



February 15, 2013

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 2011 Annual Report**

Dear Mr. Fan and Ms. Brown;

Enclosed please find the 2012 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, appearing to read "Russell Becker", is written over a light blue horizontal line.

Russell Becker
Vice President, Remediation

Enclosure

Multimedia Consent Decree 2012 Annual Report

Prepared for:

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

Prepared by:

**Sparrows Point, LLC
1430 Sparrows Point Boulevard
Baltimore, MD 21219**



February 2012

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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 14th, 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 2012 that was accomplished by RG Steel Sparrows Point, LLC and 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 2012 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 RG Steel to implement the Decree.

2.0 Waste Minimization Plan

A summary of waste minimization activities completed during 2012 is presented in the following sections. To satisfy Decree Section XVIII on pollution prevention expenditures, each section also lists the costs incurred in 2012.

Sump/Tank Work Plan

Description of 2012 Activity:

Sumps and tanks underwent routine periodic inspections as necessary in 2012. No repairs or replacement requirements were identified as a result of the inspections.

Repairs and/or replacements of sumps and storage tanks as specified in the Consent Decree and the approved "Sump/Tank Work Plan and Schedule" were completed in 2003.

Repairs completed for sumps and tanks included the following actions:

- Corrosion repair
- Repainting
- Replacement of structural tank supports and brick foundations
- Concrete joint repair within sumps
- Rubber liner repair for sumps and associated piping
- Installation of epoxy liners for trenches containing pickling acid solutions

2012 Expenditures: Maintenance completed by in-house personnel

Recycle of Blast Furnace Gas Cleaning Slurry Solids

Description of 2012 Activity:

The blast furnace was shut down at the end of May 2012 and did not operate for the remainder of the year. This shutdown, if permanent, will eliminate this waste stream and the associated requirement to recycle gas cleaning slurry solids.

2012 Expenditures: Engineering completed by in-house personnel

Recycling of BOF Fume Sludge

Description of 2012 Activity:

The BOF facility was shut down at the end of May 2012 and did not operate for the remainder of the year. This shutdown, if permanent, will eliminate this waste stream and the associated requirement to recycle BOF fume sludge.

2012 Expenditures: Engineering completed by in-house personnel,

Recycling of Humphreys Creek Wastewater Treatment Plant Sludge

Description of 2012 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.

2012 Expenditures: Engineering completed by in-house personnel

Maintenance Dredging of the Tin Mill Canal

Description of 2012 Activity:

No maintenance dredging activities were conducted in 2012.

2012 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 at Sparrows Point will continue to be evaluated as part of the requirements of the Consent Decree 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

During 2012, the groundwater pump and treat Interim Measure at the former Rod & Wire Mill Sludge Bin Storage Area at Sparrows Point was operated 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 2012 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 existing wastewater treatment facility.
- Evaluation of the groundwater pump and treat system, including documentation of treatment flow, review of semi-annual groundwater elevation data, and review of effectiveness.
- Semi-annual sampling, analysis and evaluation of the groundwater impacted by former operations at the sludge bin storage area.

A total of 2,981,417 gallons of water were extracted from the two Former Sludge Bin Storage Area groundwater pumping wells (RW15-PZM020 and RW10-PZM020) during 2012. This compares to 3,471,639 gallons extracted in 2011. The average total pumping rate for 2012 was 8,160 gallons per day (gpd), or 5.6 gallons per minute (gpm). A total of 183 pounds (lbs) of cadmium and 6,442 pounds (lbs) of zinc were removed and treated during 2012. This compares to 179 lbs of cadmium and 8,418 lbs of zinc removed in 2011. The decrease in mass removal of zinc in 2012 as compared to 2011 is due to the decrease in volume of water pumped from both wells RW15-PZM020 and RW10-PZM020 in 2012.

Intermediate zone (approximately 20 to 30 feet below the ground surface) groundwater pumping, at the average annual 2012 pumping rate of 2.85 gallons per minute (gpm) for recovery well RW15-PZM020 and 2.82 gpm for recovery well RW10-PZM020, has historically demonstrated a radius of intermediate zone pumping influence that effectively controls movement 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 (further discussed below) indicate that this zone is minimally impacted. Groundwater monitoring data collected during 2012 suggests that there was some improvement in groundwater quality as compared to 2011.

Cadmium—Cadmium concentrations in the two pumping wells (RW10-PZM020 and RW15- PZM020) are generally similar to concentrations observed in recent prior years. At most of the non-pumping wells the 2012 cadmium concentrations are also similar to prior years. An exception is RW06-PZM001 where the 2012 4th quarter cadmium concentration (25 mg/l) was unreasonably higher than historically has been observed and is considered to be a non- representative outlier to be monitored going forward. In 2011, cadmium concentrations returned to levels similar to previous concentrations in RW06-PZM001 (2.3 mg/l and 1.7 mg/l in the 2nd and 4th quarters, respectively), but then spiked again in the 4th quarter 2012 to another unreasonably high concentration similar to what was observed in the 4th quarter results in 2010 (24 mg/l).

Zinc—Zinc concentrations for 2012 in the two pumping wells (RW10-PZM020 and RW15-PZM020) are generally similar to concentrations observed in recent prior years. In 2011, exceptions included the 4th quarter zinc concentrations for RW10-PZM004 (460 mg/l), RW20-PZM020 (100 mg/l), and RW10-PZM065 (460 mg/l). Each of these concentrations was unreasonably higher than historically has been observed and was considered to be a non-representative outlier to be monitored going forward. In 2012, zinc

The Proposed Operating Plan for 2013 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. As of December 31, 2012, the following interim measures are operational:

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

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. Modifications and equipment improvements were completed in 2012 for the Cell 1 prototype system to support continued longer-term operation of the AS/SVE interim measure remedial action in this area. In total, Cell 1 has destroyed approximately 9,579 pounds of recovered hydrocarbons since the startup of the IM system in 2010. Since system startup in August 2010, a decreasing total VOC concentration trend has been documented in the groundwater at wells CO18-PZM006, 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. The major design components were 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. In total, Cell 3 has destroyed approximately 623 pounds of recovered hydrocarbons since system startup on June 24, 2011. Decreasing groundwater trends have been noted for four monitoring wells that are monitored and assessed during system operation.

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. The major design components were 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. Four amendment dosing events occurred in 2012 in conjunction with system monitoring events to document the potential impacts. Trends for ten monitoring wells were monitored and assessed during system operation.

Cell 6: LNAPL Extraction at the Former Benzol Processing Area

During 2012, approximately 1652 gallons (12,109 pounds) of LNAPL was recovered from active skimmer recovery wells, bringing the total recovered LNAPL to 8,375 gallons (61,360 pounds) as of December 28, 2012. The LNAPL was recovered from the following wells:

Well	LNAPL Occurrence During December 2012 (ft)	Total LNAPL Recovery Period		Cumulative Total LNAPL Recovered	
		Begin	End	(gal)	(lbs) (a)
RW-04	1.86	23-Jul-10	On-going (b)	1,046	7,666
BP-MW-05	0.92	28-Jan-10	On-going (b)	6,630	48,577
BP-MW-08	0.85	8-Sep-10	On-going (b)	670	4,903
BP-MW-11	0.68	23-Jul-10	9/8/2010	7.8	57
RW-02	0.16	28-Jan-11	On-going (c)	0.8	5.9
RW-03	0.46	24-Nov-10	On-going (c)	19.3	141
RW-01	0.06	28-Oct-11	On-going (c)	1.3	10
BP-MW-10	0.18	na	na	0	0
BP-MW-07	0.68	na	na	0	0
BP-MW-06	none	na	na	0	0
RW-05	none	na	na	0	0
BP-MW-09	none	na	na	0	0
CO19-PZM004	none	na	na	0	0
Total Recovery:				8,375	61,360

The range of LNAPL thicknesses has varied, as of December 2012, the thicknesses are as summarized below (wells are not listed if LNAPL was not present):

- RW-04 (1.86 ft),
- BP-MW-05 (0.92 ft),
- BP-MW-08 (0.85 ft),
- BP-MW-11 (0.68 ft),
- BP-MW-10 (0.18 ft),
- RW-02 (0.16 ft),
- RW-03 (0.46 ft)
- RW-01 (0.06 ft), and
- BP-MW-07 (0.26 ft).

No LNAPL was observed in wells RW-05, BP-MW-06, BP-MW-09, or CO19-PZM004. The existing LNAPL recovery systems will be operated in 2013 with periodic adjustments to the pumps and other components to maximize product recovery.

Site Wide Investigation

Sparrows Point LLC Progress

Coke Oven Area Corrective Measures Study

During a meeting with the agencies held on November 29, 2012, Sparrows Point LLC proposed to prepare a Corrective Measures Study (CMS) Workplan for the final remedy at Coke Point to be submitted within ninety days of acceptance by the agencies. Follow up correspondence was provided to the agencies on December 11, 2012 that delineated the area at Coke Point proposed to be addressed in the CMS Workplan.

The agencies accepted the proposal for a CMS Workplan in a letter dated January 8, 2013. As clarified in correspondence from Sparrows Point LLC to the agencies dated January 16, 2013, work is underway on the Coke Oven Area CMS Workplan with delivery to the agencies scheduled for April 8, 2013.

Removal of Land from the Facility or Site

Sparrows Point LLC has conducted a preliminary 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. In accordance with Section XXXIII Removal of Land from the Facility or Site of the Consent Decree, and 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 a correspondence dated December 21, 2012. The property for which removal is requested includes former residential, recreational and non-industrial areas generally located in the east-central portion of the Site.

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

Monitoring for the compliance requirements for visible emissions from the Basic Oxygen Furnace (BOF) Shop roof monitor prior to shutdown of operations in 2012 was conducted in accordance with the requirements outlined in the Maryland State Implementation Plan (SIP) that was promulgated by the State of Maryland on 10/2/2000 and approved by the US EPA on 11/6/2001 as provided for in Section VII Paragraph A.4. and Section XVII 1.c. of the Consent Decree. With approval of the SIP by the US EPA, compliance requirements for visible emissions from the BOF Shop roof monitor are now implemented by requirements of the SIP and not the Consent Decree.

Kish Reduction

Kish reduction requirements outlined in the Consent Decree and subsequent tasks associated with approved kish reduction work plans have been completed. Iron and steelmaking operations at the Facility were shut down at the end of May 2012 and did not operate for the remainder of the year. This shutdown, if permanent, will eliminate ongoing requirements for kish reduction.

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 2012 for the landfills were as follows:

Greys Landfill

Landfill Compliance Improvements

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 results were submitted in June 2011 (*Greys Landfill Groundwater Monitoring Report for the 1st half of 2011*, KCI 2011). This monitoring report summarizes groundwater-monitoring results at Greys Landfill during the first half of 2011 (and also presents results collected for the initial four-quarter monitoring event that occurred from July 2009 to June 2010) and fulfilled the applicable environmental monitoring requirements for Greys Landfill outlined in the approved Coke Point and Greys Landfills 2011 Groundwater Sampling and Analysis Plan.

Groundwater monitoring will resume at Greys Landfill in 2013 in accordance with a request received from the Maryland Department of the Environment on December 3, 2012. The first semi-annual event is scheduled for the 1st quarter of 2013.

The following data collection activities will occur in 2013:

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

Results of the above investigations will be presented in a monitoring report that provides data analysis and results consistent with normal practices of the Department for landfill groundwater compliance monitoring programs.

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. In addition, the Maryland Port Authority (MPA) has expressed interest in acquiring portions of Coke Point for use as a dredged material containment facility. If this project moves forward, certain aspects of the landfill compliance and future closure activities may need to be adjusted or amended to accommodate MPA's development plans.

Groundwater Monitoring Program

Groundwater monitoring results were submitted in December 2011 (*Coke Point Landfill Groundwater Monitoring Report 2nd and 3rd Quarters 2011*, KCI 2011). This monitoring report summarized groundwater-monitoring results at Greys Landfill during the 2nd and 3rd quarters of 2011 and fulfilled the applicable environmental monitoring requirements for Coke Point Landfill outlined in the approved Coke Point and Greys Landfills 2011 Groundwater Sampling and Analysis Plan.

Groundwater monitoring will resume at Coke Point Landfill in 2013 in accordance with a request received from the Maryland Department of the Environment on December 3, 2012. The first semi-annual event is scheduled for the 1st quarter of 2013.

The following data collection activities will occur in 2013:

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

Results of the above investigations will be presented in a monitoring report that provides data analysis and results consistent with normal practices of the Department for landfill groundwater compliance monitoring programs.

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 and the community outreach plan for the Multimedia Consent Decree environmental projects. The intent of the community outreach plan is to provide a forum for discussion of community interests and concerns and maintain ongoing and proactive relations with local community participants and regional environmental organizations.

It is anticipated that community relations will occur in 2013 through community leader outreach at scheduled meetings. Letters of invitation will be sent to civic, business, environmental and community organizations representing the closest local communities and neighborhoods as well as the larger surrounding area. The leadership group is expected to help disseminate information back to the community through their own organizations, as well as keep Sparrows Point LLC apprised of community concerns. The group is actively engaged with a variety of community improvement issues, of interest to both the Sparrows Point facility and its surrounding neighborhoods, including but not limited to environmental issues.

Release Reporting

There were no releases, including spills or other events, that occurred at the Facility in 2012 that were required to be reported to the Agencies.