

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 them while being transported. Hazardous materials include flammable liquids, solids, and 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, approximately 112 miles southeast of Perry County, make up one of the leading industrial trade complexes in the nation. With the numerous forms of transportation in Perry 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). They 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 that are being manufactured or processed in facilities can be found in the U.S. Environmental Agency’s (USEPA’s) Toxic Release Inventory (TRI) database.

History

The National Response Center lists 30 hazardous material instances occurring in Perry County between December 1990 and December 2012. The table below outlines the spills that occurred. Of the 30 spills, 19 were oil products and 3 were automotive gas.

**Table C.12
Perry County Hazardous Material Spills, 1990-2012**

Incident Date	Nearest City	Type of Incident	Medium Affected	Material Name
12/19/90	Blain	Pipeline	Land	Oil, Fuel: No. 2
06/12/91	Green Park	Mobile	Land	Unknown Oil, Red In Appearance
08/17/92	Loysville	Fixed	Water	Gasoline: Automotive (4.23G PB/G)
08/17/92	Loysville	Fixed	Water	Oil, Fuel: No. 2-D
04/30/95	Liverpool	Unknown	Water	Oil, Edible: Vegetable
08/16/95	Newport	Mobile	Land	Potassium Silicate
08/16/95	Newport	Mobile	Land	Oil, Fuel: No. 2-D

01/26/96	Duncannon	Unknown Sheen	Water	Unknown Oil
07/06/96	Lower Bailey	Railroad	Rail Report (N/A)	n/a
11/19/97	Marysville	Fixed	Water	Unknown Oil
05/28/98	Marysville	Fixed	Unknown	Oil, Misc.: Motor
05/28/98	Marysville	Fixed	Unknown	Gasoline: Automotive (Unleaded)
10/04/98	Marysville	Fixed	Air	Chlorine
05/13/00	Shermansdale	Fixed	Air	Natural Gas
09/01/00	Newport	Storage Tank	Soil	Oil, Fuel: No. 2
04/25/01	Harrisburg	Mobile	Ballast	Oil: Diesel
08/01/01	Newport	Railroad Non- Release	Rail Report (N/A)	n/a
08/07/03	Liverpool	Storage Tank	Water	Oil, Misc.: Motor
12/08/04	n/a	Unknown Sheen	Water	Unknown Oil
09/19/05	Newport	Mobile	Land	Oil, Misc.: Mineral
12/30/05	Wheatfield	Railroad	Non-Release (N/A)	n/a
05/12/06	Newport	Railroad	Ballast	Battery Acid (Corrosive #8)
06/01/06	Duncannon	Mobile	Water	Oil: Diesel
01/02/08	n/a	Railroad	Ballast	Gasoline: Automotive (Unleaded)
4/2/10	Watts Twp.	Railroad	Water	Oil: Diesel
8/26/10	Duncannon	Mobile	Water	Oil: Diesel
5/30/11	Newport	Fixed	Land	Oil, Misc. Motor
7/20/11	Duncannon	Railroad Non- Release	Rail Report (n/a)	n/a
10/8/11	Shermansdale	Unknown Sheen	Water	Unknown Oil
10/20/12	Duncannon	Storage Tank	Land	Oil, Fuel: No. 2

Source: National Response Center

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 manufacturing, transporting, or storing of the material. An intentional act would be 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). Perry County contains two U.S. highways (U.S. Route 11/15 and U.S. Route 22/322). Truck traffic on these transportation routes makes Perry County susceptible to hazardous material spills. The rail system in Perry County is also susceptible to hazardous material spills.

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, with mild breezes carrying 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 even rainfall can have an 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 spread into the ground and waterways or into the air. However, all these factors depend on the type of material released.

Probability

The probability of a hazardous materials spill occurring in Perry County is high. The volume of automobile and truck traffic on U.S. Route 11/15 increases the frequency of accidents and the probability of an accident resulting in a release of hazardous materials. According to PennDOT's traffic count data, U.S. Route 11/15, just north of the Rt. 22/322 interchange has an annual average daily traffic count (AADT) of 18,896. Similarly, U.S. Route 22/322, just north of the Rt. 11/15 interchange, sees an AADT of 23,256.

Carelessness, human and technological error, and criminal behavior will continue to result in hazardous material spills. While larger spills of reportable quantities will occur less frequently, smaller releases of material will continue to occur throughout the year.

A fixed SARA Facility is a facility that stores, uses or manufactures any extremely hazardous chemicals as determined by the Environmental Protection Agency in a quantity in excess of the threshold quantity established by Pa. Act 165. There are 13 facilities in Perry County that have the threshold planning quantity of any of these chemicals. The county has established a Local Emergency Planning Committee to review submissions from these sites, assess the information and require Off-Site Facility Plans for those facilities which meet the criteria. There are thirteen facilities in Perry County that have the threshold planning quantity of any of these chemicals. There has been one incident of a leak of one of these chemicals (Chlorine) at a swimming pool facility in the Borough of Liverpool that required response by the emergency services units and the contracted hazardous material team. No injury or damage occurred as a result of this incident. As the number of sites are identified within the county that meet the criteria for planning purposes, plans are being written detailing response and recovery should an incident occur which allowed a chemical to go beyond the confines of the facility. An incident at any of these facilities may require evacuation of the affected area around the facility, and may require temporary housing for those residents affected. While the number of facilities in the county is considered low, the threat of an incident at one of these sites will continue to exist.

Maximum Threat

The maximum threat to the County is along major transportation routes and connector roads, which are in close proximity to heavily populated urban areas. Such roadways in Perry County include U.S. Route 22/322 and U.S. Route 11/15. The Boroughs of Millerstown, Newport, Duncannon, Marysville, Liverpool and the Village of Perdix are the most prone area to be effected by a transportation related hazardous material incident due to their proximity to theses traffic routes and the rail system.

Two nursing homes and three school district buildings are located in this most vulnerable area. Greenwood, Susquenita and Newport schools are located in this area, as well as Nipples Nursing Home in Liverpool and Kinkora Nursing Home in Penn Township near Duncannon.

The large farming industry and agricultural supply facilities account for a large quantity of the hazardous materials located in the county. These chemicals are used for fertilizer, weed control, pesticides, etc.

Chlorine is the most predominant hazardous material in the county, with nearly all boroughs and several municipalities using chlorine for water purification and sewage treatment.

In addition, three major pipelines cross Perry County. Each of these lines poses a threat to the population they cross, as well as a compressor station located in Carroll Township.

Secondary Effects

If a spill occurs, its impact can be measured on environmental, economic, and societal factors. 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.