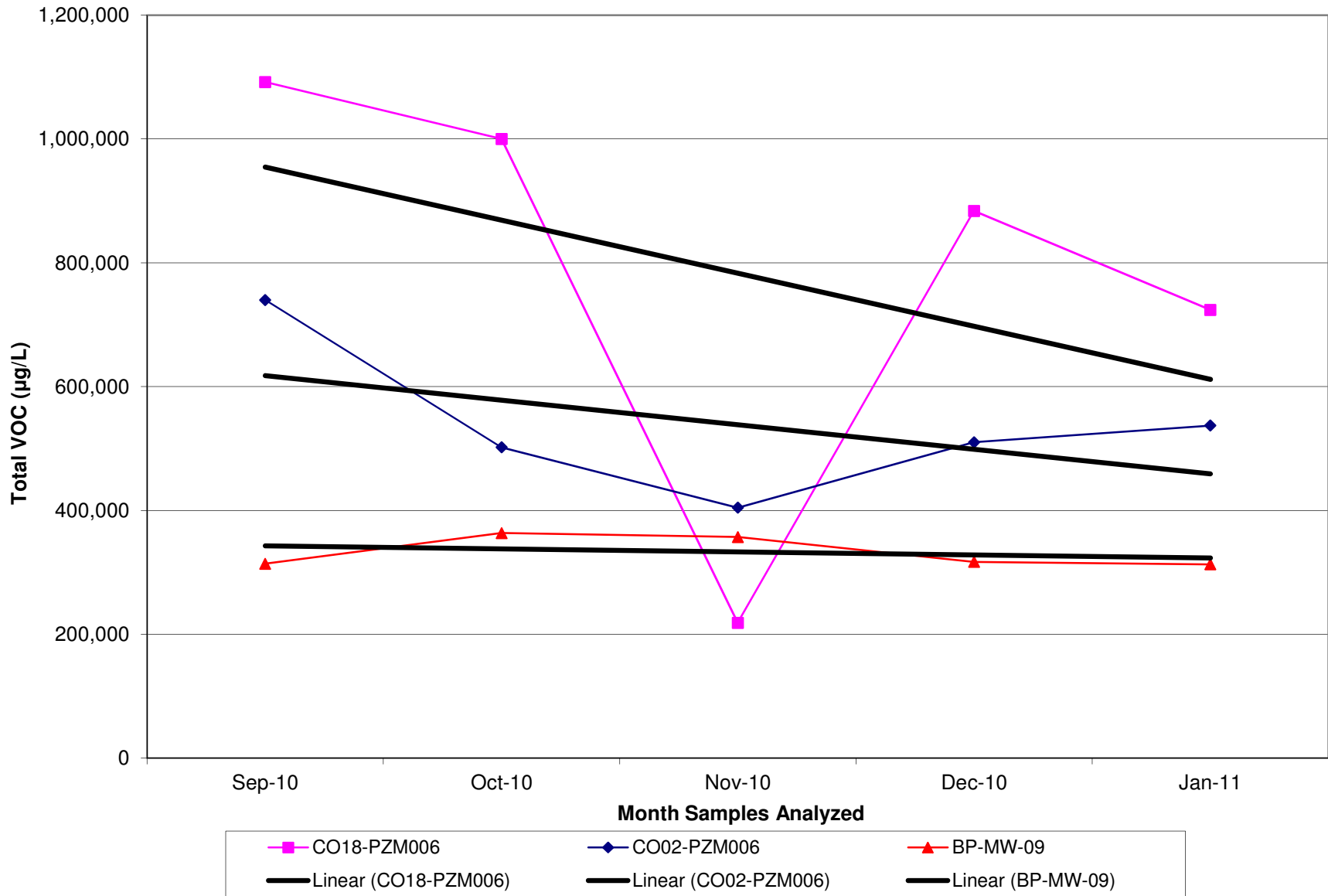


Figure 4
Photos of System Winterization Modifications
Cell 1: Former Benzol Processing Area
Severstal Sparrows Point, LLC Facility
Baltimore, Maryland





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


CLIENT	Sparrows Point		
LOCATION	Baltimore, MD		
 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 5
Existing Cell 4 Wells

G:\Projects\SparrowsPoint\Projects\2010\CokeOven-and-CokePoint-Cell4closeup_rev.mxd



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 6
LNAPL Monitoring and Recovery Wells

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