

## **Hazardous Materials Spill**

### **General**

One of the greatest threats to those who reside in the Commonwealth is the constant production, storage, use, and transportation of hazardous materials. The release of these materials from a facility is less dangerous than the release of these materials while transported. Hazardous materials include flammable liquids, solids, gases, combustible liquids, explosives, blasting agents, radioactive materials, oxidizing materials, corrosive materials, poisons, refrigerated liquids, hazardous waste/substances, and other regulated material. The City of Philadelphia and the Delaware Valley Region, less than 200 miles east of Huntingdon County, make up one of the leading industrial trade complexes in the nation. With the numerous forms of transportation in Huntingdon County, hazardous materials such as chemicals and fuels are frequently transported through the County. The carriers of hazardous materials, however, must have response plans in place in the event of an accident.

Any facility in Pennsylvania that uses, manufactures, or stores hazardous materials must comply with Title III of the Superfund Amendments and Reauthorization Act (SARA). This is also known as the Emergency Planning and Community Right-to-Know Act (EPCRA). These facilities must also comply with the reporting requirements, as amended, in Pennsylvania's Hazardous Materials Emergency Planning and Response Act (1990-165). Information about the chemicals manufactured or processed in facilities can be found in the U.S. Environmental Agency's Toxic Release Inventory (TRI) database.

### **History**

The National Response Center lists 28 hazardous materials instances occurring in Huntingdon County between July 1992 and November 2005. The Commonwealth experienced 1,000 spills in 2003. Most hazardous spills occur on highways. According to the U.S. Bureau of Transportation Statistics, 1,065 of the 1,115 spills in Pennsylvania happened on highways in 2000. These spills cost the Commonwealth approximately \$2.5 million.



*Source: Huntingdon County EMA  
State Route 22, Morris Township, Huntingdon County*

Between January 2002 and July 2007, there were approximately 84 reported hazardous material incidents in Huntingdon County, according to the Pennsylvania Emergency Incident Reporting System (PEIRS).

These spills consisted of discharged milk, oils, diesel fuels, gasoline, heating fuels, propane, natural gas, liquid manure, fertilizer, chemicals, and other various hazardous materials.

Between January 2002 and July 2007, 84 hazardous material spills were recorded in PEIRS. The table below illustrates the date and type of each spill that was entered into PEIRS during that time period.

<b>Huntingdon County HAZMAT Incidents, Jan 2002 - July 2007</b>			
<b>Incident Type</b>	<b>Date</b>	<b>Incident Type</b>	<b>Date</b>
Gasoline Spill	7/12/2007	Natural Gas Release	12/15/2004
Misc. Oils	7/5/2007	Heating Oil Spill	11/22/2004
Diesel Fuel Spill	6/30/2007	Heating Oil Spill	11/16/2004
Chemical Spill	6/27/2007	Heating Oil Spill	11/15/2004
Diesel Fuel Spill	5/29/2007	Heating Oil Spill	11/15/2004
Liquid Manure Spill	5/17/2007	Heating Oil Spill	10/27/2004
Diesel Fuel Spill	4/16/2007	Gasoline Spill	10/19/2004
Heating Oil Spill	3/6/2007	Diesel Fuel Spill	10/15/2004
Heating Oil Spill	2/26/2007	Diesel Fuel Spill	9/29/2004
Heating Oil Spill	1/23/2007	Bio-Hazardous Waste	9/26/2004
Hydraulic Oil Spill	11/27/2006	Natural Gas Release	7/6/2004
Heating Oil Spill	11/6/2006	Oil Spill	5/18/2004
Heating Oil Spill	10/29/2006	Oil Spill	4/29/2004
Chemical Release	10/19/2006	Heating Oil Spill	4/19/2004
Milk Spill	10/6/2006	Heating Oil Spill	4/1/2004
Chemical Release	8/16/2006	Hydraulic Oil Spill	3/1/2004
Misc. Oils	7/23/2006	Chemical Release	2/26/2004
Misc. Oils	7/5/2006	Heating Oil Spill	2/19/2004
Propane Release	6/5/2006	Diesel Fuel Spill	2/16/2004
Heating Oil Spill	5/9/2006	Heating Oil Spill	2/9/2004
Chemical Spill	4/12/2006	Heating Oil Spill	2/6/2004
Misc. Oils	3/31/2006	Gasoline Spill	12/6/2003
Gasoline Spill	3/13/2006	Diesel Fuel Spill	11/21/2003
Diesel Fuel Spill	3/8/2006	Heating Oil Spill	11/4/2003
Oil Sheen	12/23/2005	Hydraulic Oil Spill	9/25/2003
Oil Sheen	12/22/2005	Chemical Spill	6/26/2003
Chemical Release	12/1/2005	Heating Oil Spill	4/8/2003
Chemical Release	11/30/2005	Heating Oil Spill	3/18/2003
Heating Oil Spill	11/23/2005	Diesel Fuel Spill	2/7/2003
Heating Oil Spill	11/16/2005	Heating Oil Spill	1/21/2003
Heating Oil Spill	11/9/2005	Diesel Fuel Spill	12/13/2002
Natural Gas Release	10/27/2005	Diesel Fuel Spill	12/9/2002
Gasoline Spill	10/27/2005	Diesel Fuel Spill	10/4/2002
Oil Sheen	10/25/2005	Oil Sheen	9/28/2002
Propane Release	10/3/2005	Diesel Fuel Spill	9/27/2002
Natural Gas Release	10/3/2005	Gasoline Spill	9/24/2002

Gasoline Spill	8/8/2005	Gasoline Spill	7/15/2002
<b>Huntingdon County HAZMAT Incidents, Jan 2002 - July 2007 continued</b>			
<b>Incident Type</b>	<b>Date</b>	<b>Incident Type</b>	<b>Date</b>
Propane Release	7/24/2005	Oil Sheen	6/25/2002
Hydraulic Oil Spill	6/9/2005	Hazardous Waste Materials	2/19/2002
Chemical Spill	6/7/2005	Heating Oil Spill	1/11/2002
Heating Oil Spill	3/9/2005	Heating Oil Spill	1/7/2002
Sewage Spill	2/14/2005	Chemical Release	1/2/2002

Source: *Huntingdon County PEIRS Report, July 27, 2007*

**Vulnerability**

A hazardous materials spill can be the result of human carelessness, an intentional act, or a natural hazard. Human carelessness occurs predominantly during the manufacture, transport, or storage of the material. An intentional act would be considered either a terrorist act, criminal act, or act of vandalism. A hazardous materials spill can be a secondary effect of a natural hazard (e.g., flooding, earthquake, or severe weather).



Source: *Huntingdon County EMA State Route 22, Morris Township, Huntingdon County*

Huntingdon County contains one U.S. interstate (I-76) and two U.S. highways (U.S. Routes 22 and 522). Large volumes of truck traffic on these major transportation routes make Huntingdon County susceptible to hazardous material spills. Yet, vehicular traffic is not the only cause of hazardous material spills. Norfolk Southern Railroad, which runs through Huntingdon County, is also a cause of County vulnerability to hazardous materials (HAZMAT) incidences.

Crucial factors in a hazardous materials spill include location, weather conditions, and response. The location of a spill is critical for several reasons. The material could spill in a highly populated area, leak into a waterway, or be spilled in some other area that would cause other secondary effects. Those who are closest to the spill are at the greatest risk, but some hazardous materials can travel great distances. Weather conditions play a large role; mild breezes can carry hazardous gases and fumes long distances. Air temperature is also a determining factor of how far the material will travel by air. Contaminated waterways and rainfall can have a negative impact on the scope of the spill. Finally, the response to the incident can determine the extent of the damage. If the closest response team is miles from the incident, the material may have time to leach into ground water, waterways or into the air. However, these factors depend on the type of material released.

The closest certified hazardous materials response team available for contracting to Huntingdon County is Eagle Hazmat, located in Milesburg, Centre County. This team's location, significantly distant from a majority of Huntingdon County, contributes to lengthy response times to emergency events. The Huntingdon County Emergency Management Agency maintains a Hazardous Incident Support Team, with trained hazardous materials technicians and specialists, to assist with local level response. To improve service to citizens and stakeholders in Huntingdon County, this team should become state-certified. Funding limitations have hindered the growth of this all-volunteer team. This has been identified as an area in need of growth to assist in mitigating hazardous materials incidents locally.

### **Probability**

The probability of a HAZMAT incident occurring in Huntingdon County is high with Interstate 76, U.S. Routes 22/522, and the Norfolk Southern Railroad traveling through the County. Hazardous material spills occur annually in Huntingdon County with varying impacts.

### **Maximum Threat**

The maximum threat associated with hazardous material spills is along major transportation routes and connector roads. Such roadways in Huntingdon County include I-76, as well as U.S. Routes 22 and 522. Areas along Norfolk Southern's railroad route also are threatened. If a spill occurs, its impact can be measured on environmental, economic, and societal factors. The maximum threat would be a hazardous material spill in a populated area that could result in loss of life and impact both the environment and the economy.

### **Secondary Effects**

If the materials spilled are flammable, both urban and rural fires can occur. The greatest secondary effect is likely associated with transportation accidents that follow from spills on major transportation routes.