Introduction

In the late afternoon of Friday, August 14, 2020, two teenagers riding all terrain vehicles in the Oehler Nature Reserve along the Colonial Pipeline right-of-way, near the intersection of Huntersville-Concord Road and Asbury Chapel Road, within the extra-territorial jurisdiction of Huntersville, NC, noticed a liquid product on the ground with a strong odor of gasoline. One of the individuals called his parents who called a personal friend who works for Colonial Pipeline Company (Colonial), and the other called 911. Huntersville Fire Department (HFD) and the Colonial employee arrived at the scene at the same time. The Colonial employee confirmed the leak and notified Colonial’s Control Center in Alpharetta, Georgia. The pipeline was immediately shutdown and the pipeline segment was isolated by closing valves at facilities located nearby in Charlotte and Kannapolis, NC. HFD and Charlotte Fire Department (CFD) Hazardous Materials (Hazmat) Team responded, command was established, an exclusion zone identified, and a site assessment initiated including air monitoring for flammable vapors. Colonial representatives responded, and after consulting with local first responders, took command and control of the scene to facilitate the response. Assets of the HFD remained on scene in support of scene safety and incident stabilization.

Site History

Oehler Nature Preserve is a 142-acre preserve with an inholding in the middle. Its elevation varies from 664 feet to 742 feet, with its lowest point along North Prong Clarke Creek and the highest running parallel with Huntersville-Concord Road. Most (128 acres) of Oehler Nature Preserve is young forest, with the last disturbance occurring around 1980. Early successional habitat exists on the remainder of the property, some within the Colonial right-of-way and some within abandoned agricultural fields. Because of North Prong Clarke Creek, Oehler Nature Preserve provides potential habitat for the Carolina Darter (Etheostoma collis),
a North Carolina Special Concern Species. As such, a portion of the creek and its buffer that falls within the nature preserve is listed as “elements of natural diversity” and falls on the eastern side of the preserve, approximately one half mile from the release area. This property is also important for general watershed protection.

Colonial connects refineries with customers and markets throughout the Southern and Eastern United States through a pipeline system that spans more than 5,500 miles. Colonial’s pipeline system transports refined petroleum products between Houston, Texas and Linden, New Jersey. The pipeline delivered fuel to Greensboro in 1963 and the main line was completed to New Jersey in 1964. The pipeline traverses north Mecklenburg County through Oehler Nature Preserve located in Huntersville, NC and maintained by Mecklenburg County Parks and Recreation Department. The right-of-way includes two fuel pipes referenced as Line 1 and Line 2, buried approximately 48 inches underground, depending on topography. The 40-inch Line 1 pipe carries gasoline and the 36-inch Line 2 pipe carries various fuels, mostly diesel fuel.
Response Actions

HFD responded to the scene as a result of a 911 call and established command. CFD Hazmat responded in support of HFD as requested. An exclusion zone, also known as a no re-entry area, was established and upon investigation a liquid product having the odor of a hydrocarbon fuel was discovered and had pooled in a low-lying dry area. Air monitoring was established for flammable vapors by both first responders and Colonial. There was not a significant amount of product on the surface, and with no other apparent sources of discharge, it was surmised there was a leak in the underground pipeline. Colonial representatives with a local contractor were on scene in a timely manner and after consultation with the Incident Commander, took control of the scene. CFD Hazmat departed the scene while HFD continued to support scene safety and incident stabilization with both personnel and equipment. Both the National Response Center (NRC) and North Carolina Emergency Management (NCEM) were notified of the incident on discovery. Upon receipt of the NRC report, Charlotte-Mecklenburg Storm Water Services (CMSWS) arrived on scene to assess potential impacts to surface waters.

To support Colonial response and recovery efforts, both short-term and long-term, a Technical Working Group was established with representatives identified from local agencies having jurisdiction within the spill area, including NCEM.

Removal Actions

Colonial and their local contractors were on scene within hours of the reported leak. Up to 250 workers, compromised of Colonial employees, contractors and HFD personnel, responded during the operation. It was determined that the product on the ground was gasoline transported in Line 1. Fuel flow had already been stopped and pumping actions to remove the balance of the fuel remaining in Line 1 had begun. With Line 1 shut down to facilitate response and repairs, gasoline service was temporarily diverted to Line 2 resulting in no fuel shortages on the East Coast of the United States. Heavy equipment excavated soil until the Line 1 pipe and the breach were exposed. Foam was applied to keep flammable vapors down and fans were used to disperse any vapors. First responder and Colonial personnel safety was paramount. Pumping operations were set in place to capture residual fuel from the breach. Colonial reported to the NRC 63,000 gallons of product released from the pipeline and was recovered in the immediate vicinity of the leak site, thereby minimizing further environmental damage. Trenches, berms and plastic barriers were used to limit potential spread of product from the leak site. There have been no impacts to North Prong Clarke Creek. Booms and underflow dams were placed on surface water as a precautionary measure to limit any spread of product on the surface. Work and monitoring continued until the afternoon of Wednesday, August 19th, when conditions were safe to start welding operations to repair Line 1 with a reinforcing sleeve. Colonial Pipeline reintroduced product to Line 1 in the evening and resumed full operation on Line 1 on Thursday August 20th.
Assessment and Remediation Actions

Colonial established a perimeter of 2000 feet from the leak site for residential water well sampling purposes. This distance exceeds the regulatory requirements of 1,500 feet established by North Carolina Department of Environmental Quality (NCDEQ). However, in an abundance of caution, Colonial extended the sampling area. Working back towards the release site, a more defined area of contamination can be determined. The remediation phase will be conducted under the supervision and oversight of the NCDEQ. Regulatory oversight by NCDEQ will include sampling, monitoring and remediation to strict NCDEQ guidelines and standards. NCDEQ will continue oversight of Colonial’s activities until such time the regulatory outcomes have been met by Colonial. To date, as many as 23 residential water wells have been sampled for petroleum constituents - all with non-detect findings thus far. All results have been and will continue to be shared with Mecklenburg County Public Health. To date, in excess of 100 soil borings have been advanced, and monitoring wells are currently being installed. Soil borings and monitoring wells are used as part of assessment efforts to identify the location of product, and for design of the remediation approach. Only a limited number of the borings located nearest to the leak site are showing impacts from petroleum product. There has been no invasion of surface water as determined by CMSWS – and there has been no impact to any municipal drinking water lines or sanitary sewer lines managed by Charlotte Water. Colonial activities will include the excavation of the affected area, removal of any soil that contains volatile organic compounds (VOC’s) and replacement of soil to NCDEQ specifications. Representative samples will be collected for laboratory analysis and profiled for disposal at a Subtitle D (lined) landfill.

The site is currently secure and will continue to be secured during remediation activities. When the work is completed, the area will be restored to NCDEQ regulatory requirements.

CONTACT INFORMATION

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