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Cc: Ventura, Dominic[Ventura.Dominic@epa.gov]
From: Ex. 6 - Personal Privacy, Michelle
Sent: Thur 1/16/2014 5:55:57 PM
Subject: RE: hotspot update
Photolog_WV Chemical Leak_site observations_1_15_14.pdf

Following the repair of the waterline, the amount of water that is discharging into the area of the storm water pipe did not diminish. However, as a result of the water line repair, a large amount of water was discharged across the road and onto the front of the facility's property. This water pooled along the front of the containment wall and migrated towards the storm drain. Previously, Diversified (RP's land contractor) had attempted to seal the storm drain, and succeeded in doing so. However, the water is infiltrating into the void around the pipe and flowing beneath the facility, emerging on the rear side of the property. In addition, due to all of the voids in the clay layer that are present beneath the secondary containment, the water also migrated through the voids and filled the sumps located in the floor of the concrete pad beneath the tanks. Consequently, Diversified spent most of the afternoon of January 15, 2014, pumping water from the interior of the containment area.

OSRO (RP's water contractor) deployed horizontal absorbent booms inside the hard skimmer boom with interior absorbent boom that extends from the property line down to the dock area. A total of seven interior horizontal booms were deployed. The current boom strategy encompasses the entire sloped area of the Site, which is the area of concern for migration of the MCHM into the river. USCG, WVDEP, and EPA are all in approval of the current boom strategy. The boom is still being maintained and the absorbent booms are replaced as needed.

Two roll-offs trucks were delivered to the Site for containment of potentially contaminated soils, to be excavated during installation of the french drain. As pumping water from the containment area was priority, installation of this drain was delayed; no work has been conducted on this as of yet. A plan for the installation of the french drain was approved by WVDEP and EPA. The RP's contractor conducted a Site walk with USCG, WVDEP, EPA, and START to allow everyone to visualize what was going to be done. The french drain will begin at the southwestern end of the property and will extend up to the current location of the interceptor trench. To avoid disrupting the stability of the hillside, the drain will be placed at a depth of less than three feet bgs. Two ports, one on each end, will contain a vacuum hose to remove liquids from the pipe.

The Do Not Use order was lifted for over 80% of the zones. Downtown Charleston and all areas west of the city have water use. Some of the schools in the outlying areas remain closed.

Last evening, CST collected two samples from the water emerging from the storm drain area. The fluorine was low, 0.14 ppm, and MCHM was detected at 0.3-0.4 ppm. CST collected an additional two samples this morning; the first sample was non-detect for MCHM, and results from the second sample are expected later today. This contamination is quite possibly from un-cleaned equipment.

The RP received sample results from the storm drain area; there were high concentrations of MCHM. The RP will not divert that water into the river. All water on Site will be funneled to the interceptor trench and vacuumed to the tanker trucks.

Exploratory geoprobe operations began in the containment area, in the vicinity of the breached MCHM tank. Holes were punched through the concrete in order to determine a good location for a recovery well. Petroleum products were detected in these test holes, which were 10 feet bgs. Freedom Industries' lawyers have been in contact with Pennzoil concerning the issue. WVDEP is also aware of this legacy connection to previous facility operations.

Excavation of a trench at the far northeastern portion of the Site was delayed due to the potential instability of the glycerin tanks that are staged above the slope. The capacity of each of the tanks is 400,000 gallons. Due to the weight of the glycerin and the tanks themselves, it would have been dangerous to disturb the slope below them. In addition, three years ago, one of the tanks were unstable and the footer had to be repaired. The adjacent tank was slightly buckled as a result. Therefore, the RP's contractor pumped out as much as possible from the tanks; four feet of product remain in the tanks, which is equivalent to approximately 48,000 gallons (one inch is approximately 1,000 gallons). This activity was conducted to lessen the weight of the tanks prior to disturbance of any soils downgradient from the area.

WVDEP conducted exploratory digging along the hillside in the northeastern portion of the facility, just outside the containment area where the glycerin tanks are located. The odor of the product was prevalent. The RP's contractor had placed absorbent boom along the wall and covered the area with a tarp, to prevent rain water from washing the product down the slope and into the river. Aspen is currently on Site removing trees from that area. Following tree removal, the RP's contractor will use a high-powered vacuum to remove the top one or two inches of soil from the slope. They will then excavate a trench from the containment wall in a downgradient direction towards the existing interceptor trench. The contractor will stay 10 feet away from the gas line. The plan is to excavate the trench down to the rip rap, but if the rip rap is too deep, they will place a bentonite layer down (non-porous material) and line the trench with poly.

Following removal of all of the water from the interceptor trench, the RP's contractor will peel back the liner from the storm drain area and the current interceptor trench to install the french drain and connect the northeastern trench. The high-powered vacuum will also be used to remove the top one to two inches of surface soil from this area. The liner will then be replaced and collection of all of the water from the Site will continue.

Fencing is currently being installed along the base of the slope behind the facility, atop the crest of the river bank. Fence installation includes exterior orange hi-vis fence and interior silt fence. The fencing will extend along all areas of the Site that have disturbed soils.

In the experimental phase, an oil/water separator is being used in an attempt to remove the MCHM from the water that is being vacuumed from the interceptor trench and dike area. In the initial phases, it appears to be successful in separating the product from the water. The RP's contractor has collected samples from the influent and effluent of the separator to confirm that it is working. Also in the experimental phase, the RP's contractor is requesting a permit from WVDEP's air division in order to use an air stripper that extracts volatiles, followed by two carbon vessels, to treat the product and release it into the air.

Per EPA RA request, OSC Matlock attended a meeting at the US Attorney's Office (Booth Goodwin II) to meet with all invited agencies to discuss roles and responsibilities during this emergency. The main focus of the meeting was to ensure investigative agencies were coordinating with each other. The WVDEP and EPA updated the operational status on source control at the facility. The US Attorney was very pleased with the meeting and agency updates provided by the various agencies.