

EIGHT MILE ALABAMA MERCAPTAN RELEASE UPDATE AS OF OCTOBER 2017

In 2008, lightning struck an underground supply line leading from a tank containing the chemical mercaptan in the Eight Mile community in Mobile County, Alabama. The tank system is owned by Mobile Gas Corporation. Mercaptan is the chemical used to create the distinctive rotten egg odor in natural gas, which is odorless in its natural state. Following the lightning strike Mobile Gas removed approximately 40 cubic yards of soil around the spill.

In late 2011, residents in the Eight Mile community began noticing an increasingly strong rotten egg odor normally associated with natural gas. In 2012, it was determined that mercaptan was present in the ground water. Where the ground water reached the surface as natural springs, the mercaptan was released into the air. Residents within approximately a one mile radius were subjected to the odor. While mercaptan is not listed by federal or state agencies as a toxic substance, the extremely unpleasant odor adversely impacts the quality of life for those subjected to it.

It is the responsibility of any party discharging pollution to clean up the pollution. Without admitting responsibility, Mobile Gas entered into a binding agreement with the Alabama Department of Environmental Management (ADEM) to mitigate threats to people or the environment posed by mercaptan in the area. As a result, Mobile Gas installed a treatment system to remove odors from the spring water and a second system to remove the mercaptan from ground water.

The odor treatment system that captures ground water as it emerges from the springs utilizes ozone to oxidize the mercaptan, which removes the odor. A backup power supply is in place in the event power to the ozone treatment system should be interrupted. The second system treats the ground water before it reaches the surface by pumping ground water from 24 wells drilled for this purpose and then treating the water with ozone in closed tanks that prevent odor from escaping. Once the mercaptan is removed the treated water is acceptable for discharge to the surface under a permit issued by ADEM. The two treatment systems will remain in place as long as necessary to remove the mercaptan from the ground water and to control the mercaptan odor. Treated water is regularly tested to assure the effectiveness of the treatment systems.

Since 2012, at least weekly, ADEM has been conducting odor patrols at 8 locations in and around the Eight Mile community with special attention to any location where a specific odor complaint is received. The criteria for characterizing odor observations as level 0 through 4 are shown below. Prior to implementation of the first treatment system and prior to the start of odor patrols, odors were observed which would likely have been recorded as level 3 and level 4. In the time period between the startup of the first treatment system and commencement of the regular odor patrols, through October 2015, 2.8% of odor observations were characterized as level 2 or level 3. Since starting the second treatment system in November 2015, there have been no observations higher than level 2, and level 2 observations have dropped by over half, to approximately 1% of observations. No odor has been detected for 92% of observations throughout the period of odor patrols.

Level 0 – No detectable odor

Level 1 – Odor barely detectable

Level 2 – Distinct and definite, any unpleasant characteristics recognizable

Level 3 – Strong enough to cause attempts at avoidance

Level 4 – Overpowering, intolerable for any appreciable time

ADEM has participated in four public meetings to provide updates to the community. These meetings included representation of federal and state health officials. The latest public meeting took place on August 16, 2016. ADEM also provides updates to local elected officials. The latest update occurred on December 15, 2016, when ADEM met with Mayor Gardner of Prichard to provide information on the current status of the mercaptan remediation.

EPA received and considered a request from the Alabama Department of Public Health (ADPH) dated March 20, 2017, to perform additional air monitoring in Eight Mile. In its May 31, 2017, response to ADPH, EPA stated that ongoing remediation has significantly reduced mercaptan concentrations in groundwater, as is evident from the analytical data from groundwater samples. EPA also stated that given that air concentrations in 2012 were significantly lower than the health-based screening value and since the remediation system has significantly reduced groundwater concentrations, it appears unlikely that air concentrations would have increased within the surrounding community. Therefore, EPA declined to grant ADPH's request for additional monitoring. Both documents are available in the Department's eFile system.