

General Environmental Incident Summary

Incident: 1847 **Date/Time Notice:** 1/17/2013 1530 **DEM Incident No:**

Responsible Party: Alliance Pipeline, L.P.

Date Incident: 1/15/2013 **Time Incident:** 0800 **Duration:**

County: Burke **Twp:** 159 **Rng:** 92 **Sec:** 6 **Qtr:** SE NW SE

Lat: 48.62606 **Long:** -102.61440 **Method:** Derived from TRS

Location Description: Approximately 4.3 miles north/northeast of Powers Lake. Approximately 0.7 mile northeast of the intersection of 83rd Street NW and 90th Avenue NW.

Submitted By: Patrick Robblee

Affiliation:

Address:

City:

State:

Zip:

Received By:

Contact Person: Troy Meinke
6385 Old Shady Oak Road
Suite 150
Eden Prairie, MN 55344

Distance Nearest Occupied Building: 1.2 Miles

Type of Incident: Surface release of drilling mud associated with pipeline construction

Description of Released Contaminant: Drilling mud consisting of water and bentonite clay with small quantities of quartz, tridymite, and cristobalite

Volume Spilled: 20.00 gallons **Ag Related:** No

EPA Extremely Hazardous Substance: No **Reported to NRC:** No

Cause of Incident:

A release of drilling mud to a pond (an isolated basin) in association with installation of a natural gas pipeline (Alliance Pipeline's Tioga Lateral Project) beneath the pond using the horizontal directional drill (HDD) construction method. The HDD method is a process that allows for trenchless construction across an area by drilling a hole below the depth of a conventional pipeline lay, and then pulling a prefabricated section of pipe through the hole. The method is sometimes used to avoid direct impacts on sensitive landscape features, such as sensitive waterbody crossings, or areas that otherwise present difficulties for standard pipeline construction. To begin the HDD process, a drill rig is placed on the entry side of the HDD and a small pilot hole is drilled along a predetermined path. The pilot hole is then progressively enlarged through a process called reaming. A reaming tool is installed at the end of the drill string on the exit side of the pilot hole, and then drawn back to the drill rig to enlarge the hole. Several passes with progressively larger reaming tools are sometimes required to enlarge the hole to a sufficient diameter to accommodate the pipeline. During this process, drilling fluid, or mud, consisting of a mix of water and bentonite clay, is circulated through the hole to remove drill cuttings and maintain the integrity of the hole. Once the reaming process is complete, a prefabricated segment of pipe is attached to the drill string on the exit side of the crossing, and pulled back through the hole toward the drill rig. The method was selected for the crossing of the pond to avoid ground disturbing activities within the pond. The length of the HDD at this location is approximately 0.2 mile. Although the HDD method typically avoids impacts on water quality by precluding disturbance of the bed and banks, an inadvertent release of drilling mud (sometimes referred to as a "frac-out") is possible if drilling fluids escape the drill hole and are forced through fractures in the subsurface substrate to the ground surface. This is what occurred for Alliance's

crossing at the pond. A summary of the circumstances regarding the surface releases of drilling mud is as follows. A small quantity of drilling mud was released to the pond beneath the ice during the reaming operation. The released material was observed through the ice on the morning of January 15, 2013. Alliance estimates the released volume to be approximately 10 to 20 gallons. Based on visual observations, the released material rapidly settled to the bottom of the pond. Alliance has monitored the site, and no indication of an additional release has been observed. Alliance additionally has monitored the pressure of the drilling mud within the drill hole as well as drilling mud returns at the entry and exit sites for the HDD; no changes in pressure or volume of material potentially indicating an additional release have been observed. The release site appears to have sealed immediately after the release. Drilling operations at the site have continued without additional incident.

Risk Evaluation:

There are no immediate or long-term risks associated with the release. The drilling mud poses no risks to the environment and no health risks.

of Fatalities: 0 ***# of Injuries:*** 0 ***Affected Medium:*** 02 - water

Potential Environmental Impacts:

The release of the drilling mud caused a temporary increase in the turbidity of the water within the pond beneath the ice. As is typical for direct releases of drilling mud to water, the mud rapidly settled to the bottom of the pond.

Action Taken or Planned:

Because the drilling mud is comprised of non-toxic materials, direct releases of small quantities to surface waters typically are allowed to settle to the bed of the water without additional clean-up to avoid disturbing the bed and banks of the water. As indicated above, visual observations indicate that the material rapidly settled to the bed of the pond, and no indications of any additional releases to the water have been observed. Alliance continues to inspect the area and monitor the pressure of and returns of the drilling mud. The release was reported to Kris Roberts of the DOH in a telephone call on January 16, 2013.

Wastes Disposal Location: No material has been recovered.

Agencies Involved:

Updates

Date: 1/17/2013 ***Status:*** Reviewed - Assigned to NDDoH Division ***Author:*** Roberts, Kris

Updated Volume:

Notes:

Follow-up in spring of '13 after ice out should be done to determine what if any impact on the wetland has occurred. Additives to drilling mud other than bentonite may have some properties not ideal for aquatic life.

Date: 4/8/2016 ***Status:*** Reviewed - Follow-up Required ***Author:*** O'Gorman, Brian

Updated Volume:

Notes:

According to the incident update, no follow-up was completed in 2013. On-site observation needed to determine if the release impacted area.

Updated Volume:

Notes:

On site 16:50. Clear, 41 degrees, wind 5 mph from the south. Walked pipeline row from oil well JH VAN BERKOM 5592 12-6H for 1/2 mile east, then 3/4 miles south. Pipeline appears to pass under small (<1/4 acre) wetland. No drilling mud on bottom of wetland, although there was a thin, grey film on a small portion of the wetland along the north shore (photographs taken). Another pipeline crossed at an angle from the NE to the SW in the south half of the section. Walked this from the southern edge to the NE approximately 3/4 mile where it crosses under a pond. Walked edge of pond and found no evidence of drilling mud. Off site 18:40.