

## KURT IRON & METAL FACILITY, FAIRFIELD MARINE TERMINAL Baltimore, MD



The Maryland Port Administration (MPA) purchased approximately 10.5 acres from the Estate of Kerry Ellis, at a site known as the Kurt Iron and Metal Facility, located at 3000 Childs Street, in 2000. The site was used for shipbreaking, salvage, and demolition disposal from 1987 to 1997. At the time of purchase, the site was covered with abandoned, deteriorating trailer buildings, infrastructure and debris piles ranging in height from 25 to 35 feet, resulting from shipbreaking activities as well as unlicensed solid waste disposal from other marine demolition. The MPA purchased the site in order to expand the Fairfield Marine Terminal, procure additional deep water access, and to provide a contiguous property for the development of the Masonville Dredged Material Containment Facility. WBCM and our subconsultant, EBA Engineering, were tasked by MPA with the environmental assessment, clean-up, and remediation of the site. WBCM also completed the Site Development Design to provide additional auto storage for the Mercedes-Benz Terminal. This Project was the first of its kind to be enrolled in the Maryland Department of the Environment's Voluntary Clean-Up Program (VCP) by the MPA. It illustrates how a significantly environmentally-impacted property can be resurrected into a viable beneficial use.

The initial phase consisted of a Phase 1 Environmental Assessment and Inventory of the site. During this Phase, WBCM assisted in the inventory, prepared mapping of the site, and performed quantity estimates of the debris and abandoned infrastructure according to characterization of the material. Upon completion of the Phase I Environmental Assessment, it was decided to enter the site into MDE's Voluntary Clean-Up Program. The Phase II Environmental Assessment was then developed and completed. WBCM provided the oversight and review of the Response Action Plan (RAP) and provided the technical design information for utility installation and the final capping of the site.

The next phase of the project focused on the actual clean up of the site. WBCM prepared the Contract Documents for the "Environmental and Solid Waste Disposal at the Former Kurt Iron and Metal Facility." The Contract Documents were predicated largely on WBCM's development of a performance specification which detailed the preparation

**Client:** Maryland Port Administration

**Total Construction Cost:**

**Project Size:** 10.5 Acres

**WBCM Services:** Marine Industrial and Process  
Engineering, Civil Engineering, Structural  
Engineering, Surveying, Permitting, Construction  
Services

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of a site specific Health and Safety Plan; the characterization, segregation, and handling of the materials; and the disposal requirements of the hazardous and solid waste.

The contract was awarded to Potts and Callahan. The work was started in February, 2004, and completed in October 2004. Approximately 25,000 tons of solid waste, scrap metal, concrete rubble, tires, and creosoted timber were removed and disposed. In addition, the following hazardous wastes were removed and disposed: 40 lead acid batteries, 35 PCB-containing transformers, 1 ton of PCB-containing materials, 50 pounds of mercury-containing equipment, 515 compressed gas cylinders, and 80 cubic yards of friable asbestos. WBCM provided Construction Phase Services for the clean-up, including review of the Health and Safety Plan, tracking of the demolition and removal, updating quantity estimates, and review of the closure report.

The final phase of the Project consisted of the design of the site work for incorporation into the Mercedes-Benz Auto Terminal. This phase also serves as the completion of the Response Action Plan. The RAP employed the bituminous paving as the site capping, thereby preventing migration of on-site containments into the Bay from stormwater runoff and infiltration. WBCM prepared the Contract Documents for the filling, grading, paving, utilities, and storm drains. The stone base course was designed as a passive methane venting system and all utility trenches were installed with an impermeable liner encasing clean backfill. Critical Area and Stormwater Management compliance was achieved through the design of an innovative perimeter berm and sand filter trench.

The contract was awarded to P. Flanigan & Sons, Inc. The work was started in September, 2005, and completed in September 2006. WBCM provided the Construction Phase Services for the contract. Completion of this phase, in conjunction with recordation of the RAP deed restrictions and posted signage, resulted in successful fulfillment of the VCP requirements and an MDE finding of no further action required.

The site is currently an active part of the Mercedes-Benz Terminal operation.

The MPA provided direction and assistance in the formulation of the project planning and development. They were an active team member throughout each design phase and construction contract. The MPA had the vision to acquire an environmental hot spot, which was essentially an unlicensed hazardous and solid waste disposal facility, and transform it into an active terminal component. WBCM provided the overall project management and our subconsultant, EBA Engineering, provided environmental sampling and analysis, the environmental inventory, development of the Response Action Plan, assisted in the preparation of the specifications, provided environmental engineering, and assisted in Construction Phase Services. ARC Environmental provided full-time construction observation during the environmental and solid waste disposal contract and independently tracked the disposal of all wastes that were removed from the site.

The outstanding major components of the project were:

- the development and implementation of the Project Plan;
- the development of the Response Action Plan;
- maintaining the project schedule commensurate with steering the project through the VCP process;

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- the handling of hidden field conditions during demolition and construction.

The Project Plan consisted of three components: the environment testing, the environmental clean-up, and the bituminous capping.

The environmental testing involved establishing the Sampling and Analysis Plan for compliance with the RAP. The Sampling and Analysis Plan was extensive and required the testing of groundwater, vapors and soils. The project team met with the MDE VCP staff and mutually established a schedule for the RAP and associated construction contracts. The final capping of the site with bituminous paving was proposed as an essential component of the RAP. Coincident with the development of the RAP and the MDE review process, WBCM proceeded with the preparation of the contract documents for the environmental and solid waste disposal contract. This enabled Potts and Callahan to prosecute the work commensurate with the MDE approval. The final site development contract was phased in coordination with Mercedes-Benz's terminal operation and the new 10 acres of automobile storage was brought on line to meet the Mercedes-Benz RO-RO cargo demand.

Exclusive of maintaining the schedule through the environmental testing, multiple design/construction contracts and permitting constraints, one of the biggest challenges was the handling of unanticipated hidden conditions. During prosecution of the work, the following are examples of some of the obstacles which were encountered:

- Radioactive detection equipment;
- 500-lb. "dummy" bombs (initially suspected to be unexploded ordnance, the uncovering of these bombs resulted in the temporary closure of the Baltimore Harbor Tunnel);
- Oil-contaminated ground water;
- Leaking underground storage tanks

Each of these hidden conditions required a policy change, permit modification, and impacted the construction schedule. The Team approached each obstacle with a modification to the Project Plan and site specific Health and Safety Plan.

The removal of the hazardous and solid waste significantly improved the environment and abated the potential for future contamination of the Chesapeake Bay and groundwater. Bituminous capping of the site eliminated the pathway for migration of soluble contaminants to the adjacent surface water. The site development provided a valuable addition to the Mercedes-Benz Auto Terminal and expanded MPA's terminal capacity.