



February 15, 2014

Mr. Andrew Fan  
US EPA Region III, 3LC20  
1650 Arch Street  
Philadelphia, PA 19103-2029

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

**Subject: Consent Decree, Civil Action JFM-97-558  
Multimedia Consent Decree 2013 Annual Report**

Dear Mr. Fan and Ms. Brown;

Enclosed please find the 2013 Annual Report for the referenced Multimedia Consent Decree. This report is submitted in compliance with the annual reporting requirements of the Decree.

Please contact me at (314) 686-5611 should questions arise during your review.

Sincerely,

A handwritten signature in black ink that reads "Russell Becker". The signature is written in a cursive style.

Russell Becker  
Vice President, Remediation

Enclosure

# Multimedia Consent Decree 2013 Annual Report

**Prepared for:**

**U S Environmental Protection Agency  
Maryland Department of the Environment**

**Prepared by:**

**Sparrows Point, LLC  
1430 Sparrows Point Boulevard  
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**February 2014**

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## 1.0 Introduction

The Multimedia Consent Decree (Decree), originally entered into by Bethlehem Steel Corporation (BSC), the U.S. Environmental Protection Agency Region III (EPA) and Maryland Department of the Environment (MDE), defines specific actions required at the Sparrows Point facility "Facility" located in Baltimore County, Maryland. The Decree became effective on October 8, 1997 (Civil Action JFM-97-558). The Facility was purchased by Sparrows Point LLC on September 14<sup>th</sup>, 2012. The process to transfer the Decree to Sparrows Point LLC is underway but has not yet been executed as of the date of this Annual Report.

Specific actions outlined in the Decree include requirements for annual reporting of information and activity progress. This report provides information and activity progress for 2013 that was accomplished by Sparrows Point LLC.

There are three sections in the Decree that require annual reporting of information;

Section VI	Paragraph 4	Waste Minimization Plan,
Section XII	Paragraph 5	Notification and Certification of Documents,
Section XVIII	Paragraph 2	Civil Penalties and Pollution Prevention Credits.

Section VI, Paragraph 4, (Waste Minimization Plan), requires a report on the previous year's status of implementing each Work Plan required under Section VI including sampling data related to hazardous waste regulatory determinations.

Section XII, Paragraph 5, Notification and Certification of Documents, requires a progress report on actions completed as required in Sections V (Corrective Measures Work) and VII (Compliance Requirements) of the Decree.

Annual reports of actual pollution prevention expenditures during the previous calendar year for pollution prevention projects described in Section VI are also required by Section XVIII, Paragraph 2, Civil Penalties and Pollution Prevention Credits.

This Annual Report provides information on actions undertaken in 2013 that comply with the requirements of these three paragraphs. Information is presented in following sections of this report that complies with the reporting requirements of the Decree. Section 2.0 provides the status on the Waste Minimization Plan required in Section VI of the Decree and includes project cost information for the plan as required in Section XVIII. Sections 3.0 and 4.0 provide progress reports as required in Sections V (Corrective Measures) and Section VII (Compliance Requirements) respectively. Section 5.0 presents other supporting information required in Section XII including community relations, spill release reporting and changes to the overall management structure utilized by Sparrows Point LLC to implement the Decree.

## 2.0 Waste Minimization Plan

Iron and steel manufacturing at the site was permanently shut down in 2012. Waste streams associated with the production of iron and steel are no longer being generated. Minimization actions identified in the Consent Decree for these wastes are no longer applicable. The following sections provide additional detail as appropriate.

### Sump/Tank Work Plan

**Description of 2013 Activity:** Iron and steel manufacturing operation shut down, no further actions required.

### Recycle of Blast Furnace Gas Cleaning Slurry Solids

**Description of 2013 Activity:** Iron and steel manufacturing operation shut down, no further actions required.

### Recycling of BOF Fume Sludge

**Description of 2013 Activity:** Iron and steel manufacturing operation shut down, no further actions required.

### Recycling of Humphreys Creek Wastewater Treatment Plant Sludge

**Description of 2013 Activity:**

The iron and steel manufacturing facilities were shut down in 2012. The Humphreys Creek Wastewater Treatment Plant continues to operate to treat stormwater runoff and mill sump discharges. Sludge quantities generated by the treatment plant have been reduced by approximately 90 to 95%. Recycling options for this remaining sludge are not feasible without operations of the iron and steelmaking processes.

**2013 Expenditures:** \$0

### Maintenance Dredging of the Tin Mill Canal

**Description of 2013 Activity:**

No maintenance dredging activities were conducted in 2012.

**2013 Expenditures:** \$0

### Facility Wide Waste Minimization Plan

A Facility-wide Waste Minimization Plan (October 2006 Plan Update) was submitted in November 2006 in accordance with requirements of the Decree outlined in Section VI, Paragraph 3.c. The Waste Minimization Program identified as part of the requirements of the Consent Decree is no longer applicable in conjunction with the shutdown of iron and steelmaking operations.

### 3.0 Corrective Measures

Paragraph 5 of Section XII of the Decree requires a description of the work undertaken in Sections V (Corrective Measures) and VII (Compliance Requirements) of the Decree. This section provides a status report for corrective measures projects included in Section V of the Decree as follows:

- Rod & Wire Mill Sludge Bin Remediation Area
- Coke Oven Area Interim Measure
- Site Wide Investigation

#### Rod & Wire Mill Sludge Bin Remediation Area

Tasks were completed for the groundwater pump and treat Interim Measure at the former Rod & Wire Mill Sludge Bin Storage Area at Sparrows Point during 2013 in accordance with the scope and schedule submitted in the July 2000 Work Plan for Re- Establishment of Interim Measures, Former Sludge Bin Storage Area, Rod & Wire Mill that was approved by U. S. EPA on November 3, 2000. The interim measure tasks included:

- Maintaining institutional controls at the former in situ leaching area,
- Groundwater treatment system monitoring, operation and maintenance,
- Semi-annual groundwater elevation monitoring, and
- Semi-annual sampling and analysis of groundwater;

Specifics of the interim measures tasks completed in 2013 are as follows:

- Institutional controls were maintained at the former sludge bin storage area to minimize and manage activities that could disturb soils at the site. These controls consist of notice sign boundary markers and continuation of an authorization program to conduct work in the area.
- Operation and maintenance of the groundwater recovery wells, transfer pipeline and treatment process equipment located at the Humphreys Creek Wastewater Treatment Plant.
- Evaluation of the Interim Measure, including documentation of groundwater treatment flow, review of semi-annual groundwater elevation data, review of groundwater monitoring data and effectiveness of the Interim Measure.
- Semi-annual sampling, analysis and evaluation of the groundwater impacted by former operations at the sludge bin storage area.

A total of 2,538,611 gallons of water were extracted from the two Former Sludge Bin Storage Area groundwater pumping wells (RW15-PZM020 and RW10-PZM020) during 2013. This compares to 2,981,417 gallons extracted in 2012. The average total pumping rate for 2013 was 6,955 gallons per day (gpd), or 4.8 gallons per minute (gpm). A total of 113 pounds (lbs) of cadmium and 3646 pounds (lbs) of zinc were removed and treated during 2013. This compares to 183 lbs of cadmium and 6,442 lbs of zinc removed in 2012. The decrease in mass removal of cadmium and zinc in 2013 as compared to 2012 is

due to the decrease in the concentration of the metals in pumping wells RW15-PZM020 and RW10-PZM020 and the volume of water pumped from both wells in 2013.

Recovery of intermediate zone groundwater (approximately 20 to 30 feet below the ground surface) at the average annual 2013 pumping rate of 1.88 gallons per minute (gpm) for recovery well RW10-PZM020 and 2.96 gpm for recovery well RW15-PZM020 demonstrated a radius of influence that effectively controlled groundwater movement of the intermediate zone plume.

The groundwater elevation data for the shallow zone (groundwater table surface to 15 feet below this surface), combined with the chemistry data, document a water table situation where contamination migration is effectively controlled in this groundwater zone.

Groundwater elevation data for the deeper groundwater zone (greater than 50 feet in depth) suggest that heads in this zone may not be influenced by the pump and treat system; however, the chemistry data indicate that this zone is minimally impacted.

**Cadmium**—Cadmium concentrations in the two pumping wells (RW10-PZM020 and RW15-PZM020) exhibited generally similar to slightly lower concentrations as observed in recent prior years. Cadmium concentrations were also similar to prior years at most of the non-pumping wells.

**Zinc**—Zinc concentrations for 2013 in the two pumping wells (RW10-PZM020 and RW15-PZM020) showed lower concentrations as observed in recent prior years. This trend will be monitored during 2014. Zinc concentrations were also similar to slightly lower as compared to prior years at most of the non-pumping wells, TS04-PZM023 had noted lower concentrations in 2013. An exception is noted for well RW18-PZM047 which showed an increase in concentration in the 4<sup>th</sup> quarter of 2013. This trend will be monitored in 2014 as well.

The Proposed Operating Plan for 2014 is to: maintain institutional controls at the former storage area, continue operation, maintenance, and monitoring of the groundwater pump and treat system, and complete semi-annual monitoring of groundwater consistent with procedures outlined in the approved July 2000 Work Plan and as modified in this report.

## **Coke Oven Area Interim Measures**

Interim measures (IMs) have been developed to address identified environmental conditions at the Coke Oven Area (COA) Special Study Area in accordance with the United States Environmental Protection Agency's (US EPA)'s September 2, 2010 letter. Six IM "Cells" have been identified at the COA further described as follows:

- Cell 1: Prototype Air-Sparge/Soil Vapor Extraction (AS/SVE) System in the Former Benzol Processing Area
- Cell 2: AS/SVE and 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
- Cell 6: LNAPL Recovery at the Former Benzol Processing Area

As of December 31, 2013, Cells 1, 3, and 6 are operational. Design work was completed on the IM remediation systems for Cell 2 and Cell 5 and submitted for approval on August 6, 2013. Approval for both systems was received from EPA on September 10, 2013. As part of this approval, the bio-treatment process at Cell 4 has been discontinued and a combined Cell4/Cell5 remediation design has been approved. As of December 31, 2013, contracts have been awarded for drilling and construction for IM Cells 2 and 4/5. Construction and well drilling is scheduled to begin in February 2014. Fabrication of remediation equipment required for Cells 2 and 4/5 has begun as well and delivery of equipment is tentatively scheduled for March 2014. Further details for the progress of the IM systems are as follows:

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

Cell 1 consists of an AS/SVE system coupled with vapor destruction via an electric catalytic oxidation (CATOX) unit. The system at Cell 1 continues to operate on a pulsing schedule; where the system is in recovery or on mode for one day and then turned off to let the area rebound for two or three days. This practice was implemented during the first quarter 2013 to improve recovery of hydrocarbons from the subsurface. Operations continue to be in conformance with the manufacturer's specifications at all times that soil gases are collected in accordance with the May 20, 2011 modified permit-to-construct conditions. In total, Cell 1 has destroyed approximately 11,903 pounds of recovered hydrocarbons since operational startup in August 2010. A decreasing total volatile organic compound (VOC) concentration trend is documented at the groundwater wells monitored for system performance. The identified trend for these monitoring wells will continue to be monitored and assessed during system operation in future months.

### **Cell 2: AS/SVE and Groundwater Extraction System in Former Coal Storage Area**

Design work was completed in 2013 on the IM remediation systems for Cell 2 and submitted for approval on August 6, 2013. Approval for the Cell 2 system was received from EPA on September 10, 2013. The Cell 2 system includes: 1) groundwater extraction from selected wells installed into the semi-confined intermediate sand unit below the slag groundwater zone, 2) groundwater treatment, 3) groundwater re-injection, and 4) AS/SVE in the slag groundwater zone.

The intermediate groundwater sand unit ranges from approximately 20 feet below ground surface to approximately 40 to 45 feet below ground surface. The remediation design for this zone is to operate a pump and treat groundwater system that utilizes a low profile air stripper and an oxidizer to destroy all VOC vapors generated prior to exhausting to the atmosphere. The design of the remediation system involves pumping groundwater out of the impacted zone, addressing water quality issues (anti-scalants and pH adjustments, if necessary), sending the recovered fluids into a low profile air stripper, and then sending the treated groundwater to re-injection trenches up-gradient and introducing them to the shallow groundwater zone. The design flow is for a maximum of 40 gallons per minute (gpm). The off-gas from the air stripper containing the volatilized benzene and other VOCs would be diverted to an oxidizer where it would be destroyed prior to the air stream entering the open atmosphere.

The remediation design for the shallow groundwater zone is to operate an air sparging system, recover stripped VOCs, and destroy those captured VOCs prior to the air stream being released to the atmosphere. The delivery and recovery systems include the use of air sparge points and a horizontal vapor extraction trench. Eight (8) air sparge points will be installed along a 500 feet long stretch near the shore line of Cell 2.

Progress towards installation and operation of the approved interim measures for Cell 2 in 2013 included the following:

- Final specifications are complete and purchase orders for the process treatment equipment have been placed with the equipment vendor (Product Recovery Management, Inc.).
- The pre-installation and site prep work at Cells 2 and 4/5 is 90% complete. Treatment system pad prep work (placement of gravel pads) remains to be completed at each location. That work will be completed closer to the delivery date of the systems;
- Groundwater Appropriations Permit applications have been submitted to the MDE, and associated appropriation permits have been received from MDE;
- The groundwater discharge permit has been transferred to Sparrows Point LLC;
- The application to modify the existing Air Operating Permit for the site is currently being prepared. The air permit application is planned to be submitted by January 10, 2014;
- The process to select and engage an installation contractor is complete. A services agreement contract is in place with Key Environmental Inc. to provide the Interim Measure installation work. Field work is anticipated to start in January/early February and will be complete prior to treatment system equipment delivery;
- Allied Well Drilling has been contracted to perform the recovery and monitoring well installation services. This work will be coordinated with the schedule for installation contractor;
- The electrical services to Cells 2 and 4/5 are expected to be in place and active by mid to late February;

### **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. The system at Cell 3 continues to operate on a pulsing schedule; where the system is in recovery or on mode for one day and then turned off to let the area rebound for two or three days. This practice was implemented to improve recovery of hydrocarbons from the subsurface. Operations continue to be 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. In total, Cell 3 has destroyed approximately 1,352.4 pounds of recovered hydrocarbons since system startup on June 24, 2011. Since system startup, a generally decreasing VOC concentration trend in groundwater is documented for some of the monitoring wells. The trends for these monitoring wells will continue to be monitored and assessed during system operation in future months.

Design work completed in 2013 for the Coke Oven Area IM systems also included modifications for the Cell 3 treatment equipment. A new AS/SVE system which utilizes granular activated carbon specifically designed for vapor treatment (VGAC) will be installed. Based on the actual operations data from the previous system at Cell 3, it has been determined that the replacement AS/SVE system can be slightly downsized. The previous AS blower unit has a 30 horsepower (hp) motor, and it has been determined that the new system can step down in size to a 20 hp motor for the AS blower. In addition, the VOC concentrations in the recovered vapors have diminished to a point that they can be passed through

VGAC instead of a catalytic oxidizer. The replacement system will essentially be the same as the existing system, as well as operating nearly the same way, with the exception of these two modifications.

#### **Cell 4: In-Situ Anaerobic Bio-treatment Area**

The in-situ anaerobic bio-treatment system at Cell 4 has been discontinued as of the end of third quarter 2013. The treatment area at Cell 4 has been incorporated into the design of Cell 5, which will be installed in the first quarter 2014.

#### **Cell 4/5: Groundwater Extraction at the Turning Basin Area**

Design work was completed in 2013 on the IM remediation systems for Cell 4/5 and submitted for approval on August 6, 2013. Approval for the Cell 4/5 system was received from EPA on September 10, 2013. The Cell 4/5 system includes a revised remediation design that addresses a shallow groundwater contamination source area (Cell 4) and the area between the source and the shoreline (Cell 5) at the Turning Basin area.

The remediation system involves using high vacuum extraction points from which both soil vapor and groundwater will be recovered in an effort to promote the volatilization of naphthalene and other dissolved volatile organic compounds (VOCs) as well as the recovery of impacted groundwater. All recovered soil vapor and generated off-gas would be sent through VGAC vessels prior to being discharged to the atmosphere. The treated groundwater would be sent to re-injection trenches located up-gradient of the plume. In addition to providing a “flushing” effect across the source area, the introduction of treated water (with a lower pH and lack of dissolved iron and manganese) will eventually help alter the water chemistry inside the source area to a point where bio-augmentation efforts might be more successful than they have been to date.

The remediation design includes a dual phase recovery system with a low profile air stripper and will utilize VGAC to capture all VOC vapors in the air stream prior to being discharged to atmosphere. The design fluid flow is for a maximum of 40 gallons per minute (gpm), and based on the dissolved concentrations of iron and manganese, pretreatment will be required prior to entering the low profile air stripper. Pretreatment will occur in two equalization tanks, in series, where adjustments would be made to lower the pH (currently around 11.6) down to more neutral levels (7.5-8). In addition to pH adjustments, anti-scalants must be added to address the high dissolved iron and manganese concentrations. Once the water chemistry is altered, the groundwater would move through bag filters and then into a low profile air stripper. The off-gas from the air stripper would be merged with the recovered soil vapor and sent through the VGAC vessel to capture the VOCs prior to being exhausted to the atmosphere. Once the water has traveled through the air stripper, it will go through one more set of bag filters prior to being discharged to the subsurface, up-gradient of the plume, via two re-injection trenches.

The recovery and re-injection systems include the use of dual phase (soil vapor and groundwater) recovery wells and two horizontal injection trenches. Twelve (12) recovery wells will be installed along an approximate 500 feet long stretch down-gradient of the most recent 10,000 ppb isocontour line for naphthalene (between the naphthalene source area and the eastern shore line along the Turning Basin).

Progress towards installation and operation of the approved interim measures for Cell 4/5 in 2013 included the following:

- Final specifications are complete and purchase orders for the process treatment equipment have been placed with the equipment vendor (Product Recovery Management, Inc.).
- The pre-installation and site prep work at Cells 2 and 4/5 is 90% complete. Treatment system pad prep work (placement of gravel pads) remains to be completed at each location. That work will be completed closer to the delivery date of the systems;
- Groundwater Appropriations Permit applications have been submitted to the MDE, and associated appropriation permits have been received from MDE;
- The groundwater discharge permit has been transferred to Sparrows Point LLC;
- The application to modify the existing Air Operating Permit for the site is currently being prepared. The air permit application is planned to be submitted by January 10, 2014;
- The process to select and engage an installation contractor is complete. A services agreement contract is in place with Key Environmental Inc. to provide the Interim Measure installation work. Field work is anticipated to start in January/early February and will be complete prior to treatment system equipment delivery;
- Allied Well Drilling has been contracted to perform the recovery and monitoring well installation services. This work will be coordinated with the schedule for installation contractor;
- The electrical services to Cells 2 and 4/5 are expected be in place and active by mid to late February;

### Cell 6: LNAPL Extraction at the Former Benzol Processing Area

The Cell 6 LNAPL monitoring and recovery system operated during 2013. An estimated 1971 gallons (14,450 pounds) of LNAPL were recovered during 2013, bringing the total recovered LNAPL to 10,346 gallons (75,802 pounds) as of December 31, 2013. The LNAPL was recovered from the following wells:

Well	LNAPL Recovery (gal/lbs)	
	4 <sup>th</sup> Qtr 2013	Total thru 4 <sup>th</sup> Qtr 2013
BP-MW-05	164/1,202	8,189/60,002
RW-04	0/0	1,116/8,178
BP-MW-08	58/425	1,012/7,408
BP-MW-11	10/73	18/130
RW-03	0/0	19/141
RW-01	0/0	1/10
RW-02	0/0	0.8/5.9

LNAPL thicknesses during the reporting period are summarized below (wells are not listed if LNAPL was not present):

- RW-04 (2.5 ft),
- BP-MW-05 (1.0 ft),
- BP-MW-08 (2.8 ft),
- BP-MW-11 (5.5 ft),
- BP-MW-10 (0.01 ft),
- RW-03 (1.28 ft)
- RW-01 (0.30 ft), and
- BP-MW-07 (0.05 ft).

No LNAPL was observed in wells RW-02, RW-05, BP-MW-06, BP-MW-09, or CO19-PZM004. For all wells in which LNAPL accumulated. The existing LNAPL recovery systems will be operated in 2014 with periodic adjustments to the pumps and other components to maximize product recovery.

### **Site Wide Investigation**

Sparrows Point LLC has conducted a review of activities associated with the Facility and is undertaking an effort to develop and/or redevelop the Sparrows Point site initially including areas that in the recent past have been either unused or underutilized parcels. As discussed during a meeting with the EPA and MDE on November 29, 2012, Sparrows Point LLC has requested to remove portions of the property from inclusion within the Facility or Site for the purposes of the Consent Decree in correspondences in 2013. The properties for which removal is requested includes former residential, recreational and non-industrial areas generally located in the east-central portion of the Site. Work continues to define the process and path forward for this effort to obtain closure with the obligations of the Consent Decree for discrete parcels at the Site. Maryland Department of the Environment issued guidance for this process in a letter dated October 4, 2013.

## 4.0 Compliance Requirements

Paragraph 5 of Section XII of the Consent Decree requires a description of the work undertaken in Sections V (Corrective Measures) and VII (Compliance Requirements) of the Decree. Projects included in Section VII are as follows:

- Visible Emissions from BOF Shop Roof Monitor
- Kish Reduction
- Coke Point and Greys Landfill Operation

### Visible Emissions from BOF Shop Roof Monitor

Iron and steel manufacturing operation shut down, no further actions required.

### Kish Reduction

Iron and steel manufacturing operation shut down, no further actions required.

### Coke Point and Greys Landfill Operation

The Consent Decree required the preparation of a landfill operations plan and an engineering plan for Greys Landfill and Coke Point Landfill (Landfill Compliance Plan). The Landfill Compliance Plan was submitted on July 15, 1998. The Consent Decree also required the submittal of a plan and timetable for future uses and closure of the landfills. This document was prepared and submitted by BSC on April 8, 1999.

Activities conducted in 2013 for the landfills were as follows:

#### Coke Point Landfill

With the shutdown of iron and steelmaking operations at the Facility, the Coke Point Landfill is currently not being utilized for the management of non-hazardous waste materials. Waste materials have not been received at this landfill since the change in ownership from RG Steel Sparrows Point LLC to Sparrows Point LLC. Sparrows Point LLC does not intend to use the Coke Point Landfill facility to manage waste materials and has also further informed other entities operating at the Sparrows Point site that waste materials are not to be managed at this landfill.

The plan for Coke Point Landfill is to continue to use the facility for slag storage and tenant scrap metal recycling and iron bearing material recovery operations until mid-year 2014. Work will be completed during this time period to develop final grading and closure plans for the facility for submittal to the appropriate regulatory authorities. The future use of Coke Point Landfill, including the schedule for closure is currently contingent upon the ongoing interest by the Maryland Port Administration to acquire the parcel for the potential use of this area for dredged material containment facility

### **Control of Landfill Access and Activities**

Access control berms and a gate access structure are installed at Coke Point Landfill to mark the boundaries of the landfill and to prevent unauthorized access. Access control berms were upgraded in 2013 and placed around the perimeter of the landfill and are of sufficient height and grade to prevent vehicular access. The access control structures are being maintained as part of the current compliance actions for the landfill. .

Specific measures are being conducted to prevent unauthorized waste disposal at the landfill and include the following:

- Coke Point Landfill is located within the Sparrows Point site which currently has access control restricted to owners of the facility, demolition and scrap management operations and tenant operations. Access control includes security personnel at three operating gates to the facility and routine perimeter security patrols and inspections. Entities that have access to the site have been informed of the status of Coke Point Landfill and the restriction on future waste placement.
- Weekly inspections of the landfill access control structures and the access gate are being conducted by Sparrows Point LLC personnel to confirm the integrity of the measures being employed to restrict access to Coke Point Landfill. Routine inspections of the interior of Coke Point Landfill are also being conducted by Sparrows Point LLC personnel to confirm that waste materials are not being placed in the landfill.

### **Groundwater Monitoring Program**

Groundwater monitoring was conducted at Coke Point Landfill in 2013 in accordance with a request received from the Maryland Department of the Environment on December 3, 2012. Semi-annual sampling events were completed in the 1<sup>st</sup> and 3<sup>rd</sup> quarters of 2013. A semi-annual groundwater monitoring report providing data analysis and results consistent with normal practices of the Department for landfill groundwater compliance monitoring programs was submitted for the first half of 2013 on July 1, 2013 and will be submitted in the first quarter of 2014 for the 2013 second half monitoring event.

The reports include summaries of the following data collection activities:

- water level measurements in monitoring wells;
- sampling of monitoring wells; and
- laboratory analysis of monitoring well samples.

### **Greys Landfill**

#### **Landfill Compliance Improvements**

An erosion and sediment control plan and associated stormwater best management practices (BMPs) approved by Baltimore County are in place at Greys Landfill. The erosion and sediment control systems are providing acceptable BMPs for stormwater runoff from the current landfill waste management activities.

The current systems are being maintained at the landfill; maintenance activities have included or will include the following:

- Vegetation and tree growth has been removed as necessary within swales, the sediment basin and other control features at the landfill;
- Replacement of gravel erosion control lining with the swale structures;
- Existing silt fences have been replaced and additional silt fence has been installed at the clean soil stockpile area;
- The soil stockpile area has been graded and seeded;
- As-built plans for the sediment control basin have been reviewed to document that adequacy of the current performance of the sediment control basin.

Erosion and sediment control plans for Greys Landfill were submitted to Baltimore County for recertification in January 2013. Work on reviewing and addressing comments to the erosion and sediment controls and provision of supplemental submissions has been in progress throughout 2013. A revised erosion and sediment control plan that addressed comments from Baltimore County and the Department was submitted to Baltimore County on December 16th, 2013.

Approved landfill compliance improvements at Greys Landfill were initiated in 2005 and completed in 2008. A summary of activities completed for Greys Landfill is as follows:

Items Completed:

- Sediment/stormwater storage basin and outlet controls
- Final stormwater controls and stormwater swales
- Cement Deep Soil Mixing Stabilization Program
- Clearing and Grubbing
- 3-ft diversion swale excavated and riprap lined
- Landfill counter berms and slope regrading
- Final cap system to elevation 85
- Final seeding and slope stabilization measures

The landfill continues to operate in accordance with the approved landfill operations and engineering plan.

#### Groundwater Monitoring Program

Groundwater monitoring was conducted at Greys Landfill in 2013 in accordance with a request received from the Maryland Department of the Environment on December 3, 2012. Semi-annual sampling events were completed in the 1<sup>st</sup> and 3<sup>rd</sup> quarters of 2013. A semi-annual groundwater monitoring report providing data analysis and results consistent with normal practices of the Department for landfill groundwater compliance monitoring programs was submitted for the first half of 2013 on July 1, 2013 and will be submitted in the first quarter of 2014 for the 2013 second half monitoring event.

The reports include summaries of the following data collection activities:

- water level measurements in monitoring wells;
- sampling of monitoring wells; and
- laboratory analysis of monitoring well samples.

## **5.0 Decree Management Reporting**

### **Project Management**

The US EPA and MDE were informed of the ownership change of the facility from RG Steel Sparrows Point, LLC to Sparrows Point LLC on September 14, 2012. Transfer of the Consent Decree to Sparrows Point LLC is underway as of the writing of this report.

Notification to the U. S. Environmental Protection Agency and the Maryland Department of the Environment is hereby provided that the Project Coordinator responsible for the referenced Consent Decree is:

Mr. Russell Becker, Vice President, Remediation  
Sparrows Point, LLC  
1430 Sparrows Point Blvd.  
Sparrows Point, Maryland 21219  
Phone: (314) 686-5611

e-mail: rbecker@sparrowspoint.net

Communications between or among the parties, and documents, reports, approvals and other correspondence concerning the activities performed pursuant to the terms and conditions of the Consent Decree shall be directed to Mr. Becker. Copies of all documents to be submitted to Sparrows Point, LLC shall be sent to the Project Coordinator.

### **Community Relations**

There were several community relation activities during the year in support of communication efforts for the Multimedia Consent Decree environmental projects. It is anticipated that community relations will occur in 2014 through community leader outreach at scheduled meetings.

### **Release Reporting**

There were no releases, including spills or other events, that occurred at the Facility in 2013 that were required to be reported to the Agencies.