Stormwater Inspection

May 22, 2017

Operator: EXTRACTION OIL & GAS LLC - #10459

Location ID: 439079

Weld County, CO

NENE Section 18 T4N R68W

Chris Binschus
Reclamation Specialist, COGCC

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Google Earth aerial photo taken 9/7/2016 illustrating the Kennedy location in relation to Newell Lake to the southwest. The Kennedy location construction started on January 30, 2017 (Form 42 Document #401196319). The perimeter of the Kennedy location, red line, was mapped on February 22, 2017 using a handheld Trimble device. Blue arrows illustrate the direction standing stormwater was being pumped from the location into the perimeter ditch BMP which was directed to a sediment trap, on May 22, 2017. See the following photos for more details.

Photo 1. Photo taken from the entrance of the location, facing West. Photo illustrates the Operator pumping standing stormwater from location into the perimeter ditch BMP.

Photo 2. Photo taken from the entrance of the location, facing South along the perimeter ditch BMP. Photo illustrates standing stormwater from location being pumped into the perimeter ditch BMP.

Photo 3. Photo taken from the western sediment trap, facing North. Sediment trap appears to be properly functioning. The Operator did not pump or direct stormwater from the location to this sediment trap.
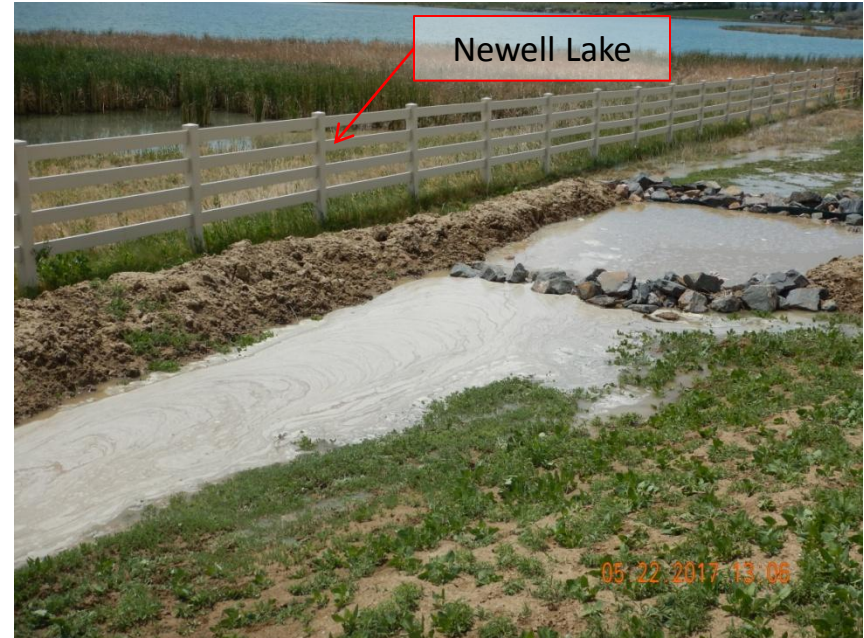
Photo 4. Photo taken from the southwestern sediment trap, facing South <u>prior</u> to the pumped stormwater from the location reaching the sediment trap. Sediment trap appears to be properly functioning at this time prior to pumping.

Newell Lake

Photo 5. Photo taken from the southwest sediment trap, facing Southeast along the outfall area. Sediment laden stormwater is flowing through the sediment trap at an accelerated rate that is not allowing sediment to drop out prior to being discharged from location. S-Fence BMP does not appear to be an adequate BMP. In addition, discharged flows from the sediment trap are eroding the surface owners property off of the location west of the sediment trap which is contributing to additional sediment discharge into Newell Lake.

Photo 6. Photo taken from the southwest sediment trap, facing Southwest. Photo illustrates pumped sediment laden stormwater from the location being discharged from the sediment trap and its proximity to Newell Lake.

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Sediment plume

Photo 7. Photo taken from the southwest sediment trap, facing North. Photo illustrates pumped sediment laden stormwater from the location flowing through the sediment trap outfall at an accelerated rate that is not allowing sediment to drop out prior to being discharged from location, even with the S-Fence BMP.

Photo 8. Photo taken from the southwest sediment trap, facing West. Photo illustrates pumped sediment laden stormwater from the location being discharged from location and areas west of the sediment trap that are contributing to additional sediment discharge into Newell Lake, ~20'-30' from the sediment trap. Photo also illustrates the sediment plume from sediment laden stormwater discharge flows from the location.

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Sediment plume

Photo 9. Photo taken from the northern Newell Lake area, facing South, adjacent to the Kennedy location illustrating the sediment plume from sediment laden stormwater discharge flows from the location.

Photo 10. Photo taken from the northern Newell Lake area, facing South, adjacent to the Kennedy location approximately 20'-30' from the sediment trap. The photo illustrates the sediment plume, to the right of the screen, in relation to the clear, undisturbed water.