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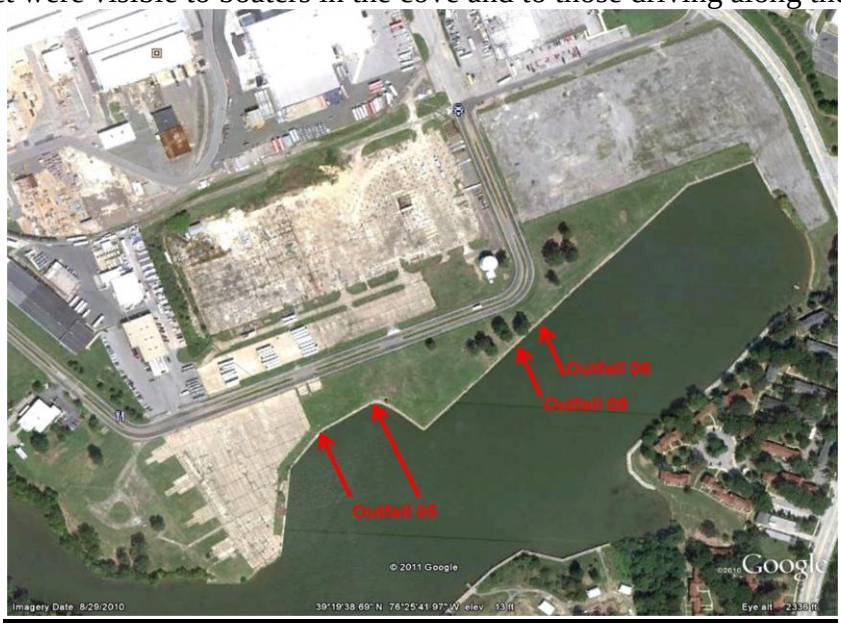
Block E Storm Drain Interim Remedial Measure
Frequently Asked Questions
January 2012

Brief Project Description:
Lockheed Martin has conducted extensive soil and sediment investigations relating to Tax Block E, where sediments contaminated with polychlorinated biphenyls (PCBs) have been identified in the storm drain system. Surface PCB concentrations are greatest in the southern portion of Block E. An Interim Remedial Measure (IRM) was conducted to safely remove the contaminated storm-drain sediments and debris, minimizing contamination movement offshore. The work occurred just after the summer season, in September-November 2011.

All work was performed on Lockheed Martin property just north of Chesapeake Park Plaza. Since the storm drain outfalls are along the shoreline of Dark Head Cove, aspects of the project were visible to boaters in the cove and to those driving along the roadway.



Four storm drain outfalls along Dark Head Cove shoreline across from Wilson Point Park are the end point locations for the storm sewer system.

The storm sewer system consists of surface inlets, drains, catch basins, manholes, and underground pipes. Sediment accumulation was common for most lines and some inlets were partially collapsed and obstructed by soil, rocks and debris. Manholes were buried, inaccessible, or appeared to be abandoned and filled with soil and rocks.

How was the work performed?

The work first removed sediment, rocks, and debris from inlets and manholes using a jet/vacuum truck or by hand, then storing them in a roll-off container. Then storm drain pipes were jet cleaned and both solids and liquids were removed into a frac tank. Pipes were then video inspected using closed circuit television (CCTV) cameras to verify lines had been cleaned. Where drainage lines could not be cleaned due to damage or accumulation of solids, they are being evaluated for abandonment and sealing. Materials accumulated in roll-off containers and frac tanks were disposed offsite.

Jetting and vacuum trucks were used to remove sediments from storm drain system.

"Frac" tanks were used for onsite storage of liquids until shipment for disposal at licensed facilities occurred.

Why did Lockheed Martin perform this work last fall?
This project is an initial step in a more comprehensive cleanup plan for Tax Block E and for offshore sediments. This action has significantly improved drainage of the Block E area, reduced the potential for sediments to discharge from the outfalls and required approval of the Maryland Department of the Environment (MDE) and the U.S. Environmental Protection Agency (USEPA) due to the presence of PCBs.

What impacts did the project have on local traffic?
The work had minimal impact on local traffic. Work took place largely on Lockheed Martin property with some work in Chesapeake Park Plaza Road. A jetting/vacuum truck was in the median or along the side of the road for a few days and at inlets and manholes in Tax Block E periodically for 8 weeks during the project. Truck traffic associated with transporting sediments/water for disposal occurred during a few days of the project, generally toward the end.

How were employees or the community protected from contaminants while they were removed?
Removal occurred below ground by jetting and vacuuming. Removed materials were stored in steel containers so there was no pathway for inadvertent contact with the sediments. Site employees did not have access to the impacted work areas. Storm drains immediately downstream of the work were plugged during jetting operation.

What were the time frames for this work?
The work occurred from the third week in September until mid-November 2011 to minimize work during the summer season. A jetting/vacuum truck worked at Block E intermittently for about 8 weeks. Roll off containers and frac tanks stored removed materials and remained onsite until the wastes were characterized for disposal and removed by trucks later in December.

What measures were taken to prevent sediments from entering water bodies and drainage ways?
During active jetting, the downstream storm drain was plugged. Plugs were removed each day as active work was completed. All removed materials were stored in lined watertight roll-offs and sampled and analyzed for appropriate waste disposal in licensed facilities. Approximately 20 tons of PCB contaminated sediments were disposed offsite at a licensed incinerator and another 20 tons of non-hazardous sediments were disposed offsite in a lined landfill. Approximately 76,000 gallons of wash water was disposed offsite by Clean Harbors. To control erosion and accumulation of new sediment in the storm drains, hay bales were placed around each inlet.

What was accomplished by the cleaning work?
Approximately 4400 linear feet of the 5200 linear feet of drains in the Tax Block E were cleaned and inspected by video camera. Many plugged and blocked inlets and manholes were cleaned of debris and were restored to the intended use for site drainage. Overall drainage at Block E was improved with the removal of sediments and debris from almost 80% of the pipe segments. PCB contaminated sediments formerly present were removed. Approximately 800 linear feet of drains and several manholes could not be cleaned

because they were filled with debris that could not be dislodged by jetting. Little to no drainage was observed coming from the pipe segments that were filled with debris.

Could Lockheed Martin clean the storm drains all the way to the outfalls?
That section of each storm drain from its outfall upstream to the first manhole could not be cleaned during this IRM because the submerged outfalls could not be accessed for installation of a temporary plug that would prevent wash water from entering surface water. These storm drain sections will be cleaned in future comprehensive actions associated with Remedial Action Plans for offshore sediment and the Block E cleanup.

What happened when the work was completed?
Inlets and manholes were repaired, returning structures to original or better condition for continuing usage. Post-construction activities included: equipment removal, landscape repair, and testing of stored waste materials for proper disposal. The drains that are plugged with debris and that could not be cleaned are being evaluated for installation of plugs that will seal the drains from any ongoing drainage. Monitoring restored areas and drainage system for one year will occur. Ongoing evaluations of Tax Block E will continue until a Remedial Action Plan approved by the MDE is implemented to complete a comprehensive remedial action, which would include digging out and removing any remaining drains too filled with debris to be cleaned during this IRM.

Did other activities occur at areas near Tax Block E during the work?
During the timeframe for the work at Tax Block E, the same cleaning and video equipment was used to inspect certain drains in Tax Blocks G and I. This work was done at proposed groundwater remedy locations to investigate these areas for the presence of utilities that potentially could interfere with injection of nutrients needed to remediate the groundwater. If the injection process resulted in raising the groundwater level to the height of the utilities, then the injectate could potentially enter drains and move to surface water. Also during this same period, a pilot injection well test, approved by the MDE, was conducted at Blocks E, G and I at the groundwater remedy locations. Water with a non-toxic tracer was injected into wells installed at each location and water level measurements and water samples were obtained during the work to determine the response of the aquifer and adjacent utilities to injection. The data compiled during these projects is being evaluated for use in the design of the groundwater remedy systems.

Who can we contact if we have questions during the work?
Feel free to contact Gary Cambre, Lockheed Martin Communications 800-449-4486 or by email at gary.cambre@lmco.com or Kay and Darryl Armstrong at 888-340-2006 or by email at darrylkay@aol.com if you have questions or concerns during the work.