Maryland Department of the Environment
Sparrows Point Steel Mill Site
Status of the Environmental Activities Under the 1997 Consent Decree
August 2011

Background Summary

The 2,300-acre Sparrows Point steelmaking plant has long been a significant part of Baltimore's history and it is perhaps the most complex environmental cleanup site in the Chesapeake Bay watershed. The 1997 Consent Decree required Bethlehem Steel Corporation to comprehensively address pollution from historic and ongoing operations at the site. The Consent Decree also included provisions for waste minimization/pollution prevention projects to reduce the amount of waste produced, and for recycling of specific waste streams in the ongoing operations of the plant.

Corrective Measures Status

The land portion of the site investigation was completed in 2006. Prior to completion of the entire onshore/offshore investigation, EPA required that then-owner Severstal implement interim measures to address the significant subsurface contamination -- consisting primarily of benzene and naphthalene -- in the former Coke Oven area. In response to EPA's directive, Severstal developed and has begun implementation of a free product recovery and groundwater treatment plan to capture and treat the subsurface plumes (described in more detail below). New owner RG Steel has continued to implement the interim plans begun by Severstal in the Coke Ovens area and has assumed responsibility to complete all remaining obligations under the Consent Decree, consisting primarily of an offshore investigation and a corrective measures study to identify and select final remedial measures to address contamination associated with the site.

The approved interim remedial system consists of 6 remediation cells designed to recover and treat the benzene and naphthalene identified in the sitewide investigation, and to prevent offsite migration of the contaminants.

- **Cell 1** has been operational since July 2010 and uses a combination of air sparge and soil vapor extraction to remove benzene from the shallow groundwater.
- **Cell 2** will utilize a combination of pumping from the deeper zone beneath the slag aquifer, air sparging, and soil venting in the shallow slag and deeper zone to address contaminated groundwater migrating off-site toward the shipyard Graving Dock. Permit applications were submitted to MDE's Air and Water administrations for operation of these systems, with the permitting process anticipated to be completed by year's end.
- **Cell 3** is comprised of an air sparge/SVE trench similar to Cell 1 that will be installed along Cove Point to treat shallow groundwater seeping into the Cove area in the southern portion of the Coke Point Peninsula. RG Steel reported to MDE that Cell 3 became operational in June 2011.
- **Cell 4** will use nutrient enhancement in recirculated shallow groundwater to encourage anaerobic biodegradation of the heavier semi-volatiles such as naphthalene near the former Coal Tar Storage Area. EPA and MDE approved the design plan on March 31, 2011. The cell construction was completed in June and initial nutrient injections took place in early July.

- **Cell 5** is designed as a pump-and-treat and reinjection cell to address elevated levels of naphthalene in the shallow groundwater near the former Coal Tar Storage Area. Like Cell 2, the system will become operational once all permitting requirements for water appropriation and discharge permits have been met, expected to be by year's end.
- **Cell 6** consists of the removal of benzene-contaminated carrier oil near the former Coke Oven Area from multiple recovery wells. To date, the system has recovered approximately 5,500 gallons of free product.

Landfill Compliance Status

Greys Landfill -- In 2008, the installation of the sediment and stormwater basins, slope stabilization, counter berm installation, and final seeding and slope stabilization measures were completed at Greys Landfill. Thirty-one groundwater monitoring wells have been sampled on a quarterly basis since July 2009. Sample results indicate that the highest levels of contaminants -- including naphthalene and volatile organic compounds -- were detected in four shallow monitoring wells adjacent to the northern portion of the landfill. Monitoring wells further from the landfill show either very low levels of contaminants, or are non-detect. The need for additional remediation will be determined through ongoing sampling.

Coke Point Landfill -- For the past decade, the Coke Point landfill area has been used primarily for stockpiling iron-bearing materials for reuse, with limited material disposal. RG Steel is continuing to implement measures such as re-grading, berming, and stormwater controls to restrict site access, improve stability, and control stormwater runoff.

New Landfill -- On June 17, 2010, Severstal submitted an application to MDE for a new industrial waste landfill to be located on approximately 60 acres in the vicinity of Greys Landfill. The proposed landfill will be designed and constructed in accordance with current State regulations. A public informational meeting was held on January 20, 2011. Phase I of the permitting process is now complete and the applicant is now preparing the required Phase II (geotechnical evaluation) and Phase III (engineering design report) portions of the application. If the landfill meets all requirements and is permitted and constructed, the closure plans for both Greys and Coke Point landfills will be initiated.

Offshore Investigation

Prior to evaluating and selecting remedies to address contamination related to the site, an offshore investigation must be completed. Severstal and prior owners ISG/Mittal refused to conduct a comprehensive offshore investigation as detailed in the Consent Decree, because they argued that the terms of the original bankruptcy purchase from Bethlehem Steel Corporation released them from liability for historic, offshore contamination. Since Severstal and EPA/MDE were unable to come to an agreement under the dispute resolution provision in the Consent Decree, a federal District Court judge heard arguments in March 2011 and issued a series of rulings on July 5, 2011 (see MDE's website for a copy of the judge's rulings). In a related ruling, the Chesapeake Bay Foundation (CBF) petitioned the court and was granted the motion to intervene in the off-site sampling dispute. The companies – with current owner RG Steel now primarily responsible -- along with EPA, CBF, and MDE are following the judge's directive to continue to negotiate an acceptable scope of work for an offshore investigation. If the parties cannot develop a mutually acceptable plan, the judge will then determine what constitutes compliance under applicable law.

Air Emissions – Kish

The Kish Reduction Requirements outlined in the 1997 Consent Decree were satisfied in 2004 with the implementation of the Kish Reduction Plan. While kish complaints have been greatly reduced, MDE continues to investigate reported kish emissions whenever complaints are received.

Contacts

Andrew Fan, Project Coordinator
U.S. EPA, Mid-Atlantic Region
fan.andrew@epa.gov or
215-814-3426

Barbara Brown, Project Coordinator
Maryland Department of the Environment
bbrown@mde.state.md.us or
410-537-3493

Site-related documents and links to the EPA information relating to the site are available by visiting the MDE website at:

http://www.mde.state.md.us/Programs/LandPrograms/Hazardous_Waste/hazwastecleanupsites/sparrowspt.asp