

HARBOR POINT AIR MONITORING PROGRAM

MAY 2014

Ensuring Health and Safety of Nearby Communities and Workers; Plans Approved by Federal and State Agencies

- The U.S. Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE) have approved detailed design and air monitoring plans for the construction of the Exelon building and Central Plaza garage at Harbor Point. The plans, including operating procedures that will be overseen by both agencies, ensure that construction will be done in a way that protects human health, the environment, and the existing remedy at the former Baltimore Works site. The site was remediated in the 1990s pursuant to a federal Consent Decree, which requires that any construction protects the remedy.
- The Harbor Point Construction Air Monitoring System includes a sophisticated network that measures dust in real-time, allowing for rapid implementation of dust suppression activities if necessary. The monitoring methods, at four perimeter locations, two off-site locations, and at the work zone, have been approved by EPA and MDE.
- The design and air monitoring plans are posted on MDE's website: mde.maryland.gov. Air monitoring results will be collected in real-time and posted on harborpointbaltimore.info the next business day. Additional information about the remedy is below.
- Working with EPA, MDE, Honeywell, and in accordance with OSHA regulations, Beatty Development will take extensive precautions to protect the health and safety of the community and the workers during construction. MDE and EPA will make frequent visits to the site. They also will be participating in progress meetings and conducting inspections to ensure the remedy is protected.

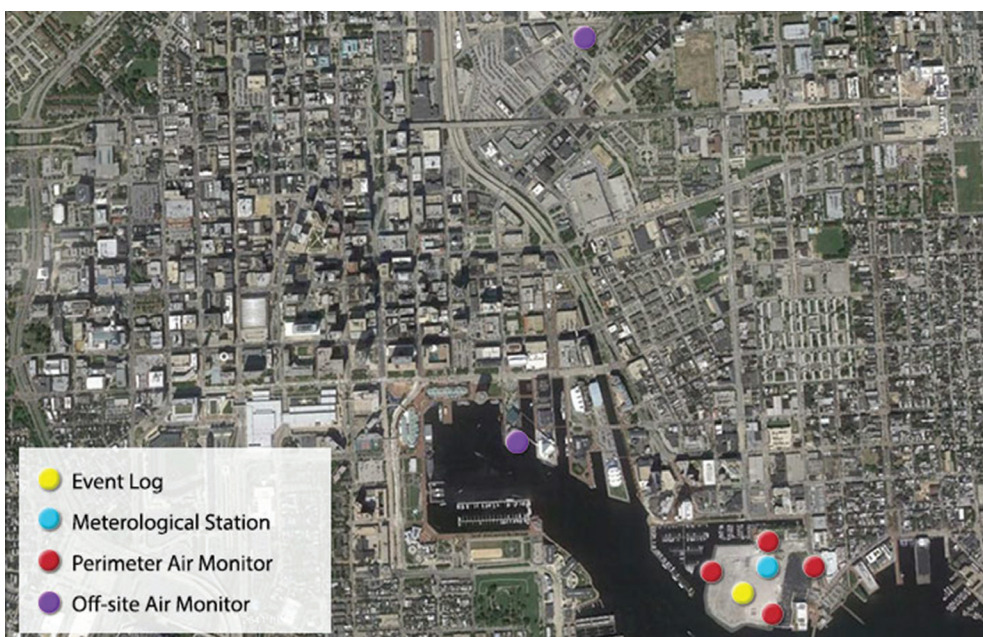
Construction Over A Multi-Media Cap

- Construction will include driving piles to support the new buildings. Utilizing proven construction techniques and detailed procedures approved by EPA and MDE, the contractor will open portions of the multi-media cap to allow the piles to be installed and then reseal the cap.
- The Detailed Design Plan outlines this carefully designed, step-by-step procedure.

Dust Control and Air Monitoring During Construction Below the Cap; Federal and State Regulators to Conduct On-site Visits

Air monitoring data posted at: harborpointbaltimore.info/

- Chromium, if present in the air, would be contained in the dust. Thus, dust control is the primary goal of the Construction Air Monitoring Plan. The plan is in effect when there is any disturbance of the soil below the protective multi-media cap.
- Demonstrated, effective measures will be taken to prevent dust from leaving the work zone. These measures include using water misting to suppress dust, limiting the size of the open area at any one time, and placing clean materials over impacted soil so that dust from the impacted soil cannot be generated, as well as other Best Management Practices.
- Extensive air monitoring (at the site perimeter, at the work zones, and at off-site locations) will be conducted to document that strict government criteria are being met.



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- The air monitoring system measures dust in real-time and collects samples for analysis of hexavalent chromium. The placement of the monitors provides upwind and downwind coverage. The system uses both fixed and mobile air sampling equipment.
- Completion of these activities is expected within the first six months of construction.

Background Air Monitoring:

- The background air monitoring program, which was approved by EPA and MDE, began on March 6, 2014 starting with the measurement of background concentrations of both dust and hexavalent chromium. EPA and MDE approved a stationary air monitor at the site perimeter and at two off-site locations (the Old Town Fire Station and the Baltimore National Aquarium).
- Prior to beginning the air monitoring, MDE visited the sites to make sure the monitors were set up according to regulations. They also observed the collection process during the 15-day sampling period.
- Thousands of real-time dust measurements and 60 samples of hexavalent chromium were collected to establish background concentrations.
- According to MDE, "preliminary results of pre-construction air monitoring show low concentrations of hexavalent chromium consistent with other major urban areas across the country as measured by EPA."

Construction Air Monitoring Program for Intrusive Activities

- Using EPA-approved methods and protocol, dust will be monitored in real-time 24 hours a day during the work week; dust is used as an indicator for chromium.
- Hexavalent chromium samples will be collected over a 24-hour period each work day.
- Monitoring will be performed at the work zone, the site perimeter, and at off-site locations.
- Environmental professionals and government regulators will review results to ensure that air quality plans are being followed and actions taken to control dust. The data will be posted to the project website (harborpointbaltimore.info) the next business day. Hexavalent chromium results will be posted once independent laboratory results and validation reports are received from the independent, third-party data validating firm.

Actions Levels Approved by Regulators

- The dust control measures are designed to keep concentrations below the dust action levels approved by the agencies. The Construction Air Monitoring Plan includes procedures to be followed if dust reaches the action levels, including determining the cause of the elevated dust; ensuring that all dust mitigation measures are working effectively; suspending construction work as appropriate; and making recommendations for improvements, if any.
- The action levels are within the range of background dust levels detected during the background air monitoring study, and as a conservative measure, well below the maximum dust levels detected. Air monitoring data posted on the website will note the reason for any exceedances of the action level. These are likely to include sources unrelated to redevelopment including idling trucks, commuter traffic, weather such as fog, and other off-site construction activities.

MDE and EPA will provide oversight and make frequent on-site visits. MDE will be on-site during key construction activities that penetrate the soils under the cap.

Information on chromium can be found at the federal government's Agency for Toxic Substances and Disease Registry's website: atsdr.cdc.gov/toxprofiles/tp7.html

Remedy Completed Under EPA / MDE Supervision

EPA, MDE and AlliedSignal (Allied Chemical's successor company and Honeywell's predecessor) entered into a Consent Decree to clean up the former Baltimore Works site. The consent decree required a remedy that permanently contained chromium contaminated soils and groundwater within the site, eliminated human and animal contact with the contamination, and prevented further contamination of surrounding soils, surface and groundwater. The project was completed in 1999. The consent decree requires Honeywell, in perpetuity, to continue to monitor, maintain, and repair the containment system, which consists of the following elements.

- An underground barrier wall encircles the property. It is three feet thick and averages 70 feet deep. It is constructed out of clay and effectively seals off the groundwater under the site, preventing it from reaching the Patapsco River.
- A groundwater containment system, which includes the barrier wall and pumping wells, prevents any groundwater from leaving the site.
- A three-foot thick multi-media cap isolates the chromium soils and prevents stormwater infiltration into that soil. Performance of the cap will be enhanced by redevelopment in two ways. First, the grade will be raised across most of the site, providing additional isolation of the underlying soils. Second, the new streets, paved areas and concrete floor slabs will add another barrier for the cap system. Where piles are necessary to support the new structures, the cap will be sealed around those piles.