MEMORANDUM

DATE: September 30, 2021

TO: Washington Department of Ecology, Water Quality Program

FROM: Martin Penhallegon, PE, Senior Principal Engineer

SUBJECT: Bakerview / Go East Non-compliance Notification – WAR306901

The subject site is located at 4308 108th Street SE, Everett, Washington. The site is currently under development for a landfill closure and plat development.

A mudflow event occurred on Friday, 9/17/2021, around 3pm, and reoccurred on Saturday, 9/18/2021 during heavy rains, during the placement of fill material for a construction access along the northeast slope of the site. The access will be used to install utilities and buttress fill for the proposed development.

The contactor had prepared the upper portion of the slope by placing fill along the access alignment while also cutting into the north slope. Quarry spalls were placed along a small spring located near the top of the slope and the contractor used a section of HDPE pipe to divert the water flow under the access road. This was completed prior to a September 15 site visit by the geotechnical engineer. A larger cut into the north slope was made about 100 feet down the access road and a moderate amount of water was seeping from the top of the cut and flowing down the cut face and onto the access fill. From the upper portion of the access, it was readily apparent that a significant mudflow had occurred and initiated from the lower portion of the access. The mudflow and some trees flowed down the slope into the grassy wetland near the base of the NE slope and eastward beyond the project boundaries, likely at least 200 feet. A small excavator was buried in the mudflow up to about the cab 75 feet past the project limits. A small dozer was observed just beyond the excavator. The contractor mentioned that their mechanics were able to get the dozer running and moved it up out of the mud and onto some logs. They could not get the excavator started as the engine was impacted by water and mud. The mudflow that covered the grassy flat area appeared to be roughly 2 to 5 feet thick.

The upper portion of the access was still relatively stable. The contractor had spread fill material southward from the access onto the edges of the NE landfill slope. Farther down the access, roughly 100 to 150 feet, is where the access fill became very wet and unstable and where the head of the mudflow was observed. A significant amount of grading occurred on Saturday when the mudflow reoccurred. The contractor mentioned that the mudflow occurred in two separate events, 9/17/2021 and 9/18/2021.

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The following steps were taken to reduce, eliminate and prevent reoccurrence of the noncompliance:

1. Stabilized the disturbed area within the project boundaries ASAP and under a heightened/emergency basis
2. Installed TESC measures along the terminus of the mudflow, as necessary and monitoring same.
3. Removed the existing loose fill and mud within the access alignment and within the project boundaries to the base of the NE slope. This area had to be disturbed as part of the project, so stabilization of the access alignment and lower slope is being completed while there is good weather.
4. Developed a plan to construct a stable road fill prism, directed by the geotechnical engineer, using quarry spalls as needed, or other methods. The contractor should start from the top and work in small sections (say 20 to 30 feet long) to build a stable road base.
5. Construct a working pad at the base of the NE slope and placed the buttress fill against the NE slope as shown on the drawings for closure of the landfill, including two wells.
6. Stabilized all disturbed areas with erosion control blankets and then hydroseed ASAP. Placed plastic sheeting over exposed soil areas as directed by CESCL.
7. After the work was completed to remove the saturated fill and mud, and to stabilize the access and working pad area, the contractor was able to remove one piece of equipment. The contractor will have to develop a plan to remove their one remaining piece equipment that will satisfy the County and Ecology requirements. Removing the mud beyond the project boundaries will be difficult because of the saturated flat, grassy area that likely exists below the mud.
8. If the contractor considers the area too wet and unstable then the work may have to be completed next summer.

The mudflow was reported to Ecology representatives on 9/21/2021 and an onsite meeting was held onsite with Ecology representatives for the project, Snohomish County, the property owner, CESCL lead, representatives for Olympic Pipeline, and the contractor, within 24 hours of the property owner being notified of the mudflow (9/22/2021). Snohomish County, under their LDA approval, issued a “Correction Notice” that the property owner is complying with. The mudflow event was reported to Ecology ERTS on 9/29/21