

Questions and Answers Regarding Eastman's Assistance in the Emergency Response to the Spill of Crude MCHM in Charleston, West Virginia

What is the purpose of providing this Question and Answer document?

Eastman's focus since learning of the spill has been to work with local, state and federal agencies and emergency responders to provide information and assistance to address their immediate needs in responding to the Freedom Industries' spill. In an emergency situation, Eastman believes that emergency responders should be the initial source of information to the public regarding response efforts. While Eastman provided full information to emergency responders, Eastman decided to provide only high-level information to the public until the immediate response efforts were complete. This helped to avoid any potential for confusion that might occur as a result of the manufacturer of the product releasing information to the public at the same time that emergency responders were attempting to release information to the public. The purpose of this Question and Answer is to provide information to the public and to respond to certain news reports that Eastman has reviewed regarding the Freedom Industries' spill.

When did Eastman learn of the spill and how did the company respond?

Eastman first learned of the release of Crude MCHM from a Freedom Industries' storage facility at approximately 7:30 PM on Thursday, January 9, 2014, from emergency responders in the Charleston, WV area. Eastman immediately began working with emergency responders by providing assistance and information. This assistance included providing a Safety Data Sheet and an immediate discussion of the physical and chemical properties of the product and all toxicity information known to Eastman. Among other questions, emergency responders asked Eastman for information on how to detect Crude MCHM in water. During the next few hours, Eastman's internal experts provided a proprietary test method and collaborated with internal experts at another chemical company to accelerate the development of an efficient means of determining the level of MCHM in water. That method for detecting the level of MCHM in water is the one in use by emergency responders. On Friday, Eastman had additional discussions with a number of federal agencies who were working to evaluate the safety of water in the area. Eastman provided complete copies of its toxicity studies to agencies and emergency responders who requested the information. Following this initial 24 hour period, Eastman has continued to work with agencies and emergency responders to aid in the spill response and to support their evaluation of safe levels for the water.

What is Crude MCHM and what is it used for?

Crude MCHM is a mixture of the chemicals identified in [Eastman's Safety Data Sheet](#). The largest component of the Crude MCHM product is MCHM. Crude MCHM is intended solely for use in industrial applications in an industrial setting. One industrial use of the product is as a coal or other ore flotation chemical. It first began to be used as a coal flotation chemical as early as the 1970s. A second and less significant use of the Crude MCHM product is as an additive to certain fuels. The physical and chemical properties of Crude MCHM are found on the Crude MCHM Safety Data Sheet. Crude MCHM does not require any unique type of handling or storage facility that differs from those required for most industrial chemicals. In the past decade, Eastman has produced between 5 million and 10 million pounds of the Crude MCHM product annually. By volume, that is equivalent to approximately 10 - 20 tanker truck loads per month.

What is Eastman's relationship to Freedom Industries?

Eastman has sold Crude MCHM to Freedom Industries since at least 2000. Eastman was aware that Freedom Industries used the product for coal flotation which is an approved use. Freedom Industries purchased Crude MCHM at Eastman's Kingsport, Tennessee facility. A common carrier transported the product for Freedom Industries to its designated facility. Eastman's last sale to Freedom Industries occurred on January 4, 2014. Contrary to some media reports, Freedom Industries was not a distributor for Eastman.

What does Eastman know about the cause of the spill?

Eastman does not have any direct information about the cause of the spill. Crude MCHM does not have any unique storage or handling requirements beyond those required for most industrial chemicals. As part of the normal sales process, an Eastman sales representative visited the Charleston site in June, 2012. Eastman does not typically inspect customer facilities and tanks and did not do so here. Eastman has reviewed several news stories discussing the spill. Eastman has no reason to believe that Crude MCHM would cause a 1 inch hole to form in an above ground storage tank or would cause secondary containment around the tank to apparently fail.

Has Eastman been contacted by any governmental agencies before the spill about Freedom Industries?

On June 19, 2013, a representative of West Virginia Department of Environmental Protection, Division of Air Quality, located in Charleston, WV contacted Eastman through Eastman's Customer Care web portal to request information on Crude MCHM in response to a citizen's complaint of objectionable (licorice-like) odors associated with Crude MCHM occurring during tank filling operations. The inquiry asked for information regarding component vapor pressure. The inquiry did not identify which Freedom Industries' facility in the Charleston, WV area was involved.

Has Crude MCHM been involved in any other spills?

Crude MCHM is an industrial chemical intended for use in a controlled industrial environment. To Eastman's knowledge, the release of Crude MCHM from Freedom Industries' storage facility is the first environmental incident involving the product.

What toxicity studies does Eastman have?

Eastman performs a regulatory and toxicity review of all products to determine whether the product complies with all applicable laws and whether the products are safe for their intended use. Prior to being commercialized in the 1970s, Eastman, of its own initiative, completed an initial set of toxicity studies on the Crude MCHM product as a mixture. As part of its on-going review process, Eastman, of its own initiative, conducted additional studies on pure MCHM in 1990. Eastman also performed or evaluated studies on several of the other minor components in the mixture. In 1997, Eastman, of its own initiative, elected to conduct further studies on the Crude MCHM product. Eastman's studies were performed by reputable laboratories under established standards. Generally speaking, Eastman's toxicity studies were designed to evaluate the risk of the product in its intended use in an industrial environment. These studies

evaluate acute (short term) risk to workers. From these studies, Eastman made recommendations for worker safety measures that are found in the Safety Data Sheet. Additionally, toxicity studies were conducted to evaluate the risk to the environment. Toxicity studies are technical documents written for trained professionals. Specialized scientific training is needed to use the studies to evaluate the risks to humans based upon animal testing results. Additionally, toxicologists can use toxicity data for structurally similar chemicals (chemical cousins if you will) to evaluate the risk of a chemical that is being reviewed. This process is known as a “read-across”. Eastman employs toxicologists, industrial hygienists, physicians and other experts to assist in evaluating the need for data and to interpret the data.

What type of toxicity information does Eastman have for Crude MCHM?

Eastman has an internal process to ensure that its products are safe in its intended end use. Crude MCHM is an industrial chemical intended to be used in a controlled industrial setting. Eastman’s toxicity studies were performed to evaluate the acute (short term) risk to workers in an industrial environment and the risk to the environment. Based on these studies, Eastman provided recommendations in its Safety Data Sheet for precautionary measures to be taken by workers. The Safety Data Sheet also provided a precaution to avoid release to the environment and to prevent any spill from reaching a drain, sewer or stream.

Why are the studies proprietary?

Simply stated, Eastman, at its own initiative, invested a substantial amount of money to have the studies performed, and we do not want our competitors to have free access to the information that they did not help fund. As we did in response to Freedom Industries’ spill, Eastman does not hesitate to provide all requested information, proprietary or not, to local, state and federal agencies and emergency responders to aid in emergency response efforts.

Why has Eastman not provided its toxicity studies to the public?

The results of Eastman’s toxicity studies are included in Eastman’s Safety Data Sheet for Crude MCHM, which is publicly available. Eastman believes that individuals should look to designated emergency responders to receive the most current up-to-date information during an emergency situation. After learning of the spill on Thursday evening, Eastman provided a copy of its current Safety Data Sheet to emergency responders and explained the physical and chemical properties of the product and all toxicity data known to Eastman about the product. Conversations with emergency responders and governmental agencies continued the next morning. Eastman did not hesitate to provide complete copies of its studies to emergency responders when requested the following morning. The responders have been using Eastman’s information since that time to provide additional information to the public. Eastman’s studies are proprietary documents. Beyond the concern about Eastman’s confidential business information, Eastman decided not to release its studies to the public to avoid any potential confusion that might be caused if the manufacturer of the product is releasing toxicity information at the same time that emergency responders are making critical emergency response communications.

Will Eastman release its toxicity studies to the public?

Eastman recognizes that the public is interested and has made the toxicity studies available on www.Eastman.com. Toxicity studies are technical documents written for trained professionals. Specialized scientific training is needed to use the studies to evaluate the risks to humans based upon animal testing results. Eastman is not in a position to respond to questions from

the public regarding the toxicity studies but will continue to work with emergency responders and local, state and federal agencies as needed. Eastman encourages individuals to contact emergency responders and local, state and federal agencies for information related to spill recovery efforts and with any safety or toxicity concerns. If an individual has concerns about his or her health, Eastman encourages them to contact a medical professional. Eastman does not provide medical advice to individuals.

What are the effects of this chemical on human health?

Eastman encourages individuals to contact emergency responders, local, state and federal agencies or medical professionals for information related to human health concerns. The effect of a chemical on an individual depends upon a number of factors including the toxicity of the chemical, the amount of the exposure and the sensitivity of the individual who was exposed. Toxicity studies like the ones conducted by Eastman assist professionals in determining the toxicity of the chemical. Eastman provided all of its toxicity studies to governmental agencies and emergency responders shortly after learning of the Freedom Industries' spill. Eastman has worked with these agencies in their efforts to understand the toxicity of the chemical. Eastman does not have information necessary to determine the amount of exposure. For example, Eastman does not know the amount of the chemical that spilled or the concentration of the chemical in the water system before the order to stop using the water was issued. As a result, Eastman cannot provide any information on the effect of the spill on human health beyond what it has already made available.

Eastman agrees with the government agencies' announced determination of a safe level for Crude MCHM in water.

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What is Eastman's position on TSCA reform?

Eastman supports legislative reform that incorporates sound, risk-based principles and appropriate protection of confidential business information, and is willing to work with members of Congress to enact meaningful reforms. As a responsible company, Eastman evaluates whether its products are safe for their intended use. As part of this review process, Eastman often performs toxicity testing that goes beyond that required by governmental agencies. Eastman's additional, voluntary testing on Crude MCHM and its components during its product reviews enabled emergency responders to evaluate safe levels in water. Eastman has no objection to any requirement for testing or restrictions that are appropriate for the risk presented by a given chemical or its intended use.