

Facts About...

Allied/Honeywell Site at Inner Harbor

Site Description: The Baltimore Chrome Works Facility was originally constructed in the mid-nineteenth century on approximately 18 acres of waterfront property near Fells Point. Chromium ore was processed to produce chromium chemicals until 1985. Allied Chemicals, later AlliedSignal, now Honeywell, acquired the plant in 1954. Environmental investigations conducted at the site during the 1980's established that large quantities of chromium, calculated to be approximately 62 pounds per day, were migrating from the site, with most of the chromium being released to the Baltimore harbor.

Contaminants: Of the 62 pounds per day leaving the site, approximately 80% was in the form known as hexavalent chromium (Cr+6), the form of chromium that is a known carcinogen (by the inhalation route). In 1986, concentrations of chromium in the Patapsco River adjacent to the site ranged to 2,000 parts per billion (ppb), and 640 ppb Cr+6.

Consent Decree: On September 29, 1989, the Maryland Department of the Environment, the United States Environmental Protection Agency, and Allied entered into a Consent Decree which required the company to fully investigate the environmental impact of releases from the site, and implement remedial measures approved by State and Federal agencies. This



Consent Decree was unique, because in addition to outlining a containment remedy and cleanup goals for the site, it also anticipated the future reuse of the site. More specifically, the Consent Decree called for a slurry wall and cap to eliminate exposure, a groundwater pumping system to contain groundwater, monitoring and cleanup goals to provide protection, and approval by MDE and EPA of redevelopment plans to ensure that any development did not interfere with the remedy.

Corrective Measures: In 1990, Allied began dismantling on-site buildings. These activities were conducted in a manner intended to minimize further releases to the environment. Hazardous wastes generated by dismantlement activities were disposed at the Hawkins Point Hazardous Waste Landfill. To provide structural support to failing bulkheads, Allied then constructed a stone embankment around the three sides of the site that border on the Patapsco River. Harbor bottom material dredged from the river during embankment construction was disposed at Hart-Miller Island.

Allied then constructed around the perimeter of the facility a three-foot wide soil-bentonite hydraulic barrier that extended to depths greater than 70 feet. Following completion of the barrier in February 1996, concentrations of chromium in the harbor decreased to values less than 20 ppb.

A multimedia cap was then constructed over the area enclosed by the hydraulic barrier. The cap included a capillary break layer, a synthetic clay layer, a plastic membrane layer, and a clean soil layer; the total thickness of the cap was five feet. The cap was completed in 1999, and to date has prevented surface releases of chromium.

The final remedial component that was constructed was the head maintenance system. This system was designed to extract contaminated groundwater from 16 wells located within the hydraulic barrier, lowering groundwater levels within the barrier to elevations less than that of the Patapsco River, and thereby reducing releases of chromium to the river from any imperfections in the wall. Contaminated groundwater collected by this system is temporarily stored on-site in two 10,000 gallon tanks in Allied/Honeywell's office building/transfer station, then transported from the site to a hazardous waste treatment facility.

The investigation, remedy selection, dismantlement of the former plant, and remedy construction took over 10 years and \$100 million to complete. The result is complete containment with an ongoing monitoring program that continues to demonstrate that the remedy is meeting the cleanup goals. Honeywell remains perpetually responsible for monitoring and maintenance of the containment structure and the environment around the property.

Remedial Action Activities



1. Construction of Stone Embankment



2. Construction of Slurry Wall



3. Head Maintenance System Component Installation



4. Cap Construction

Next Steps: Before site development could occur, Honeywell was required to demonstrate one year of compliance with the performance standards specified in the Consent Decree. Honeywell met that requirement.

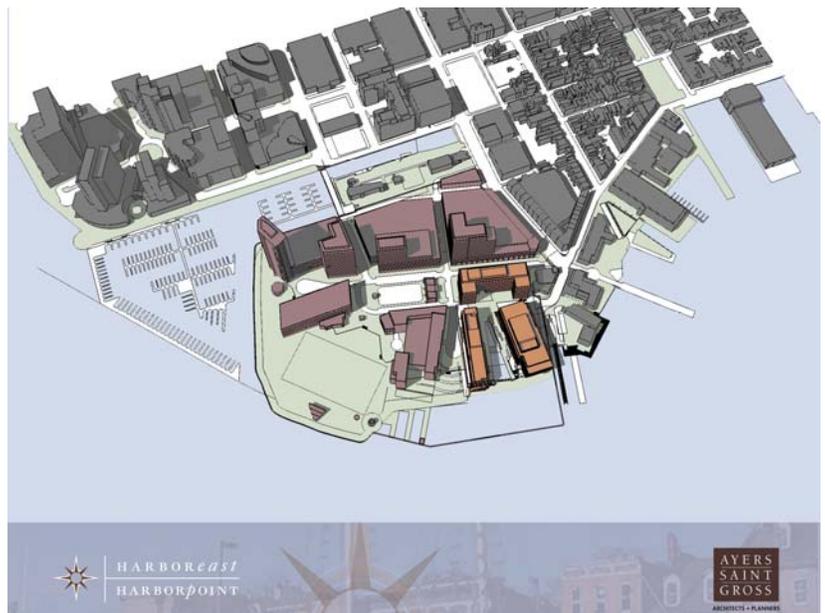


View of site following completion of remedial measures construction

In May 2003, EPA and MDE signed the nation's first Prospective Lessee Agreement (PLA), which provided the developer, Harbor Point Development, LLC with relief from certain future environmental liabilities. Harbor Point Development, LLC is a joint venture between Struever Bros., Eccles and Rouse, Inc., and H&S Properties Development, LLC, which are both Baltimore-based development companies. After a public notice period, the PLA became effective and the developer entered into a long-term ground lease for the property with Honeywell. In August 2003, the developer became a participant in MDE's Voluntary Cleanup Program, affording them additional liability protection under State law.

Redevelopment of the former Allied Baltimore Works facility presents huge challenges for the developers because they need to work around the remedy and because they need MDE and EPA approval of all plans prior to any construction. As the redevelopment planning and design phase of the former Baltimore Works facility started to take shape, the developers and Agency reviewers quickly recognized that they work in very different worlds. Environmental reviews are measured; development is fast-paced. Typically, developers have little experience with environmental requirements and Agencies have little experience with development.

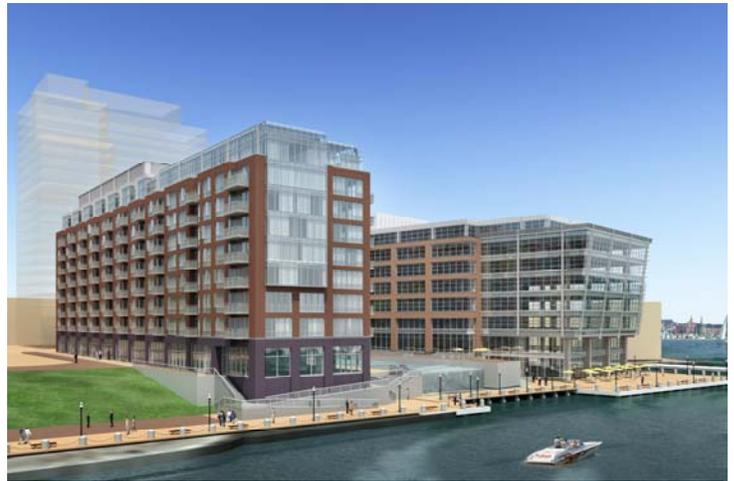
To facilitate this design review/approval process, the Agencies took a proactive role in the developer's bi-weekly planning meetings. By being present at these meetings, the Agencies were able to identify potential regulatory hurdles and fatal flaws in proposals, prior to formal submission. This expedited the approval process significantly. In retrospect, Agency participation in the planning meetings proved to be a critical factor in integrating the needs of the Agencies and the developer.



Overall Site Conceptual Design

One of the biggest challenges in the reuse of contaminated properties is the stigma associated with these properties. To address this issue, the developer proposed a number of temporary uses to help the community and prospective purchasers/tenants leap over this psychological hurdle.

The internationally celebrated Cirque Du Soleil used the property for performances in the Spring of 2003 and subsequent years. The site was the location of a public ice skating rink for the City of Baltimore, and even hosted a National Hockey League exhibition game. As of this date, the ice rink is no longer located at the site. In addition, the community regularly uses the site for local festivals and events. These interim use events are washing away the memories of an old industrial chemical facility and replacing them with visions of a valuable community asset.



Conceptual Design of Morgan Stanley Building

Due to the innovations, cooperation and success of Harbor Point's transformation, in April 2003, EPA used the site to announce EPA's Land Revitalization Agenda.

Through the use of innovative administrative tools and streamlined, yet environmentally protective approaches, a vacant contaminated facility is on the way to becoming a jewel in the crown of redevelopment that encircles Baltimore's Inner Harbor.



April 2010 Photo of Development

This former industrial site is on the verge of booming again with a successful cleanup and a \$400 million dollar redevelopment project in the works. The Harbor Point Project connects the revitalized Inner Harbor, home of the National Aquarium in Baltimore, the Maryland Science Center, shops and restaurants with the adjacent historic Fells Point community. Harbor Point will include green design office buildings, a hotel, a waterfront park, a public waterfront promenade and engineered green space. Harbor Point will create jobs and tax dollars and reduce sprawl by reusing urban land.

H&S is now in charge of site construction work, since SBER has encountered financial difficulties. The first building constructed, on Area 2, is to be used by Morgan Stanley. The company began

moving in on May 4, 2010, and expects to be fully operational by June 1, 2010. Additional redevelopment activities are also expected to be implemented on Areas 1 and 3. MDE and EPA will continue to provide oversight to assure that all remedial measures continue to function during and after construction activities. As of this date, final detailed design drawings for additional construction have not been received, and the timing of those events is undetermined at this point.