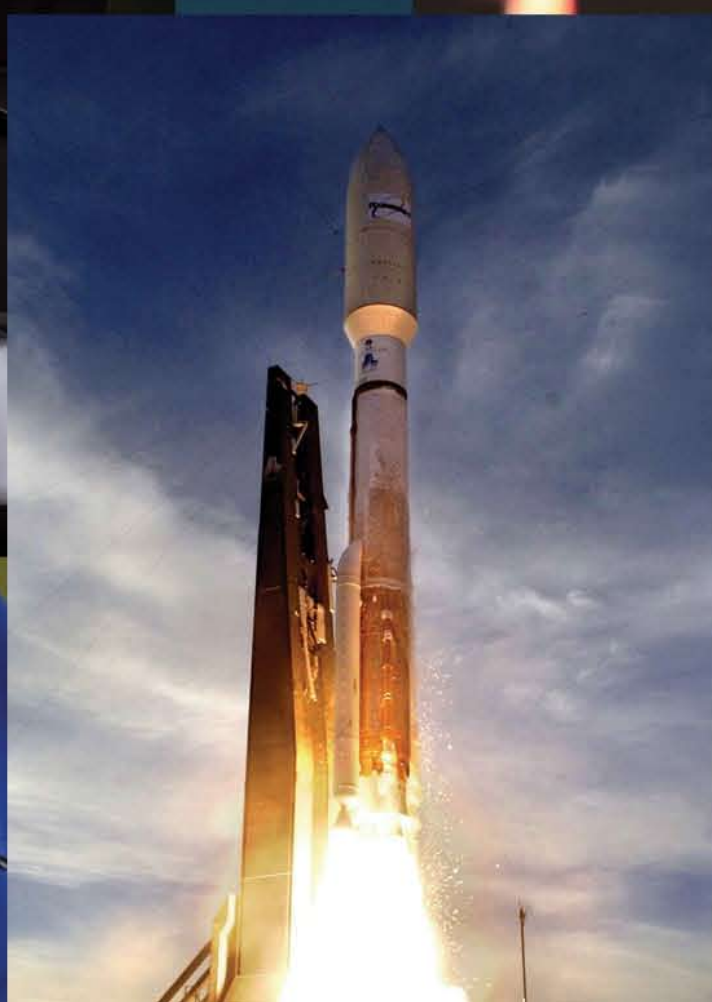


Who We Are

- Maritime Systems and Sensors (MS2) is a business unit within the Electronic Systems business area of Lockheed Martin Corporation
- MS2 provides surface, air and undersea applications on more than 460 programs for U.S. military and international customers. The same expertise we provide to military customers is being applied to increase capabilities of U.S. and international civilian agencies. Our vision for MS2 is to set performance standards for our customers worldwide, every day with the best people, best systems and best services
- Moorestown lines of business include Advanced Naval Systems, Coast Guard Systems and Sea-based Missile Defense



Issue

Vapor Intrusion investigations under current New Jersey Department of Environmental Protection (NJDEP) policy have recently become a primary focus, where contamination in shallow groundwater aquifers has the potential to impact residential properties.

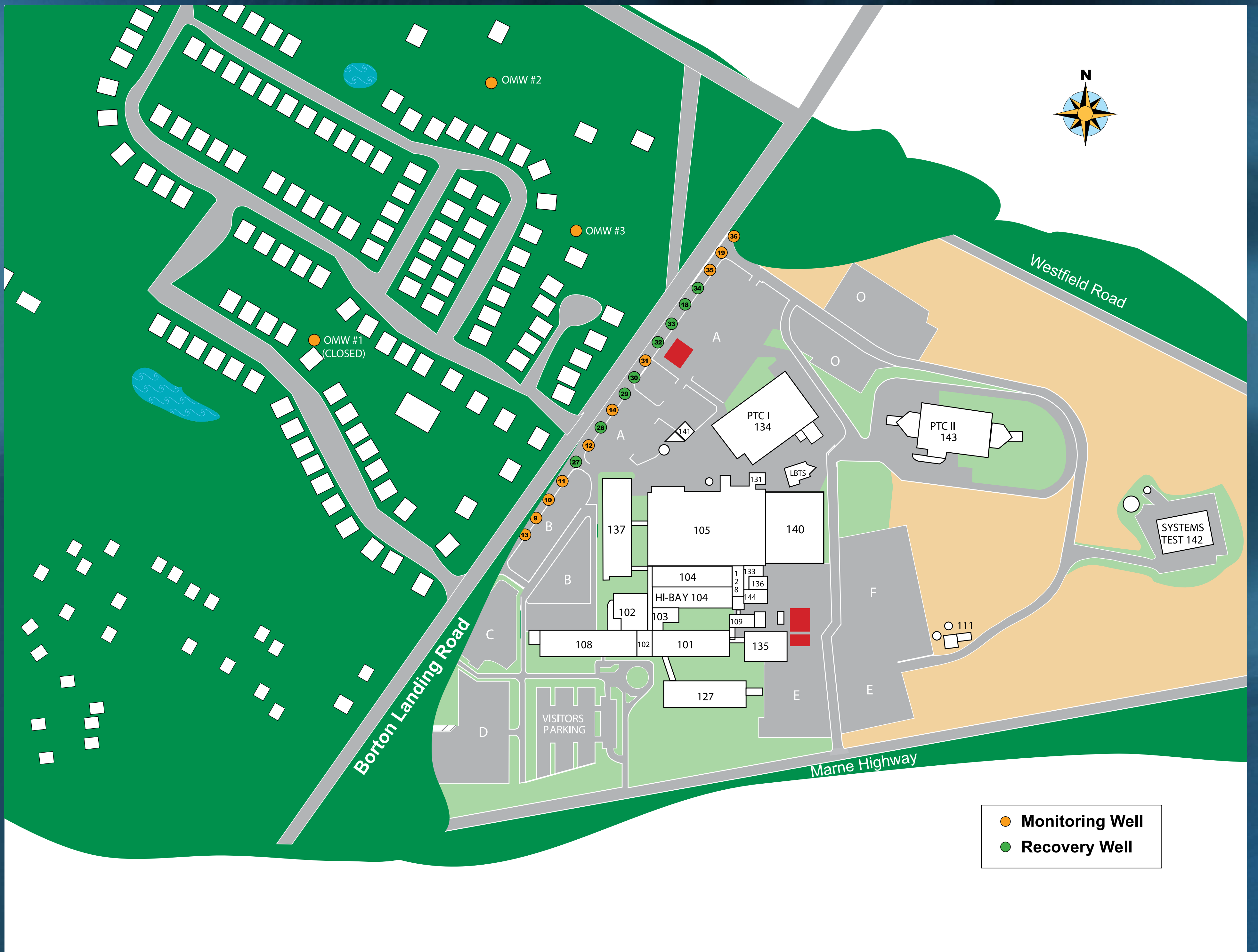


Current Focus

- **Lockheed Martin has taken extensive actions to determine if vapor intrusion is occurring as a result of groundwater contamination**
- **Lockheed Martin is working with the NJDEP to ensure the safety of the surrounding community**
- **Lockheed Martin is also working with the Burlington County Department of Health and Moorestown Township**



Residential Map



Who Is Here Tonight?

- Lockheed Martin
- New Jersey Department of Environmental Protection
- Burlington County Department of Health
- Moorestown Township
- URS
- Handex Consulting and Remediation



On-Site History

- An environmental investigation that began prior to Lockheed Martin's ownership, revealed on-site soil and groundwater contamination with trichloroethylene (TCE)
- Groundwater monitoring wells were installed in the early 1990s
- Based on groundwater sample results, and coordination with the NJDEP, three remediation systems were installed in 1994 for on-site cleanup and to prevent further migration of contaminants across Borton Landing Road
- Remediation systems have been removing contaminants virtually 24/7 for 14 years
- On-site and off-site groundwater monitoring is on-going
- TCE groundwater concentrations have been decreasing

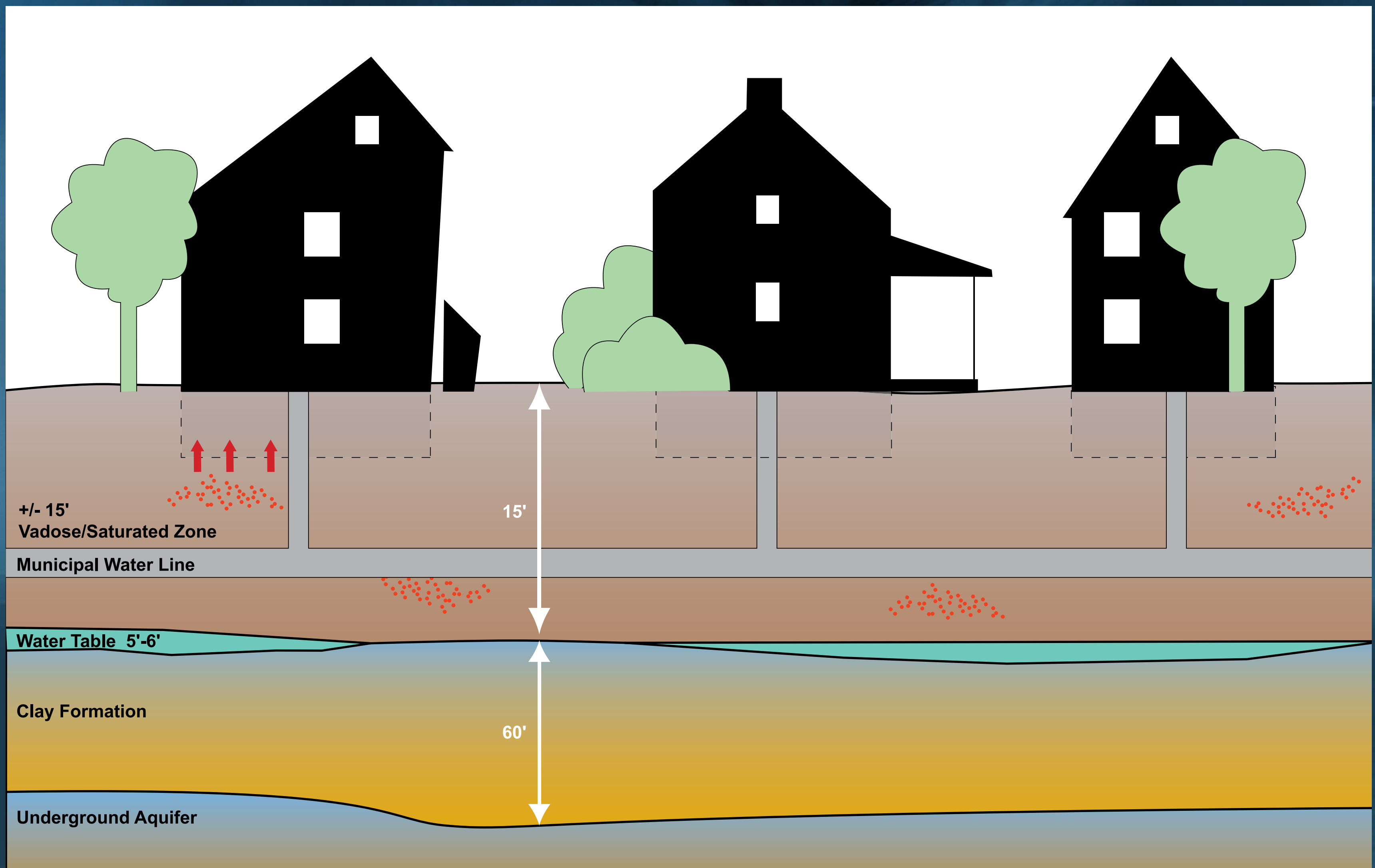


Off-Site History

- Four off-site monitoring wells were installed in 1991. Sampled annually as per NJDEP guidance
- In 1992, (Pre-Wexford) seven residences (two with low levels of TCE in private well water) were connected to Moorestown municipal water system
- All development since 1992 connected to municipal water
- In 1995, the NJDEP approved closing two off-site monitoring wells with consistent readings showing no contamination
- At the request of NJDEP in May 2007, Lockheed Martin conducted precautionary vapor intrusion testing at Chesterbrook Academy (day care facility)
No TCE detected
 - Lockheed Martin conducted vapor intrusion sampling at the Main Plant building closest to Borton Landing Road. No TCE detected



Soil Vapor Intrusion Example



Certain chemicals called volatile organic compounds that originate from a contaminant plume* in the groundwater can evaporate from groundwater through the soil and rise towards the ground surface. From there they can penetrate into a basement through a sump or drain system and affect indoor air quality.

* **Plume:** A body of contaminated groundwater that extends from the source of contamination to another point in the direction of the flow of groundwater

Vapor Intrusion Testing Approach

- **Step 1: Temporary groundwater wells to delineate groundwater plume**
- **Step 2: Near slab sampling to assess any soil gas concentrations**
- **Step 3: If groundwater and near slab tests at property were above NJDEP screening levels, we performed sub slab sampling (In some cases later on in the project, we went directly to sub slab and did not perform near slab)**
- **Step 4: If results from the sub slab were above the NJDEP screening level, we performed indoor air sampling**

Near Slab Testing

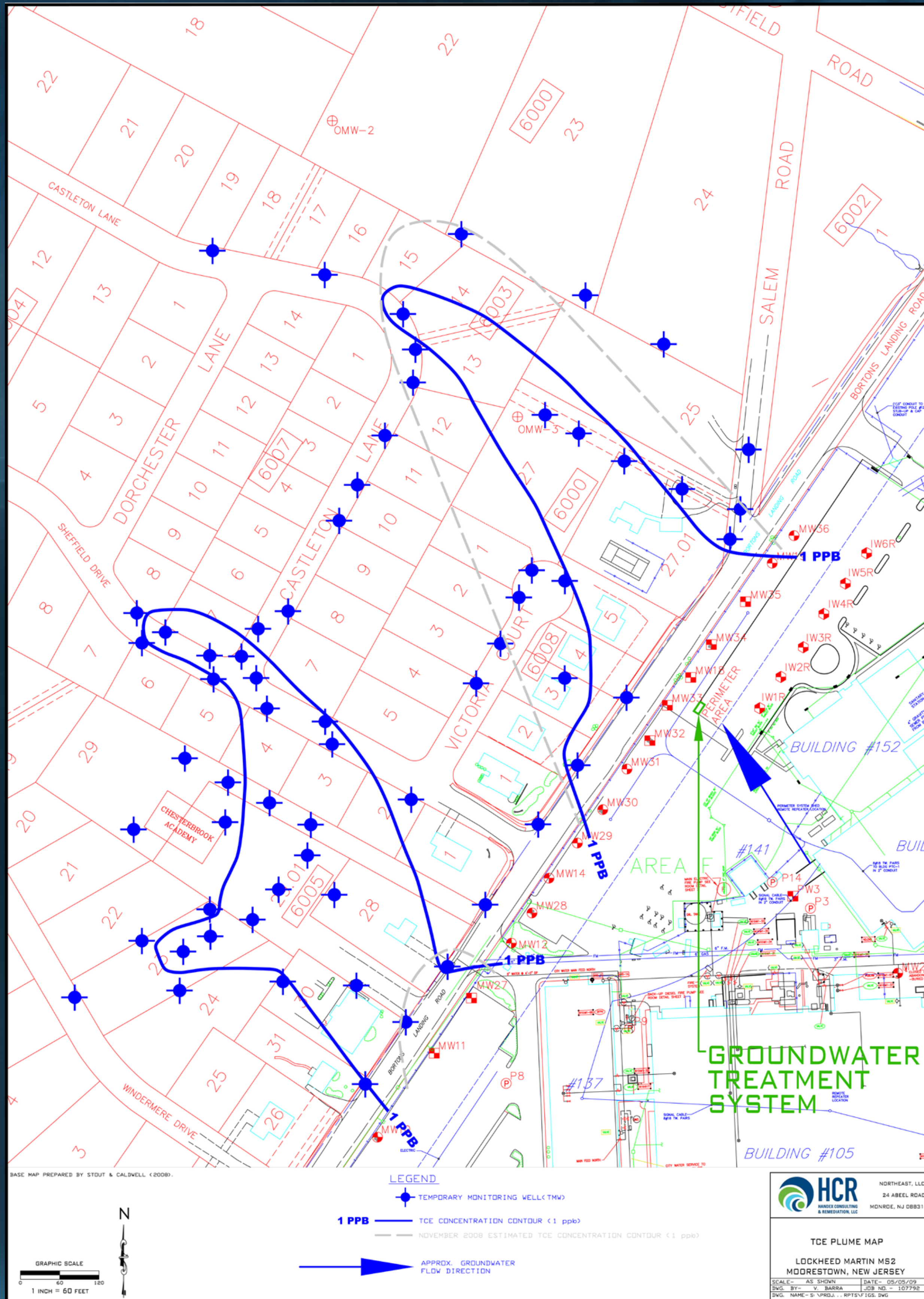
- Near slab testing is a US Environmental Protection Agency (USEPA) - and NJDEP - approved method for sampling vapors in the soil near the foundation of a building
- A utility mark out is performed prior to the drilling to assure that no utilities are interrupted, such as electricity, natural gas, or plumbing
- The near slab testing process involves drilling a small diameter hole within 10 feet of the residential foundation, five to 10 feet below grade, inserting a plastic tube, packing sand and clay around the tube and drawing an air sample from the tube into a Summa canister



Sub Slab Testing

- **A US EPA - and NJDEP- approved method for sampling vapors in the soil underneath the foundation of a building**
- **Requires access inside the property owner's building/house**
- **Involves drilling a small diameter hole through basement foundation floor, inserting a plastic tube to draw an air sample into a summa canister**
- **Hole is filled with concrete/cement mix after sampling**
- **Summa canister sent to the laboratory for analysis**

Plume Map



What We Have Accomplished

- Installed and sampled 62 temporary groundwater wells to define off-site groundwater contamination
- Collected near slab (within 10 ft. from foundation) samples at 37 properties
- Based on groundwater and near slab results, collected sub slab (beneath basement foundation) samples at 17 properties
- Based on sub slab results tested indoor air at 6 properties

Each sampling method built on the previous sample to examine all likely potential paths for vapor intrusion.



Results

- **No TCE vapor intrusion detected**
- **Groundwater remediation system on-site successfully removing contaminants to help reduce the off-site plume**



Next Steps

- **Submit final report and all sample results to NJDEP**
 - NJDEP may request further actions
 - NJDEP will also issue letters with sample results to residents where subslab and indoor air samples were conducted
- **Continue annual sampling and monitoring permanent off-site groundwater wells**
- **Annual off-site monitoring results will be provided to all residents involved in the current testing activity**
- **External website will remain updated:**
www.lockheedmartin.com/environment/moorestown.



More Information

David Sutton
Brad Heim
Ken Ross
Jack Grdinich
(856) 722-2009

Burlington County Health Department
(609) 265-5548

NJ Department of Environmental Protection
(609) 984-3081

