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Sulfolane Release Questions and Answers Former Hartland 36 Gas Processing Plant

Last fall, Merit Energy decided to end natural gas operations at their site off Lone Tree and Pleasant Valley Roads, south of M-59. While dismantling the station and conducting necessary testing, it was discovered that detectable levels of the chemical sulfolane was present in the earth beneath and around the gas plant, in the groundwater beneath the excavation site and at one of the seven monitoring wells surrounding the former gas processing facility.

Testing completed in early June has confirmed the sulfolane impact to groundwater appears localized to the site. Water testing of private wells in the downgradient direction of native groundwater plume movement has shown none of the first six residential water wells are impacted by sulfolane or other volatile organic chemicals previously used at the gas processing plant. This document was reviewed by Merit Energy Company and the Michigan Department of Environmental Quality (MDEQ) to address the most common questions which area residents may have concerning the ongoing investigation.

Q: What is sulfolane?

A: Sulfolane is an organic chemical (solvent) comprised of carbon, hydrogen, oxygen, and sulfur compounds (specifically $C_4H_8O_2S$) initially created for use to purify natural gas via the Sulfinol process. It is fully soluble in water.

Q: Where was the Hartland 36 Gas Processing Plant formerly located?

A: The gas processing plant operated for nearly 15 years under the ownership and operation of multiple firms. Merit Energy is the most recent firm to operate the plant and made the final decision to close the plant due to economic reasons. The plant was located on the south side of Lone Tree Road, in Hartland Township, between South Tipsico Lake Road and Pleasant Valley Road. All facility buildings, tanks, and underground piping were removed in 2015.

Q: When was a sulfolane release first discovered?

A: Sulfolane was discovered in the soils beneath the process building in October 2015 when the plant buildings were demolished. Thousands of cubic yards of contaminated soil was excavated and transported to a licensed hazardous waste landfill for disposal under the regulatory oversight of the Michigan Department of Environmental Quality (MDEQ) Oil, Gas, & Minerals Division. The soil remediation work concluded in November 2015.

Q: How does sulfolane migrate through groundwater?

A: In pure form, sulfolane is a clear, colorless liquid which is heavier than water. Sulfolane does not volatilize from water or soil and is not readily absorbed to organic matter. The migration of sulfolane through groundwater can depend on a variety of circumstances, including geologic conditions, the directional flow of the groundwater, and other factors.

Q: Who is responsible to complete the groundwater investigation and remediation in accordance to State laws and regulations?

A: Merit Energy Company.

Q: Who is responsible to verify the groundwater investigation and remediation occurs in accordance to State laws and regulations?

A: The MDEQ Office of Oil, Gas, and Minerals. Lansing District Area Geologist Shaun Lehman can be reached at (517) 282-5323.

Q: How much is known about the groundwater contamination so far?

A: The first phase of groundwater investigation was completed last fall after the soil remediation was completed. Seven permanent monitoring wells were installed within the 5-acre former gas sweetening plant property boundaries and one well had detectable concentrations of sulfolane, located near the north plant boundary along with the groundwater at the bottom of the excavation pit. The closest residential wells were sampled then and had non-detectable concentrations of sulfolane.

Q: What is Merit Energy Company's future plans and timeline?

A: The comprehensive Groundwater Investigation Work Plan initiated in June 2016 should provide evidence the horizontal and vertical extent of sulfolane contamination is confined largely to the original 5-acre site. When the data review from the first phase of investigation is completed, Merit will prepare a summary report and amend their Work Plan to complete additional field work, as necessary. At a minimum, additional permanent monitoring wells will be installed.

Q: How clean is clean?

A: Development of generic statewide clean up criteria is underway by the MDEQ Remediation and Redevelopment Division.

Q: What is the relative risk to area homes?

A: Based upon existing data, it appears there is a low risk to area residents. A more complete and accurate risk assessment can be done after the planned investigation work is completed. In addition to the six private residential wells sampled the week of June 6th, another half-dozen private wells were tested the week of June 13th. All the private residential well sample data results will be posted when they are received.

Q: What is the timeline to complete the contaminated groundwater investigation?

A: No definitive date can be forecast at this time, but Merit Energy is committed to defining the leading edge of the contamination as soon as possible. Under ideal conditions a much better understanding of the plume extent should be known by late summer. Since the detailed investigation required by MDEQ takes time to implement correctly, this is why Merit Energy Co. has elected to proactively sample the closest residential wells as explained above.

As more information is generated, a public meeting may be scheduled to explain in much greater detail about the past and future investigation results than is possible in this short Questions and Answers document. The meeting would be jointly hosted by Merit Energy Company, MDEQ, and Hartland Township.

Further questions concerning the sulfolane release in southeast Hartland Township should be addressed to Hartland Township Trustee Matthew Germane at (810) 449-9366. Mr. Germane is a licensed professional environmental engineer and is in direct communication with Merit, MDEQ, Livingston County Health Department (LCHD), the Hartland Township Board, and Hartland Township staff members.