



Committee on Transportation and Infrastructure
U.S. House of Representatives

Bill Shuster
Chairman

Washington, DC 20515

Nick J. Rahall, III
Ranking Member

Christopher P. Bertram, Staff Director

February 7, 2014

James H. Zoia, Democrat Staff Director

SUMMARY OF SUBJECT MATTER

TO: Members, Committee on Transportation and Infrastructure
FROM: Staff, Committee on Transportation and Infrastructure
RE: Field Hearing on “The Charleston, West Virginia Chemical Spill”

PURPOSE

On February 10, 2014, at 9:00 a.m., at the Kanawha County Courthouse, in Ceremonial Courtroom 4, Charleston, West Virginia, the Committee on Transportation and Infrastructure will meet to examine the circumstances behind, and the response to, the accidental release of chemicals into the Elk River near Charleston, West Virginia by Freedom Industries, Inc., which contaminated the water supply for Charleston and surrounding counties.

The Committee will receive testimony from representatives of West Virginia American Water, the West Virginia Department of Environmental Protection, West Virginia Division of Homeland Security and Emergency Management, West Virginia Department of Health and Human Resources, Cabell County Office of Emergency Services, Kanawha County Office of Homeland Security and Emergency Management, and the U.S. Chemical Safety Board.

BACKGROUND

The Chemical Release

On the morning of January 9, 2014, the West Virginia Department of Environmental Protection (WVDEP) received a call complaining of a licorice odor in the air around Charleston, West Virginia. Responding to the call, WVDEP dispatched two air quality inspectors who traced the odor to a tank farm owned by Freedom Industries, Inc. The Freedom Industries bulk storage distribution facility is located alongside the Elk River and approximately one and a half miles upstream from the potable water supply intake of the local water utility, West Virginia American Water. (See Figure 1 in the Appendix.)

Upon arrival at the Freedom Industries facility, the DEP inspectors observed a chemical substance in the secondary containment area surrounding aboveground storage tanks. Three of the tanks were storing a chemical known as 4-Methylcyclohexane Methanol (MCHM), a chemical produced by Eastman Chemicals, which was responsible for providing the Material Safety Data Sheet (MSDS), a document intended to inform workers and emergency personnel about procedures for handling or working with specific substances in a safe manner. WVDEP inspectors observed that this material appeared to have escaped the secondary containment (which is intended to catch spills) and was entering the Elk River. The inspectors noted that no one was trying to contain (or initially was even aware of) the chemical release. The inspectors contacted the WVDEP's Emergency Response Unit.

Shortly after noon that day, a Freedom Industries employee reported the release to the West Virginia Homeland Security and Emergency Management Department's Emergency Response Spill Hotline.

After further investigation, WVDEP Emergency Response and Kanawha County inspectors confirmed that the chemicals had, in fact, escaped the secondary containment, leading them to shut down the site. They instructed Freedom Industries to immediately take all necessary measures to contain, recover, and remediate the material that had escaped the aboveground storage tank and the secondary containment structure. WVDEP officials further instructed Freedom Industries to empty the three tanks that were identified as containing MCHM and move that material to a separate site that had appropriate secondary containment structures, as well as to identify the contents of the 11 other storage tanks located on the site. The company was also required to submit a corrective action plan that would include steps to clean up contaminated soil and groundwater.

By the early afternoon, the water utility recognized that its water supply was about to become contaminated as a result of the chemical plume migrating downstream from the spill site. In response, the utility turned on its activated carbon filters (mistakenly believing that the carbon would treat the MCHM). Shortly thereafter, West Virginia American Water notified its customers, via Twitter, that its treatment teams were closely monitoring the chemical spill.

Later that afternoon, the water utility notified the West Virginia Department of Health and Human Resources (WVDHHR) that the chemical had entered its system, and, recognizing that the steps it had taken to address the contamination were unsuccessful, the utility alerted WVDHHR that would be issuing a do-not-use water alert. Around this time, the WVDEP also began receiving notices that citizens were reporting odor and taste issues with their residential water supplies.

By late afternoon, state officials began informing media and the public of plans by West Virginia American Water to issue a do-not-use water alert to affected customers in Kanawha, Cabell, Boone, Putnam, Lincoln, Logan, Clay, Roane, and Jackson counties. The Governor then declared a State of Emergency for affected counties and the water utility issued its alert. The President approved a federal emergency declaration for West Virginia later that night.

Earlier in the day, Freedom Industries had begun emptying the leaking tank in response to the inspectors' orders, and moving the remaining MCHM to a storage facility in Nitro, West Virginia, about 10 miles from the Charleston site. But when West Virginia inspectors examined the alternative facility, they reportedly cited the company for five violations that could have resulted in another chemical leak. The site's secondary containment was deteriorated or nonexistent, according to a report prepared by the WVDEP, describing problems similar to those that caused the original release of the chemical into the Elk River.

Subsequent to the spill, the WVDEP has had an ongoing presence at Freedom's Elk River site, and is directing the containment and remediation measures with the assistance of officials from the State and local Homeland Security offices, the Coast Guard, U.S. Environmental Protection Agency, and the U.S. Chemical Safety Board.

Freedom Industries originally estimated that approximately 2,000 to 5,000 gallons of the chemical MCHM had leaked into the Elk River. The company has since released a new estimate that closer to 10,000 gallons of the chemical leaked from the tank. An undetermined amount of MCHM actually entered the river. It was reported that approximately 1,272 gallons of the substance was recovered from the river.

On January 21, 2014, Freedom Industries reported to authorities that a second chemical -- a mixture of polyglycol ethers (PPH) -- was part of the January 9th chemical release. Freedom Industries officials explained that, though adding PPH to their MCHM mixture had been a previous practice, the company had, for a time, stopped including the PPH. Company management, however, discovered, subsequent to the leak, that the company had resumed adding PPH to the mixture, at approximately five percent. It was not clear how much of that material leaked out of the tank or how much reached the river.

After finding out that Freedom Industries failed to report the presence of PPH in the January 9th leak, the WVDEP required Freedom Industries to disclose all chemicals that had possibly leaked into Elk River. Freedom Industries responded to the WVDEP that no further chemicals had leaked besides MCHM and PPH.

Impact on Water Supply

As a result of the January 9th spill, an unknown amount of the chemical plume in the river was drawn into the American Water Company's supply intake, contaminating the water supply and causing State and federal agencies to declare a state of emergency and order over 300,000 residents in nine counties, including the City of Charleston, not to drink or use tap water for any purpose other than flushing toilets.

The West Virginia National Guard was deployed to help bring in "water buffaloes" (portable tanks with clean water) to provide citizens with drinking water. In addition, the Federal Emergency Management Agency (FEMA) responded by delivering more than a million liters of water from its distribution centers in Cumberland and Frederick, Maryland, to the area. The West Virginia National Guard assisted FEMA in distributing bottled drinking water to emergency services agencies and citizens in the affected areas.

Ongoing testing of the water supply downstream was initiated after the chemical release. On January 12th, officials said tests conducted at the water treatment plant showed little to no traces of contamination, allowing testing of the water distribution system to move to the next phase. The water company planned to begin lifting the do-not-use ban by zones, starting in downtown Charleston and three other “priority zones” that include the City’s four major hospitals and 25,000 customers who use more than half of the company’s water. The water-use ban gradually was lifted over the next several days zone-by-zone as the concentrations of the chemicals decreased toward non-detectable levels.

On January 15, 2014, two days after the ban was lifted for the initial priority zones, the U.S. Centers for Disease Control advised that pregnant women may wish to use other sources of drinking water until testing found no trace of MCHM in the water. The final zone was lifted from the do-not-use ban on January 18, 2014. State, local, and water utility officials used CDC recommendations in determining when the ban on the use of tap water could be lifted.

In the days following the spill, the chemical substance plume in the Elk River continued to migrate downstream, into and down the Kanawha River, ultimately to the Ohio River. Even though the plume became more diluted as it moved downstream, water suppliers along the Kanawha and Ohio Rivers monitored for the chemical plume so they could respond in an appropriate fashion, to prevent potential contamination of their water supply systems.

The U.S. Chemical Safety Board has sent an investigative team to Charleston to investigate the incident and determine what happened and how to prevent a similar incident from occurring in the future.

Freedom Industries Facility

The Freedom Industries chemical storage facility, which is perched on a steep bank of the Elk River, has 14 tanks, built in the 1940s and 1950s. (See Figure 2 in the Appendix.) The tank that leaked is about 20 feet high and sits on a concrete pad surrounded by dirt. Encircling that tank and some others is a containment wall with various sections consisting of either concrete, cement, or cinder block. The containment structure dates back to the time when the facility was owned by Pennzoil and was part of that company’s approved Spill Prevention, Control, and Countermeasures plan.

The facility was owned by Etowah River Terminal LLC, a liquid bulk storage and distribution company. Freedom Industries acquired the Charleston storage tank facility in December 2013, when it merged with Etowah River Terminal, though the companies had long been associated.

Freedom Industries holds a National Pollution Discharge Elimination System (NPDES) Multi-sector General Water Pollution Control Permit issued by the WVDEP. WVDEP is approved under the Federal Water Pollution Control Act (commonly known as the Clean Water Act (CWA)) to implement the NPDES Permit Program in West Virginia. The permit covers discharges of stormwater associated with industrial activity. The facility’s NPDES permit does

not authorize the discharge of the chemicals that leaked into the river, so the discharge was a violation of the CWA.

The permit requires the facility's operators, among other things, to report, to the West Virginia Spill Alert System, spills and accidental discharges that occur at the facility, including any noncompliance that may endanger health or the environment immediately after becoming aware of the circumstances. Freedom Industries called the emergency spill line to report the chemical leak, but there is some question as to how cooperative Freedom Industries initially was with WVDEP and Chemical Safety Board officials.

Freedom Industries is facing multiple class-action lawsuits from residents and businesses seeking damages, as well as investigations by the state, the U.S. Attorney's office, and the U.S. Chemical Safety Board, all stemming from the January 9th spill. In response, Freedom Industries filed a Chapter 11 petition on January 17th with the U.S. Bankruptcy Court in the Southern District of West Virginia, freezing the numerous lawsuits against the company.

Freedom Industries reached a preliminary bankruptcy court deal for up to \$4 million in credit from a lender to help continue operations. The deal reportedly lets the company continue paying its employees in the short term, and also continue paying costs for environmental remediation, critical day-to-day administrative expenses, and major vendors. The bankruptcy proceedings are expected to continue.

WITNESSES

PANEL I

Hon. Joe Manchin
D-West Virginia
U.S. Senate

PANELII

Dr. Rafael Moure-Eraso
Chairman
U.S. Chemical Safety Board

Mr. Mike Dorsey
Director, Homeland Security and Emergency Response
West Virginia Department of Environmental Protection

Mr. Jimmy Gianato
Director
West Virginia Division of Homeland Security
and Emergency Management

Dr. Letitia Tierney
Commissioner and State Health Officer
West Virginia Bureau for Public Health

Mr. Gordon Merry
Director
Cabell County Office of Emergency Services

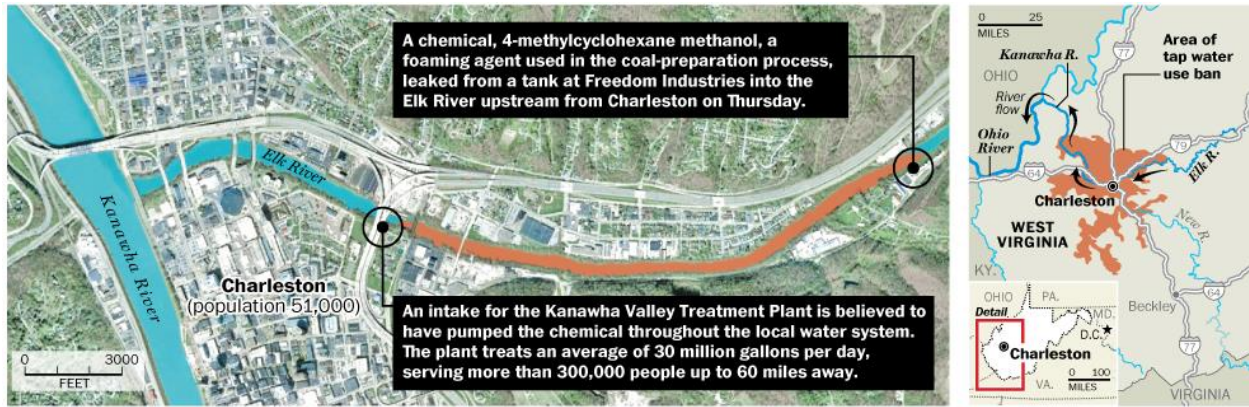
Mr. Dale Petry
Director
Kanawha County Homeland Security
and Emergency Management

Mr. Gary Southern
President
Freedom Industries

Mr. Jeff McIntyre
President
West Virginia American Water

APPENDIX

Figure 1.



- Population affected:**
- Total population: 294,350; of that 65,237 are children
 - 123,451 households
 - Median household income is \$47,191 (W.Va. average is \$40,400)
 - Number of families: 78,856; of those 8,445 in poverty; poverty rate 10.7 percent (W. Va. average is 12.8 percent)

Source: Google Earth and the U.S. Census Bureau. Gene Thorpe/The Washington Post. Published on January 10, 2014, 7:45 p.m.

http://www.washingtonpost.com/national/health-science/chemical-spill-threatens-thousands/2014/01/10/638b739e-7a59-11e3-b1c5-739e63e9c9a7_graphic.html

Figure 2.



<http://www.etowahriverterminal.com/default2.htm>