

Dave Sutton, Manager, Environment, Safety and Health
Lockheed Martin Precautionary Vapor Intrusion Investigation
Report to Moorestown Township Council

June 8, 2009

Good Evening.

My name is Dave Sutton and I manage the Environment, Safety and Health program at Lockheed Martin's business in Moorestown.

I last spoke to you in November of last year when, under direction of the NJDEP and in coordination with the Burlington County Health Department, we initiated a project to conduct a precautionary vapor intrusion investigation involving sampling activities primarily in the Wexford development. At that time I provided a brief history. In the interest of time, I will limit that discussion to mentioning that the intent of the investigation was to (1) characterize the extent of groundwater containing trichloroethylene (TCE) and associated compounds that might be present on these residential properties due to the presence of historic TCE groundwater contamination under the former RCA, now Lockheed Martin Moorestown property; and (2) determine if vapor intrusion was occurring within these residences. Additional information concerning the historical state-directed remediation activities on the Lockheed Martin Moorestown property can be obtained from a public website we have established in accordance with NJDEP regulations.

With respect to vapor intrusion, in 2005 the NJDEP published a vapor intrusion guidance document. Vapor intrusion can occur when vapors from chemical solvents in groundwater vaporize into the pore spaces in the soil and migrate into cracks in building foundations or basements and crawlspaces.

In May 2007, in response to health concerns from chemicals discovered at a Gloucester Township day care facility - Kiddie Kollege - the NJDEP requested that businesses with known contamination near day care facilities conduct vapor intrusion testing. Lockheed Martin completed proactive precautionary testing at Chesterbrook Academy, as well as in a building in an area on our property where we estimated the highest likelihood of TCE detection. Sample results in both cases were nondetectable for TCE.

In September 2008, the NJDEP informally requested that Lockheed Martin conduct precautionary vapor intrusion testing at residential properties across Borton Landing Road from our facility – which are in the path of the groundwater flow, and within a calculated plume (based on the August 2008 results from routine sampling of our offsite monitoring wells).

In response to the NJDEP request, we have essentially completed (with the exception of just a few additional samples that remain to be collected) the residential vapor intrusion investigation. Our sample results indicate that there is no evidence of vapor intrusion of

TCE into any buildings on any of the properties sampled. One property revealed sampling results in excess of NJDEP screening levels for perchloroethylene (PCE) in one subslab and one indoor air sample; however PCE was not present in excess of NJDEP screening levels in the groundwater on this or any of the residential properties sampled. Moreover, there is no evidence to suggest that the PCE detected migrated from the Lockheed Martin facility.

The investigation included the following sampling steps:

Step 1: Installation of temporary groundwater wells to delineate groundwater plume

Step 2: Near-slab sampling to assess any soil gas concentrations. Near-slab samples are taken by drilling a core within 10 ft. from a building foundation in the soil to a depth just above the water table and extracting a vapor sample with a pump sampler.

Step 3: If groundwater and near-slab sample results on properties were above NJDEP screening levels, we performed sub-slab sampling – during which a hole is drilled in the slab in the basement; a tube is inserted and a sample of vapor from beneath the slab is extracted with a pump. In some instances later on in the project, we decided to skip the near-slab testing and moved directly to perform sub-slab sampling.

Step 4: If results from the sub-slab were in excess of the NJDEP screening level, we performed indoor air sampling.

In summary, during the course of the investigation, we:

- Completed installation and sampling of 62 temporary groundwater wells to further define off-site groundwater contamination
- Completed near-slab sampling of 37 properties
- Based on groundwater and near-slab results, completed sub-slab sampling at 17 properties
- Based on sub-slab results, completed testing of indoor air at 6 properties, including Chesterbrook Academy (all of which had nondetectable sample results for TCE)
- Each sampling method built on the previous sample to examine all potential pathways for vapor intrusion

We have provided hard copies of results to the residents of all properties sampled, and submitted copies of all results to date to the NJDEP and Burlington County Health Department. To ensure we engaged all stakeholders, on May 7, we held a joint information session with the NJDEP, Burlington County Health Department (attended by the mayor of Moorestown Township) for the residents.

Going forward, by the end of this month we intend to submit a complete report of the entire residential vapor intrusion investigation including all sample results and data relevant to the project, along with recommendations for further actions. In that regard, we will be proposing to the NJDEP the installation of an additional five permanent monitoring wells within the Wexford development which would be sampled periodically and results submitted to the NJDEP. Based on previous history, the expectation is that contaminant levels will continue to naturally degrade over time and monitoring will continue until contaminant levels consistently meet NJDEP standards.

As I mentioned, we have established a publically accessible website where materials associated with the overall historic state-directed remediation project and residential vapor intrusion project are posted. I have noted the website link at the bottom of this document.

It is sincerely hoped that we have demonstrated through this process our desire to communicate openly, respond proactively, and enhance our ongoing commitment to being a good neighbor.

Thank you for your time. I'd be happy to try to answer any questions you may have.

www.lockheedmartin.com/environment/moorestown