

On Friday May 17, 2013, Kerry Guy, US Environmental Protection Agency, met Alex Fischer, Colorado Oil and Gas Conservation Commission, at the Lone Pine Gas, Inc. facility near Walden, CO., to inspect the petroleum contaminated soil piles stockpiled at the site. The soil piles are a result of historic pits that were recently excavated (within the last year) by Lone Pine under the oversight of COGCC. To a much lesser extent, some contaminated soil and vegetation were caused by removal activities associated with a December 15, 2011, discharge of crude oil from the Lone Pine battery and treatment facility.

The soil piles are located on Lone Pine's battery and treatment pad. Soil Pile 1 is located immediately north of the Margaret Spalding B4 oil well, and Soil Pile 2 is located immediately north of the Margaret Spalding B14 oil well. Soil Pile 2 appears to have significantly more soil stockpiled than Soil Pile 1. Lone Pine has estimated the total volume of the two piles in previous reports to EPA at approximately 2,000 cubic yards.

The soil piles are located on the west side of the battery and treatment pad. Soil Pile 1 is on the northwest side and Soil Pile 2 on the southwest side. The pad slopes from east to west towards Spring Gulch Creek. What appears to be a pre-existing berm in need of maintenance, lies on the downslope (west) side of the pad, and runs a short ways upslope on both the north and south ends of the pad. The berm encompasses, for the most part, areas downgradient from the soil stockpiles. However, soil piled next to and on the berm has compromised the structure which is in need of general maintenance, extension (on the north and south sides), and an increase in height in several locations. A description is provided below of the stockpiles and berms and necessary actions to provide and ensure adequate containment of runoff from the stockpiles.

Soil Pile 1 (looking from the north, the berm terminates on the north side of the pile---bottom of picture)





Soil Pile 1 encroaches onto the northwest side of the berm. As seen in the inspection photographs, contaminated soil lies on the outside slope of the berm--most pronounced on the northwest corner. The pile needs to be pulled back from the berm, consolidated and shaped, and contaminated soil scrapped off the inside and outside slopes of the berm and placed within the re-shaped soil pile. Sufficient freeboard (recommended 3 feet) above the pad needs to be created to retain large precipitation event runoff... A minimum three to five foot corridor between the berm and the pile

should be created for this purpose. The berm itself requires buildup in several locations where it is low. The entire berm needs to be cleared of vegetation, built up as necessary-both height and sidewalls, extended sufficiently around the north side of the soil pile, and sufficiently compacted. There is approximately 150-200 linear feet of berm requiring restoration as described above for Soil Pile 1.

Soil Pile 2 (looking east from the west side of pad)





Soil Pile 2 does not encroach upon the berm to the extent as Soil Pile 1; however, it needs to be pulled back in places and sufficient space provided for water retention/ponding between the berm and pile. The berm is low in several locations and also has significant vegetation and animal burrow holes. Contaminated soil from the pile should be pulled away from the berm. The berm should be cleared of vegetation, built up to minimum height of 3 feet above the pad, extended to cover the south side of the soil pile, and compacted appropriately. There is approximately 225-250 linear feet of berm involved in the above berm restoration maintenance work.

Up-gradient (east of the piles)

Looking west from upslope of the piles on the pad (note: the access road goes through middle of pad).



Inspections: The soil stockpiles and berm need to be inspected weekly at a minimum and immediately following rain storms. These inspections should be documented.