

Chemical Metals Industries, Inc.

Chronology (last updated: 06/26/09)

- **1950s-1973:** The properties at 2001 and 2103 Annapolis Road (“the Properties”) are used for commercial purposes including a gasoline service station and a precious metals refining business.
- **April 1973:** Chemical Metals Industries, Inc. (“CMI”) incorporates and some time after begins a metals recovery and copper sulfate manufacturing operation on the Properties.
- **August 28, 1981:** CMI is dissolved by court order and placed in the hands of a court appointed receiver (Weinburger & Weinstock, P.A.). Two weeks prior, a Maryland Office of Environmental Programs (“OEP”) inspector discovered CMI’s facility at the Properties abandoned and containing significant quantities of improperly stored hazardous waste materials. The nature of the wastes and manner of their storage posed an imminent threat to human health and the environment.
- **September 2, 1981:** OEP reports the situation to U.S. Environmental Protection Agency Region III (“EPA”) and requests technical and financial support to address the hazardous waste materials.
- **October 19, 1981-December 18, 1981:** EPA declares the Properties a Superfund site and performs an Emergency Removal Action along with a team of federal, State and local agencies. Various tanks, containers, at least 1500 deteriorated drums, and approximately 21,000 gallons and 114,000 pounds of hazardous waste are removed from the Properties. Underground storage tanks are removed or abandoned in-place and building decontamination activities are performed. Nine monitoring wells are installed on the Properties to evaluate groundwater and soil quality.

Soil and groundwater sampling results indicate significant contamination by various metals and volatile organic compounds (VOCs). Based on these findings, 2001 Annapolis Road property is covered with a foot of clayey fill material and outdoor areas of 2013 Annapolis Road property is covered with a layer of asphalt paving.

- **September 24 & 27, 1985:** The Department of Health and Metal Hygiene (“DHMH”) surveys the occupants of sixteen of the twenty row houses located between the Properties to see if they had noted chemical odors or other problems in their basements since the October-December 1981 Emergency Removal Action. None of the occupants report any odors or problems.

- **October 3, 1985:** The Wall Street Journal quotes DHMH as saying it does not believe toxic vapors are collecting in the basements of the row houses adjoining the Properties. DHMH bases its statement on the absence of contaminants in testing done in one of the basements during the 1981 cleanup and the findings of its September 1985 row house survey.
- **June 27, 1997:** MDE completes a risk assessment of the 2103 Annapolis Road property based on the results of indoor and outdoor air samples collected on June 11, 1997. Fifty-six chemical substances were detected in the outdoor air samples. These same substances, plus 17 additional substances, were detected in the indoor air samples. MDE's assessment does not identify any significant risks to workers inside the building or nearby residents.
- **November 5, 1997:** Roy F. Weston, Inc. (an EPA contractor) collects soil samples from beneath the asphalt covering at the 2103 Annapolis Road property to evaluate the nature and extent of the underlying soil contamination. TCE, PCE and lead are found in the soil at levels exceeding EPA's emergency removal guidelines. Soil logging conducted during the sampling activities suggests the TCE, PCE, and lead are confined between the asphalt cover and a continuous clay layer found at a depth of approximately 2.5 feet.
- **February 3, 1998:** EPA notifies MDE it has reviewed the November 5, 1997 sampling results and is preparing an action memo to address the contamination.
- **November 24, 1998:** MDE and EPA enter into a Superfund Memorandum of Agreement to correct deterioration and cracking of the asphalt cover at 2103 Annapolis Road. EPA agrees to excavate and dispose of contaminated soil exposed by the deteriorated and cracked asphalt, backfill the excavation with stone, and pave the area with new asphalt.
- **April 2003:** MDE evaluates contaminant levels at the Properties using May 7, 2002 groundwater-sampling data (from six on-site monitoring wells) and May 6, 2002/October 31, 2002 air-sampling data from a network of indoor/outdoor locations on the 2001, 2009, and 2103 Annapolis Road properties.

Significant levels of chlorinated hydrocarbons and selected metals are detected in the groundwater beneath the Properties. Airborne contaminants are detected in the unoccupied basement of 2009 Annapolis Road and MDE field office at 2103 Annapolis Road. The source of the airborne contaminants is unclear and may be the result of vapor intrusion from contaminated groundwater, past site operations, and/or ambient air pollution.

Based on these findings, MDE concludes further air testing is needed at and in between the 2001 and 2103 properties.

- **November 9-21, 2005:** Columbia Technologies, LLC (an MDE contractor) conducts a groundwater investigation at the Properties and alongside the intervening row houses. Significant groundwater contamination from the Properties is found migrating beneath the twenty intervening row houses. Based on these findings, MDE resolves to test air quality in the basements of the affected row houses. Columbia's investigation results suggest the possibility of significant residual soil contamination beneath the 2103 Annapolis Road property.
- **March 7, 2006:** MDE shares the November 2005 investigation results with EPA and suggests they consider doing further investigation of the 2001 Annapolis Road property.
- **August 6, 2006:** MDE meets on site with representatives of EPA's Response Team West (Rebecca Connell, Chemical Engineer and EPA's indoor air expert), ATSDR (Karl Markiewicz, Ph.D., Senior Toxicologist) and EPA's Region III Emergency Response Team (Gregory Ham, Federal On-Scene Coordinator). For decision-making purposes, they ask MDE to collect additional indoor air sampling data from the intervening row homes.
- **August 21, 2006:** MDE sends letters to the owners of fifteen (2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023, 2027, 2029, 2033, 2035, 2037, 2041, and 2047 Annapolis Road) of the twenty affected row houses. The letters notify the owners of the groundwater contamination beneath their houses and requests permission to collect a sub-slab vapor sample from each of their basements. MDE learns one of the houses (2031 Annapolis Road) has been condemned by the City of Baltimore and is un-safe to enter. Reliable contact information is unavailable for four of the houses and we do not issue letters for them.
- **September 18, 2006:** Receiving no response to the August 21, 2006 letters, MDE knocks on the door of each affected row house in an effort to alert the occupants to the potential problem, seek verbal approval for basement sub-slab sampling where possible, and get reliable contact information.
- **January 19-22, 2007:** MDE contacts the owners of 2017, 2023, 2027, and 2043 Annapolis Road by telephone and faxes them information about the contamination problem and MDE's procedures for collecting sub-slab vapor samples.
- **February 8, 2007:** MDE writes the owner of 2009, 2011, and 2013 with information about the contamination problem and MDE's procedures for collecting sub-slab vapor samples.
- **March 8, 2007:** Using information gleaned during its September 18, 2006 door-to-door survey, MDE writes the owners of 2015, 2019, 2021, 2025, 2029, 2033, 2035, 2037, 2039, 2041, 2045, and 2047 re-affirming our need for property access and explaining the vapor intrusion mechanism and our air sampling techniques.

The letters threaten the use of legal action if MDE is unable to access the basements in a cooperative manner. The letters result in MDE gaining verbal approval to access the basements of 2019, 2021, 2033, 2035, 2037, 2039, 2045 and 2047 Annapolis Road.

- **April 4, 2007:** Unable to get a response from the owner of 2009, 2011, and 2013 (the three houses closest to the 2001 Annapolis Road property), MDE's Office of the Attorney General ("OAG") writes the owner threatening the use of an administrative search warrant to gain property access.
- **April 30, 2007:** Not getting a response, to its April 4, 2007 letter, OAG writes to the owner's resident agent for the 2009 and 2011 Annapolis Road properties.
- **May 2007:** Chesapeake GeoSciences (an MDE contractor) installs and activates a soil vapor extraction system in the MDE field office at 2103 Annapolis Road. The system prevents the migration of VOC vapors into the building by extracting them from beneath the building slab and venting them to the atmosphere through a rooftop exhaust stack.
- **June 20, 2007:** Chesapeake GeoSciences collects sub-slab vapor samples from the basements of the row houses at 2019, 2035 and 2047 Annapolis Road. Vapor contamination beneath 2047 Annapolis Road exceeds the Johnson and Ettinger (J&E) target screening level. Significant vapor contamination is also present under the 2019 and 2035 houses, but not at concentrations high enough to exceed the J&E target screening levels. MDE relays the results to the owners by telephone and outlines a plan for testing indoor air quality in the houses.
- **June 25, 2007:** The owner of 2009, 2011, and 2013 Annapolis Road contacts MDE by telephone and agrees to provide us access to collect vapor samples.
- **July 11, 2007:** MDE notifies EPA of the June 2007 sub-slab vapor sampling results.
- **August 1-3, 2007:** Chesapeake GeoSciences collects indoor air samples from the basement and first floor living space of the residences at 2009, 2019, 2035 and 2047 Annapolis Road. CGS also collects a basement sub-slab vapor sample from 2009 as the property was not accessible during the June 20, 2007 sampling event.
- **August 9, 2007:** Learning that 2019 Annapolis Road is scheduled for public auction, MDE provides the property owner with a copy of the CMI fact sheet and a written summary of the June 20, 2007 basement sub-slab vapor sampling results.
- **November 14, 2007:** MDE sends the owners of 2009, 2019, 2035 and 2047 Annapolis Road a written summary and explanation of the June and August 2007 sub-slab vapor and indoor air sampling results. To better quantify potential health

risks, MDE requests the owners' permission to collect two additional indoor air samples from each property during cold-weather conditions. MDE informs the owners there is no evidence of an acute health hazard in any of the houses tested to date.

- **January 7, 2008:** MDE reaches the owners of 2035 and 2047 Annapolis Road by telephone and secures approval to re-sample indoor air at their properties. MDE learns 2009 and 2019 Annapolis Road have new owners and starts trying to contact them.
- **January 15, 2008:** MDE writes the new owners of 2009 and 2019 Annapolis Road seeking permission to collect the indoor air samples requested in our November 14, 2008 letter to the previous owners.
- **February 4, 2008:** MDE samples basement and first floor air quality in 2035 and 2047 Annapolis Road. Two air samples are collected from the first floor of each house.
- **February 29, 2008:** The new owner of 2009 Annapolis Road calls MDE and grants verbal approval for us to collect indoor air samples from the property.
- **March 13, 2008:** MDE writes the owner of 2011 and 2013 Annapolis Road seeking permission to collect the indoor air samples requested in our November 14, 2008 letter. MDE also issues an Order Requiring Environmental Response to the owner of 2019 Annapolis Road requesting him/her to submit a plan for sampling the air inside the house.
- **March 21, 2008:** MDE sends the owners of 2035 and 2047 Annapolis road a written summary and explanation of the February 2008 air-sampling results. MDE informs the owners the sampling results indicate a slight chronic health risk to the buildings' occupants and is working with EPA on an abatement strategy.
- **May 1, 2008:** Having received no response to its March 13, 2008 letter requesting access, MDE issues an Order Requiring Environmental Response to the owners of 2011 and 2013 requiring the submission of a work plan for indoor air sampling.
- **May 6, 2008:** EPA informs MDE it is considering doing a removal investigation at the 2001 Annapolis Road property.
- **May 20, 2008:** MDE responds to a telephone call from the owners of 2011 and 2013 Annapolis Road seeking clarification on the requirements of the May 1, 2008 enforcement orders.
- **May 30, 2008:** MDE receives a work plan (dated May 29, 2008) for indoor air sampling at the 2011 Annapolis Road property.

- **June 6, 2008:** MDE approves the May 29, 2008 work plan for indoor air sampling and reminds the owner a work plan is also required for the 2013 Annapolis Road property.
- **June 30, 2008:** EPA informs MDE they have a lawyer and civil investigator working on obtaining access to the 2001 Annapolis Road property. EPA says it plans to perform a removal assessment and, perhaps, a removal action at the property.
- **July 11, 2008:** MDE issues a Complaint and Order and \$5,000 fine to the owner of 2019 Annapolis Road for not replying to MDE's March 13, 2008 Order Requiring Environmental Response. The Complaint and Order requires the owner to do the requisite indoor air sampling.
- **July 24, 2008:** EPA informs MDE they are trying to locate corporate officers of Chemical Metals Industries, the listed owner of the 2001 property, to obtain access to investigate environmental conditions at the property.
- **August 1, 2008:** MDE receives indoor air sampling results report (dated August 1, 2008) summarizing indoor air data collected from 2011 and 2013 on July 8-9, 2008.
- **August 5, 2008:** MDE contacts owners' consultant the indoor air sampling results indicate slight, but unacceptable, chronic health risks to the occupants of the 2011 and 2013 houses. MDE also informs the owners it is working with EPA to come up with a strategy for abating the problem.
- **August 12, 2008:** EPA informs MDE they have located one of CMI's corporate officers and are attempting to get access to the 2001 property through him.
- **August 20, 2008:** EPA informs MDE the corporate officer mentioned above will not grant them access to the 2001 property.
- **September 3, 2008:** MDE authorizes CGS to conduct additional investigation of the 2013 property to define the vertical and horizontal extent of soil and groundwater contamination at the property and evaluate possible remedial alternatives.
- **September 11, 2008:** MDE requests an update from EPA on the status of their effort to gain access to the 2001 property.
- **September 16, 2008:** EPA informs MDE it is developing a warrant package to submit to the court for accessing the 2001 property. After obtaining access, EPA anticipates collecting 5 surface and 10 to 15 subsurface soil samples from the property.

- **September 18, 2008:** MDE hand delivers copies of its unanswered 2019 correspondence to the 2019 property owner.
- **October 3, 2008:** MDE's contractor surveyed the homes at 2011, 2013, 2019, 2035, and 2037 Annapolis Road to determine whether there were any household chemicals that could interfere with indoor air sampling.
- **October 7, 2008:** MDE's contractor removed household chemicals from the above-mentioned properties before to indoor air sampling.
- **October 15, 2008:** MDE's contractor completed home surveys and chemical inventories at 2017 and 2021 Annapolis Road.
- **October 8 – 9, 2008:** Indoor air samples were collected from 2011, 2013, 2019, 2035, and 2037 Annapolis Road.
- **October 21 – 22, 2008:** Indoor air samples were collected from 2017 and 2021 Annapolis Road.
- **November 13, 2008:** MDE requested permission to access and install a vapor mitigation system at 2047 Annapolis Road. Homeowner declined offer on November 19, 2008.
- **January 2009:** MDE's contractor prepared a Limited Remedial Investigation/Feasibility Study for 2103 Annapolis Road (Westport Field Office). The report selected In-Situ Chemical Oxidation Injection as the preferred alternative for groundwater remediation at the site.
- **February 19, 2009:** MDE received the analytical results for the indoor air sampling events and determined that vapor mitigation systems were needed for 2009, 2011, and 2013 Annapolis Road.
- **February 27, 2009:** MDE sent access agreement letters to the property owners of 2011 and 2013 Annapolis Road requesting permission to install vapor mitigation systems.
- **March 2009:** MDE's contractor begins soil borings around 2103 Annapolis Road to identify locations for injecting oxidizing chemicals to cleanup the soil and groundwater contamination.
- **March 13, 2009:** MDE sent access agreement letters to the property owner of 2009 Annapolis Road requesting permission to install a vapor mitigation system.
- **March 17 - 25, 2009:** MDE receives verbal approval for accessing 2011 and 2013 Annapolis Road and begins contacting the tenants to schedule installation.

- **May 25, 2009:** MDE's contractor begins injecting chemicals to treat contaminated groundwater at 2103 Annapolis Road.
- **June 12, 2009:** MDE hand delivers notices to tenants that it is scheduling the contractor's walkthrough prior to conducting testing needed to size the ventilation equipment scheduled for June 18 and June 25, 2009.
- **June 24 – 26, 2009:** MDE's contractor begins initial testing of 2009, 2011, and 2013 Annapolis Road to determine the appropriate size of the ventilation equipment.