



August 2, 2013

Ms. Barbara H. Brown, Project Coordinator  
Land Management Administration  
Maryland Department of the Environment  
1800 Washington Boulevard  
Baltimore MD 21230

**RE: Coke Point Landfill  
Maryland Department of the Environment letter dated May 22, 2013**

Dear Ms. Brown:

This letter and associated attachments provides information intended to address the items outlined in the correspondence from the Maryland Department of the Environment dated May 22, 2013 which was received by Sparrows Point LLC on June 3, 2013. Information is provided with respect to the status of Coke Point Landfill, including ongoing waste minimization and recycling efforts, plan and timetable for future use and closure of the landfill and groundwater compliance monitoring information. This information is submitted in accordance with the specified 60 day response timeline outlined in the letter.

## **STATUS OF COKE POINT LANDFILL**

### **Current Activities**

A site plan has been attached that shows the Coke Point Landfill boundary, existing topography of the landfill as of March 2011, areas used for waste disposal, and current slag storage areas and tenant scrap metal recycling and iron bearing material recovery operations (Figure 1) . Coke Point Landfill is currently not accepting waste materials generated from the Sparrows Point peninsula for landfill management. The curtailment of ongoing waste landfilling activities was implemented after the change in ownership of the site from RG Steel Sparrows Point LLC to Sparrows Point LLC and has been maintained in conjunction with the decision reached in early 2013 to terminate integrated iron and steel making operations utilizing the existing equipment and facilities at the site.

Locations within the boundary of Coke Point Landfill are currently being utilized for slag storage and tenant iron bearing material recovery and scrap metal recycling operations. An updated operations manual reflecting the current activities for the landfill is attached with this document. Ongoing activities at the landfill are further described as follows:

- The eastern portion of the landfill is being used for the storage of processed steel slag materials as shown in Figure 1. Former operations screened and sized steel slag generated during the steelmaking process for reuse as road aggregate or other aggregate uses. Screened and sized slag materials were stored within the boundary of Coke Point Landfill in the areas delineated on the site plan. Screened steel slag material is still present and is intended to be recovered and used for road maintenance at the Sparrows Point site.
- Scrap metal and iron bearing materials previously disposed or managed in Coke Point Landfill are currently be recovered for processing and sale. Areas of Coke Point Landfill where these materials are currently stored or processed are shown on Figure 2. Figure 2 also shows areas that have undergone reclamation efforts and areas that remain to be reclaimed.

### **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 of sufficient height and grade to prevent vehicular access have been upgraded and placed around the perimeter of the landfill. The access control structures are being maintained as part of the current compliance actions for the landfill. The current configuration of the access control berms and gate access structure is shown on plan view in Figure 1.

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 around the clock security personnel at three operating gates for the Sparrows Point site and routine perimeter security patrols and inspections. Entities that have access to the site have been informed that Coke Point Landfill is not accepting waste materials.

- 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.

## **IRON BEARING MATERIAL RECOVERY AND RECYCLING**

### **Process**

Materials that have reusable iron content are currently being reclaimed or processed by Fritz Enterprises Inc. within the footprint of the Coke Point Landfill boundary. The effort includes a process that physically separates iron using equipment including: hammer mill, drop ball cranes, excavators and magnetic material separators and conveyors. Scrap metal is also being recovered by Fritz Enterprises Inc. from landfill areas. The iron bearing materials and scrap metal are sold for reuse at various offsite locations. Removal of concrete materials from the landfill for processing and recycling is not occurring now or planned in the future.

Iron bearing materials are being reclaimed from the subsurface slag and other materials using typical construction equipment including; dozers, excavators and a specialty designed salvage machine. The salvage machine is used to magnetically separate iron bearing materials. Magnetically separated materials are then processed further either by drop balling to reduce the size of recovered material or processed through the Fritz hammer mill facility to provide a raw material feed product for the iron and steel industry. Scrap metal is reclaimed from the landfill and processed as required to provide appropriate sizing for shipment.

### **Environmental Controls**

Fugitive dust emissions from the material recovery operations and subsequent transport to the on-site processing equipment are being controlled by dust abatement procedures. Dust abatement includes the use of road watering equipment used at the working face and associated haul roads during the material separation process. Fugitive emissions from the on-site processing equipment including the hammer mill are being controlled in accordance with the air permits that have been issued to the tenant for the equipment.

Odors have not been noticeable from materials recovered from the landfill or from the working face of operations. Odors also are not anticipated to be a

future issue based on the inert nature of waste materials typically disposed at Coke Point Landfill. If required, odor control products may include granular and liquid odor suppressants (masking agents) and odor neutralizers that work on the ion-exchange principle to neutralize offensive odor ions. Odor control will be accomplished via sprayers on wheeled equipment with a movable spray arm mounted on a rotating platform.

Stormwater is retained on-site at the Coke Point Landfill area. Best management practices are in place for stormwater management in support of the recovery and recycling operations. Gravel filter berms have been placed around the working areas to retain runoff and aid in stormwater control.

### **Recovered Material Quantities**

Fritz Enterprises was contacted to provide a summary of materials removed from Coke Point Landfill in 2010, 2011 and in 2012 prior to the ownership period of Sparrows Point LLC (September 14<sup>th</sup>, 2012). Information provided by Fritz has been attached to this letter and is summarized as follows:

<b>Date Materials Recovered</b>	<b>Metallic Material (tons)</b>
2010	56,897
2011	59,274
2012 (prior to September 14, 2012)	12,323

Although processing within the landfill is ongoing, the Fritz Enterprise operating plan has not recovered significant materials from Coke Point Landfill from September 15 2012 – June 2013.

### **Material Recovery and Recycling Plan**

Areas of Coke Point Landfill where recovered materials are currently stored or processed are shown on Figure 2. The attached figure also shows areas that have undergone reclamation efforts and areas that remain to be reclaimed. The scope of the remaining effort will encompass the processing of existing surface materials located on the western half of the landfill and recovery and processing of materials from remaining areas on the eastern side of the landfill.

Material recovery efforts at Coke Point Landfill are anticipated to continue into the 2<sup>nd</sup> quarter of 2014. Quarterly updates will be provided at the end of the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2013 and the first quarter of 2014.

## PLAN AND TIMETABLE FOR FUTURE USE AND CLOSURE OF COKE POINT LANDFILL

The solid waste plan for the Sparrows Point site does not include the continuous use of Coke Point Landfill for the long-term management and disposal of acceptable solid wastes generated at the site. 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 through 2013 and in 2014. This landfill may also be used on a non-routine basis in this timeframe as may be appropriate to support either site cleanup or landfill grading requirements. Prior notice will be provided to the Department should the need arise for waste disposal at the landfill during this period.

Engineering work will be completed during this time period to develop final grading and landfill closure plans for the facility for submittal to the appropriate regulatory authorities. Final closure of the landfill facility will be in accordance with the submitted and approved engineering plans.

The future use of Coke Point Landfill, including the schedule for closure, is currently contingent upon the ongoing interest by the Maryland Port Administration (MPA) to acquire the parcel. Timely communication will be provided to the Department should key decisions be made concerning the future acquisition and use of this area by the MPA.

## GROUNDWATER MONITORING

Concerns were raised in the referenced Department letter about the source of benzene in the groundwater that is being monitored in well CP08-PZM008 and whether it originates from within the Coke Point Landfill or from other sources, such as the Coke Oven Area. In response, Sparrows Point LLC offers the findings of the *Site Wide Investigation Report of Nature & Extent of Releases to Groundwater from the Special Study Areas* (Nature and Extent Report) completed by URS in 2005 (modified in 2007). This report found that:

*“ VOC and SVOC impacts (predominately benzene and naphthalene) to groundwater in the shallow zone is highest near the east boundary of the Coke Point Landfill SSA near CP08. VOC- and SVOC-impacted groundwater within the shallow and intermediate groundwater zones extends to the shoreline to the east south and west. The VOC concentrations (benzene) show a two order of magnitude decrease from the source area in all directions. The SVOC (naphthalene) concentrations are more evenly distributed across the SSA...”*

*...Based on the results of the groundwater samples collected during the RSC and the N&E activities and the hydrogeologic conditions present at the Site, the horizontal and vertical extent of COPI analytes have been defined for the Coke Point Landfill SSA. Associated VOC and SVOC groundwater plumes and migration pathways have been defined to the extent practical along the shoreline. This data is adequate to support subsequent risk-based characterization of the SSA."*

EPA, in reviewing the Nature and Extent Report, requested isoconcentration maps of benzene (and naphthalene) for the combined Coke Oven and Coke Point Landfill areas (EPA, March 15, 2005). These maps were provided to the agencies (ISG Sparrows Point LLC, December 6, 2006) and the shallow benzene isoconcentration map for the Coke Point Area has been attached for your review. The data in this map provide an overall representation of the nature and extent of benzene groundwater contamination in the Coke Point Area and provide evidence that the benzene at CP08 is local in nature and not related to other sources. EPA also indicated in their comment letter that they were satisfied with the Nature and Extent Report and determined that it met the objectives for defining the nature and extent of contamination from the special study areas, including Coke Point Landfill (EPA, March 15, 2005). Sparrows Point LLC is in agreement with that conclusion.

Recent data collected as part of ongoing compliance groundwater monitoring for Coke Point Landfill supports the conclusions reached in the Nature and Extent Report (*Coke Point and Greys Landfills Semi-Annual Monitoring Report, 1<sup>st</sup> Half 2013*, Sparrows Point LLC, July 1, 2013). Most notably, benzene was not detected in shallow zone well CP02 located to the north of CP08, and continued to show significant attenuation of concentration in the range of three orders of magnitude towards the south and the shoreline.

It is understood that the Department has requested further work to investigate the nature and extent of impacts associated with groundwater monitored at the well CP08 location. Three additional groundwater monitoring wells will be installed in this area to supplement previous nature and extent groundwater investigation work and current groundwater compliance monitoring for the Coke Point Landfill. These wells will be installed to monitor the shallow groundwater zone in locations as shown on Figure 3 and specifically to define the nature and extent of shallow groundwater impacts towards the shoreline and towards the east of CP08.

Groundwater data will be collected from the newly installed wells in accordance with parameters and sampling protocol used for semi-annual compliance monitoring events currently ongoing for Coke Point Landfill. This

additional data will be evaluated in conjunction with the semi-annual groundwater monitoring program also in accordance with associated procedures and reporting obligations.

If you have any questions regarding the information provided in this response, please contact me at (314) 686-5611.

Sincerely,

A handwritten signature in blue ink that reads "Russell Becker". The signature is written in a cursive style with a large initial 'R'.

Russell Becker  
Vice President, Remediation

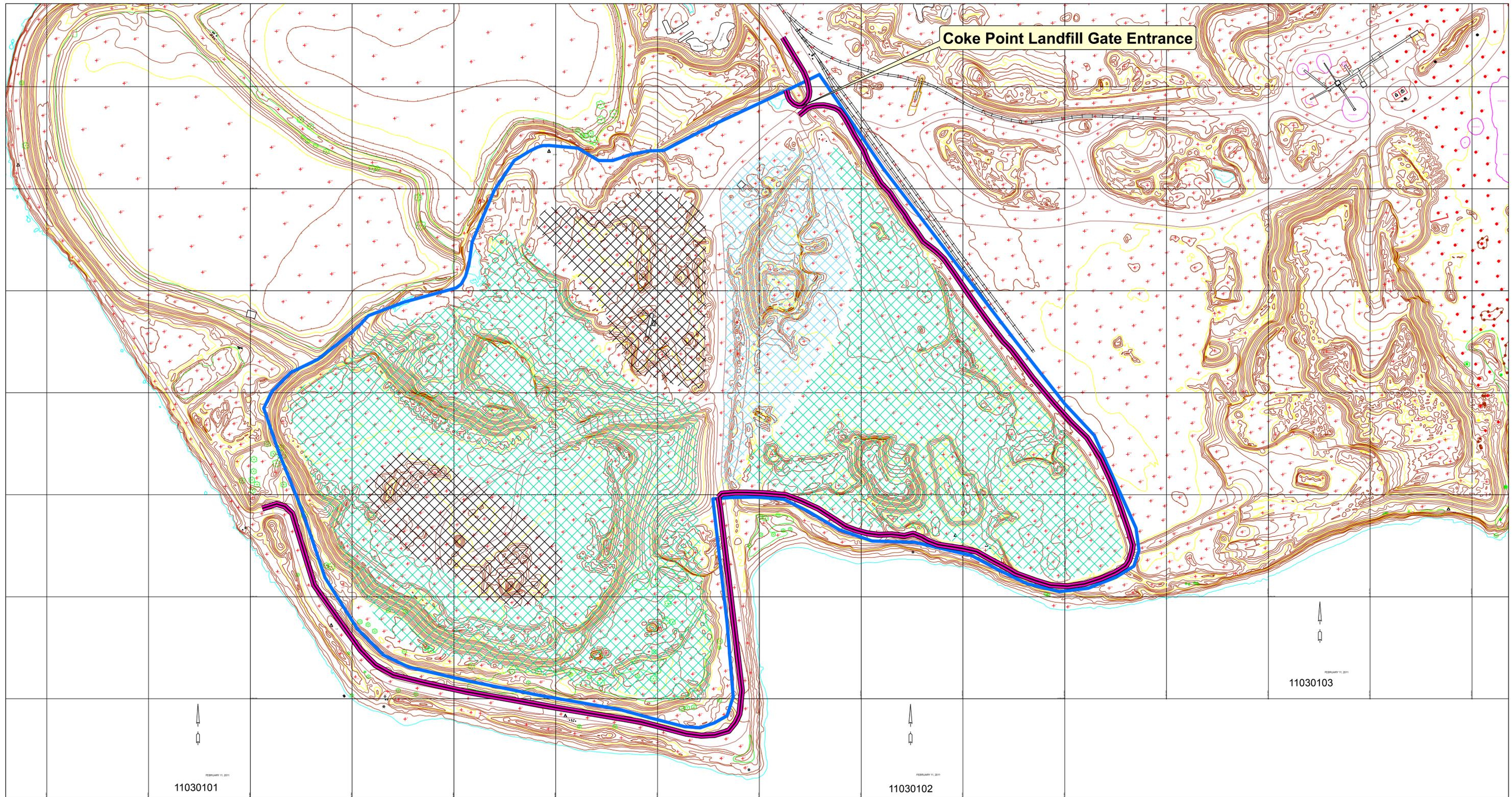
Enclosures

cc: Andrew Fan, Project Coordinator, US EPA Region III



Coke Point Landfill - Current Conditions

July 2013



# Coke Point Landfill - Iron Bearing Material Recovery Plan

July 2013



## Legend

-  Iron Bearing Material Recovery Operations (Current Areas)
-  Iron Bearing Material Recovery Complete
-  Area of Future Iron Bearing Material Recovery
-  Access Control Berm
-  Landfill Boundary

**Figure 2**

**COKE POINT LANDFILL FACILITY**  
**OPERATIONS MANUAL**

**July 2013**

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

**OPERATIONS MANUAL  
COKE POINT LANDFILL FACILITY**

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**DRAWINGS**

Figure 1      Coke Point Landfill Current Conditions

## **1.0 INTRODUCTION**

### **1.1 Background**

Coke Point Landfill is a solid waste disposal area located within the boundary limits of the Sparrows Point site owned by Sparrows Point, LLC. The Sparrows Point site is located in Baltimore County, Maryland at the southeast corner of the Baltimore metropolitan area, approximately nine miles from the downtown area. The facility occupies all of a peninsula bounded to the west by Bear Creek; to the south by the Patapsco River; and to the east by Jones Creek, Old Road Bay and the city of Edgemere. The facility is approximately 3100 acres. Coke Point Landfill is located at the southwestern edge of the facility adjacent to the Patapsco River.

The landfill area is approximately 46 acres with a specific landfill boundary defined as shown on Figure 1 attached with this operations manual. The area is characterized by surface materials of slag and miscellaneous fill that were placed during filling operations to provide made land at Coke Point. Filling operations in this area began in approximately 1952 and the extent of the area was generally defined by 1973 as determined by aerial photograph records. Pre-landfilling topographic elevations are approximately 10 to 15 feet. Vegetation is generally not present on the surface slag fill materials.

Current wastes disposed at Coke Point Landfill exhibit irregular side slopes and vertical topographic elevations ranging up to approximately 70 feet. Figure 1 shows the topography that was current as of 2011, including surrounding features and lateral extent of historical waste placement.

This manual provides procedures and requirements for the landfill including waste acceptance, operating requirements, environmental monitoring and operational restrictions. The operating procedures and design plans and specifications defined in this manual have been developed to meet applicable compliance requirements for operation of the Coke Point Landfill as defined by the Multi-Media Consent Decree for the Sparrows Point site dated October 8, 1997.

## **1.2 Definitions**

SSP - Sparrows Point, LLC

COMAR - Code of Maryland Regulations

CHS - Controlled Hazardous Substances

Facility - Sparrows Point Facility

HCWWTP - Humphreys Creek Wastewater Treatment Plant

Landfill - Coke Point Landfill

MDE - Maryland Department of the Environment

NAVD (1988) - North American Vertical Datum (1988)

OSHA - Occupational Safety and Health Administration

## **2.0 SITE INFORMATION**

### **2.1 Responsible Officials**

The following is a list of entities involved with the design, operation, maintenance, quality control/quality assurance of the Coke Point Landfill at the Sparrows Point Facility.

1. Operations and Maintenance:

Sparrows Point LLC  
Sparrows Point Facility Office  
1430 Sparrows Point Blvd.  
Sparrows Point, Maryland 21219

At the date of this manual the acting area manager is Mr. Bill Trentzsch  
Telephone (314) 686-5598

2. Material Separation and Iron Bearing Recovery:

Fritz Enterprises, Inc  
Contact: Ray Fritz  
1650 West Jefferson  
Trenton, MI 48183

(734) 362-3200  
Local (443) 213-0392

### **3.0 WASTE ACCEPTANCE PROCEDURES**

#### **3.1 Current Activities**

Coke Point Landfill is currently not accepting waste materials for landfill management from the Sparrows Point peninsula. Waste materials have not been received at this landfill since the change in ownership from RG Steel Sparrows Point LLC to Sparrows Point LLC. The curtailment of ongoing waste landfilling activities was implemented after the change in ownership of the site from RG Steel Sparrows Point LLC to Sparrows Point LLC and has been maintained in conjunction with the decision reached in early 2013 to terminate integrated iron and steel making operations utilizing the existing equipment and facilities at the site. Sparrows Point LLC does not intend to continually 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 currently managed at this landfill.

A site plan has been attached that shows the Coke Point Landfill boundary, existing topography of the landfill as of March 2011, former waste disposal areas, and current slag storage areas and tenant scrap metal recycling and iron bearing material recovery operations that are within the landfill footprint (Figure 1) . Locations within the boundary of Coke Point Landfill are currently being utilized for slag storage and tenant scrap metal recycling and iron bearing material recovery operations. Ongoing activities at the landfill are further described as follows:

- The eastern portion of the landfill is being used for the storage of processed steel slag materials. Former operations screened and sized steel slag generated during the steelmaking process for reuse as road aggregate or other aggregate uses. These screened and sized materials were stored within the boundary of Coke Point Landfill in the area delineated on the site plan. Screened steel slag material is still present and is intended to be recovered and used for road maintenance at the Sparrows Point site.
- Scrap metal and iron bearing materials previously disposed or managed in Coke Point Landfill are currently be recovered for processing and sale. Areas of Coke Point Landfill where these materials are currently stored or processed are shown on the attached plan. The attached plan also shows areas that have undergone reclamation efforts and areas that remain to be reclaimed.

## **4.0 OPERATING PROCEDURES**

### **4.1 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 of sufficient height and grade to prevent vehicular access have been upgraded and placed around the perimeter of the landfill. The access control structures are being maintained as part of the current compliance actions for the landfill. The current configuration of the access control berms and gate access structure is shown on plan view in Figure 1.

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 around the clock security personnel at three operating gates for the Sparrows Point site and routine perimeter security patrols and inspections. Entities that have access to the site have been informed that Coke Point Landfill is not accepting waste materials.
- 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.

### **4.2 Material Separation Procedures**

Iron bearing materials will be reclaimed and recycled using typical construction equipment including; dozers, excavators, drop ball cranes and a specially designed salvage machine. The salvage machine will be used to magnetically separate iron bearing materials. Separated materials will either be processed further at the hammer mill facility to provide a feed product or be shipped offsite directly. Separated materials that will remain will be placed as fill materials within the horizontal limit within the existing footprint of the landfill.

### **4.3 Covering Procedures**

#### Daily Cover:

No daily or intermediate cover is currently being applied. The previously disposed wastes are physically stable, nonputrescible and are not attractants for disease or animal vectors.

### Intermediate and Final Cover

Engineering work will be completed during 2013 and 2014 to develop final grading and landfill closure plans for the facility for submittal to the appropriate regulatory authorities. Final closure of the landfill facility will be in accordance with the submitted and approved engineering plans.

The final cover to be utilized on the landfill will be as follows (from top layer downward):

- vegetation support layer consisting of 6 inches of earthen material
- 18 inches of earthen fill;
- drainage layer consisting of 6 inches of granular material exhibiting a permeability of  $1 \times 10^{-3}$  cm/sec or greater or equivalent geosynthetic drainage net;
- low permeability cap layer consisting of a minimum of 1 foot of suitable waste material compacted to exhibit a permeability of  $1 \times 10^{-5}$  cm/sec or less;

Vegetation shall be established on the final cover. The applicable seeding methods and types to be used for vegetation will be selected in consideration of seasonal and other factors. Specifications for seed mixture applications are included with the sediment and erosion control plan. The plan and schedule for final cover of the landfill has not been determined.

#### **4.4 Grading and Drainage**

Grading and drainage procedures will be implemented to: a) minimize runoff onto the working faces and other fill areas of the landfill; b) prevent erosion and ponding within the working faces and other fill areas; and c) facilitate runoff from the surface of the landfill.

#### **4.5 Scavenging or Salvaging**

Scavenging and salvaging of recyclable iron and steel units or products is part of routine recycling and waste minimization procedures at the facility. Some of the acceptable waste streams at the facility contain a percentage of iron and steel units which may contain recoverable value. Dependent upon economic conditions, reclamation operations for particular waste streams will be conducted as outlined in this manual and previously authorized by MDE

Routine salvaging of recoverable iron and steel units will be conducted within the landfill boundary. Areas for salvaging are clearly designated and will remain separate from the working face and disposal area of the landfill.

#### 4.6 Operational Restrictions

The following operational restrictions will be complied with during the life of the landfill facility:

- Burning - Solid waste will not be burned at the landfill except as permitted by MDE.
- Operating an Open Dump - Open dumping will not be permitted at the landfill;
- Explosive Gases - The landfill will not be designed or operated in such a manner that the concentration of explosive gases generated by a unit exceeds twenty-five percent (25%) of the lower explosive limit for the gases inside of a structure, excluding gas control or recovery system components, and the lower explosive limit for the gases at the property boundary.

## **5.0 ENVIRONMENTAL PROTECTION**

### **5.1 Landfill Operation Requirements**

#### Dust Control

Fugitive dust emissions from the material recovery operations and subsequent transport to the on-site processing equipment are being controlled by dust abatement procedures. Dust abatement includes the use of road watering equipment used at the working face and associated haul roads during the material separation process. Fugitive emissions from the on-site processing equipment including the hammer mill are being controlled in accordance with the air permits that have been issued to the tenant for the equipment.

#### Odor Control

Odors have not been noticeable from materials recovered from the landfill or from the working face of operations. Odors also are not anticipated to be a future issue based on the inert nature of waste materials typically disposed at Coke Point Landfill. If required, odor control products may include granular and liquid odor suppressants (masking agents) and odor neutralizers that work on the ion-exchange principle to neutralize offensive odor ions. Odor control will be accomplished via sprayers on wheeled equipment with a movable spray arm mounted on a rotating platform.

#### Stormwater Control

Stormwater is retained on-site at the Coke Point Landfill area. Stormwater runoff will be managed with the maintenance of a perimeter berm structure that prevents runoff and retains stormwater. Best management practices are in place for stormwater management in support of the recovery and recycling operations. Gravel filter berms have been placed around the working areas to retain runoff and aid in stormwater control.

#### Litter Control

Litter control is not anticipated to be a concern at the landfill. The existing wastes do not contain wastes (paper or lightweight materials) which would require windblown litter controls.

### **5.2 Environmental Monitoring Requirements**

Environmental monitoring requirements will include provisions to periodically collect and analyze groundwater related to the landfill.

#### Groundwater Monitoring

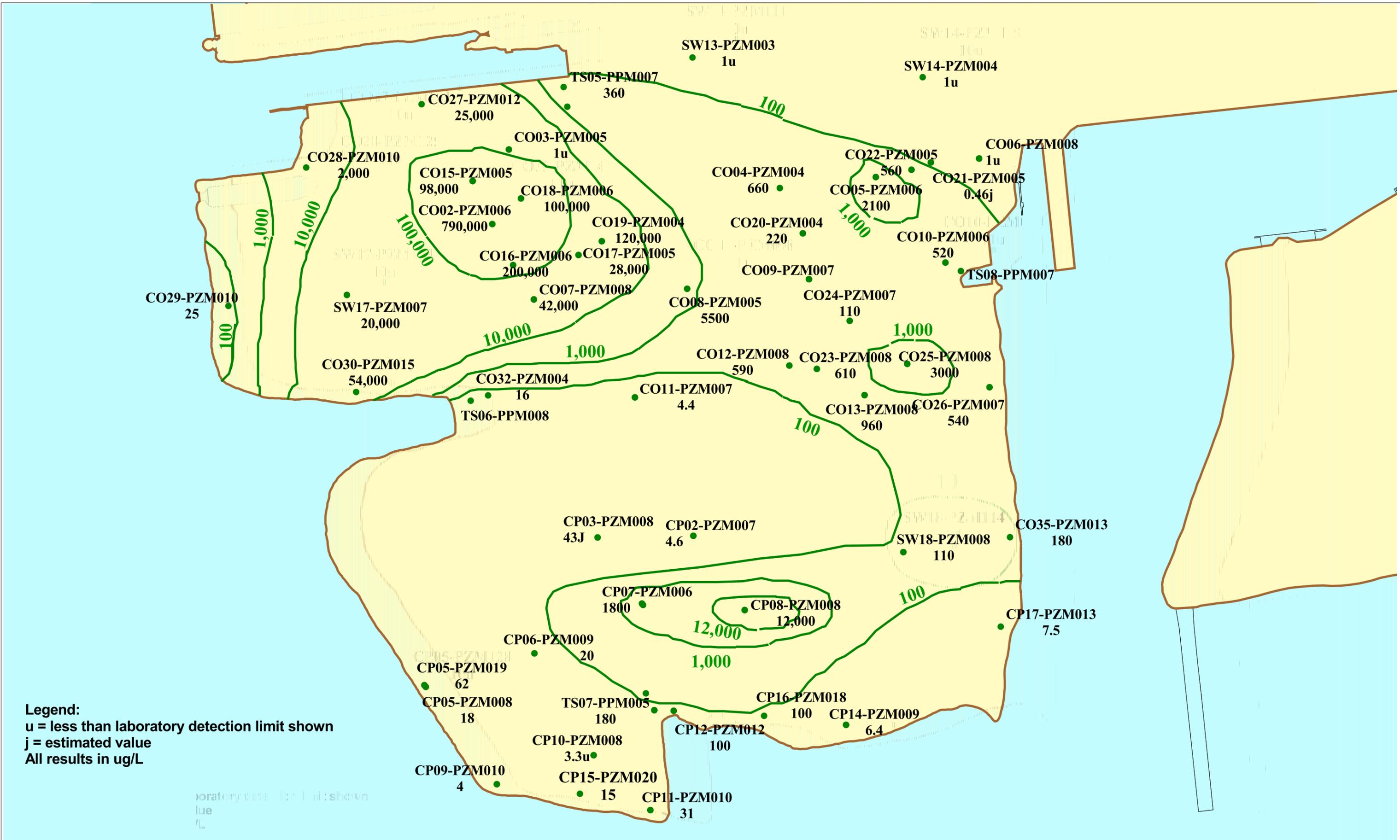
A groundwater monitoring program is currently implemented consistent with the process for waste management facilities in the State of Maryland. The program consists of semi-annual groundwater monitoring with submission of semi-annual reports. Adjustments to the program will be made as appropriate upon review of the results obtained.

### Surface Water Runoff

Current stormwater management practices at Coke Point Landfill include on-site retention and solids filtration. Stormwater is retained through the use of impervious dike structures that have been constructed in low areas susceptible to overland runoff. Solids filtration is accomplished with the use of gravel filter berms installed where potential runoff from access roads or the landfill could occur.

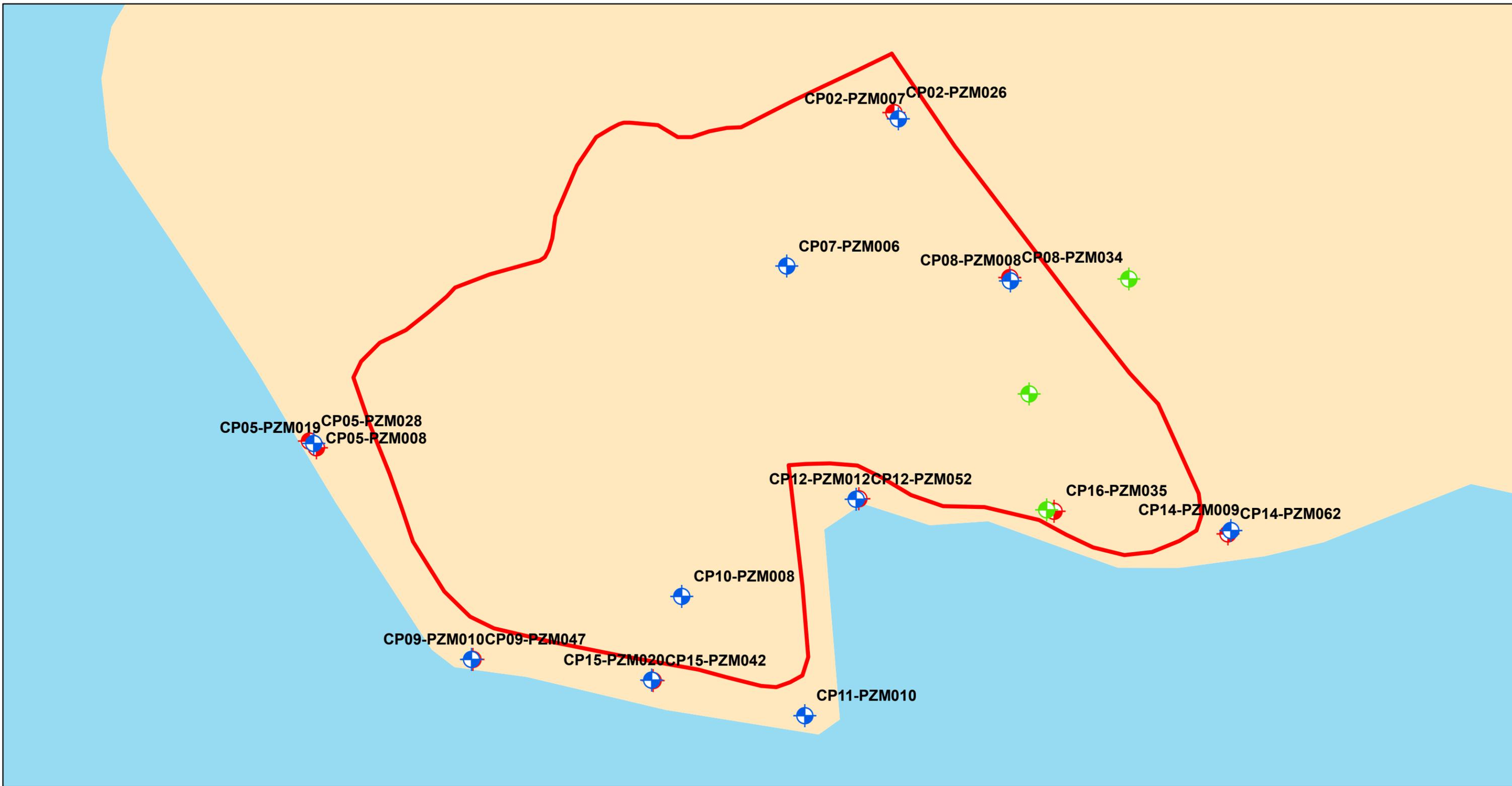
If stormwater outlet structures or outfalls are installed in the future, a sampling plan for this discharge point(s) may be implemented to monitor stormwater. In addition, changes to the site stormwater controls will be included in the facility's NPDES Stormwater Pollution Prevention Plan.





Shallow Zone Locations:  
 Coke Oven and Coke Point  
 Benzene Iso Concentration, ug/L (Parts per Billion)

Figure  
 1



July 2013

Coke Point Landfill - Proposed Monitoring Wells



**Legend**

- ⊕ Proposed Monitoring Wells Shallow
- ⊕ Monitoring Wells Shallow
- ⊕ Monitoring Wells Intermediate
- Landfill Boundary
- Property Boundary
- US Water Bodies

Figure 3