

Response to September 7, 2018 Inspection

COGCC conducted an inspection of the LG 09-03 pad (Location ID 456690) on September 7, 2018 (Document 682503854). During that inspection, COGCC made the following observations:

Topsoil comment 1: “It does not appear as though sufficient topsoil salvage on the location has been conducted. Contractors performing soil salvage and construction indicate that “~4-6 inches of topsoil” was salvaged and stored on the northeast end of the location. Contractor indicated that no additional topsoil salvage was planned. COGCC rule 1002.b.(2) requires that “operator shall separate and store the topsoil horizon or the top six (6) inches, whichever is deeper....”. Topsoil can still be observed on areas of surface of the the pad. A topsoil depth of ~2 feet was observed durring inspection.”

Response 1: Noble assessed the depth of topsoil on the LG 09-03 pad by potholing in the north, south, east, and west (See photos NBL1 through NBL4). The average depth of topsoil based on Noble’s four measurements was approximately 15.5 inches. The size of the pad area where Noble removed topsoil is approximately 400 feet by 500 feet. Noble measured the topsoil pile and estimates it contains approximately 162,000 cubic feet of topsoil. In addition, Noble is implementing enhanced procedures for evaluating topsoil depths and adequately segregating topsoil.

Topsoil comment 2: “It does not appear as though topsoil has been salvaged from the fill areas on the south, southwest ends of the location. It does not appear as though soils are being separated. Topsoil appears to be mixing w/subsoils on the fill areas of the pad. Additionally, it also appears as though topsoil is being used and incorporated as fill material. See photo 10 in the attached photo document.”

Response 2: The area shown in Photo 10 is not a part of the pad, but is an area adjacent to the pad where a temporary ramp was built. The ramp provided access to the southwest portion of the pad so that topsoil could be removed and stored. Imported fill was used to build the ramp; topsoil was not used to construct the ramp. Fill was placed on top of the existing topsoil. Topsoil was not removed from this area because Noble believed that removal of the topsoil and disturbance of the surrounding vegetation and topsoil would cause more damage than placing and removing fill material for the short duration that the ramp was needed. Noble has since removed the ramp. Photo NBL5 provides annotations showing the layout of the ramp, pad, and undisturbed area.

Topsoil comment 3: “It does not appear as though soils are being separated. Topsoil appears to be mixing w/subsoils on the fill areas of the pad. Additionally, it also appears as though topsoil is being used and incorporated as fill material. See photo 10 in the attached photo document.”

Response 3: As in Response 2, imported fill material was used to construct a ramp so that topsoil could be removed from the pad footprint. The fill material was not mixed into the topsoil and was later removed once the ramp was no longer necessary.

Stormwater Corrective Action: “Provide detailed calculations with documentation showing the amount of topsoil horizon that the operator salvaged, separated and stored for the location in accordance with 1002.b.(2).”

Response 4: In accordance with 1002.b.(2), Noble has documented the location of the topsoil pile. Our records indicated the pile is located in the area wrapped around the southeast corner of the pad. The additional calculations and documentation requested by COGCC have been provided in the response above, as well as in the photo log below. Noble is also making changes to their topsoil salvage program, to ensure topsoil is appropriately identified and segregated.

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comment 1: Topsoil Quantity

COGCC – 9/7/18



Photo 4: Photo taken from the northwest corner of the pad. Photo shows the topsoil horizon. Topsoil horizon appears to be ~2 feet in depth. 6 foot measuring stick for reference.

Noble Energy –9/19/18



Photo NBL1. Southern pothole, showing topsoil depth

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comment 1: Topsoil Quantity

COGCC – 9/7/18



Photo 5: Continued from photo 4. Photo shows the topsoil horizon. Topsoil horizon appears to be ~2 feet in depth. 6 foot measuring stick for reference.

Noble Energy –9/19/18



Photo NBL2. Western pothole, showing topsoil depth

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comment 1: Topsoil Quantity

Noble Energy –9/19/18



Photo NBL3. Eastern pothole, showing topsoil depth

Noble Energy –9/19/18



Photo NBL4. Northern topsoil pothole, showing topsoil depth

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comments 2 & 3: Topsoil Segregation

COGCC – 9/7/18

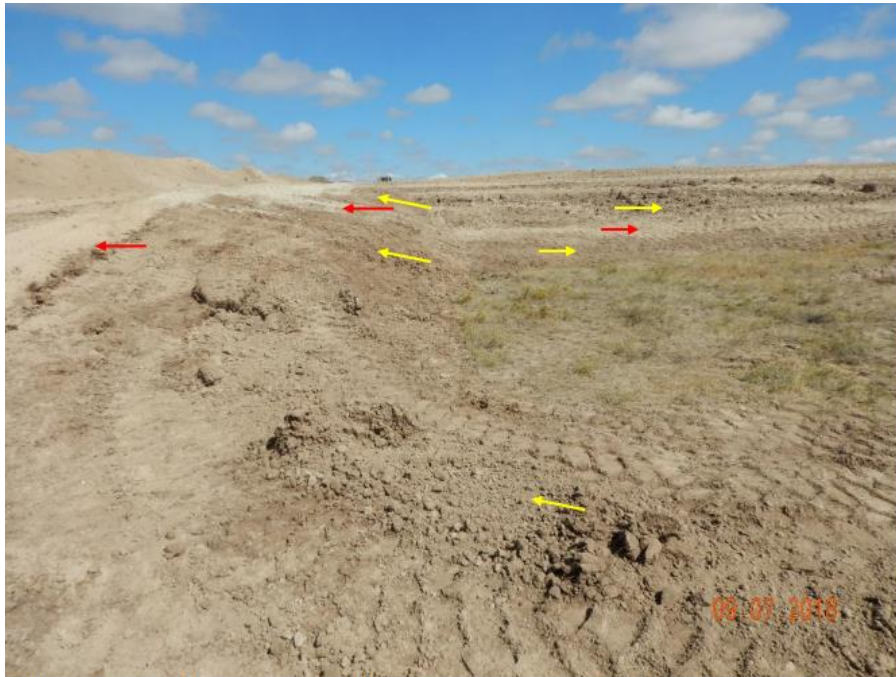


Photo 10: Photo taken from the southwest end of the pad. Photo shows construction in process. It does not appear as though soil salvage has been conducted on this section of the location. Additionally, it is unclear how the horizons are being separated as topsoil (dark soils, yellow arrow) appears to be mixing with subsoils (Light, red arrow). TOPSOIL APPEARS TO BE BEING USED AND INCORPORATED AS FILL MATERIAL.

Noble Energy –9/19/18

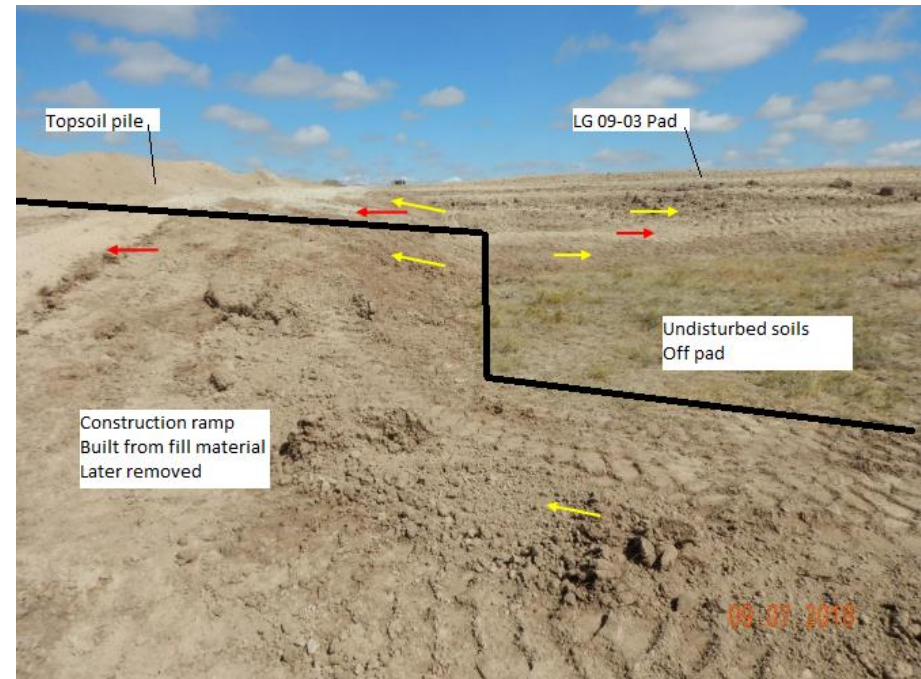


Photo NBL5. A temporary ramp was constructed from fill material to allow access to the pad for topsoil removal and segregation. Once complete, the fill material was removed. It was not incorporated into the topsoil.

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comments 2 & 3: Topsoil Segregation
See next slides for response

COGCC – 9/7/18



Photo 12: Photo taken from the northeast corner of the location, facing north. Photo shows topsoil stockpile for the location. Contractors performing soil salvage and construction indicate that "~4-6 inches of topsoil" was salvaged and stored on the southeast end of the location. It does not appear as though sufficient topsoil salvage has been conducted on the location.

COGCC – 9/7/18



Photo 13: Photo taken from the southeast corner of the pad, facing west. Photo shows unsalvaged topsoil appears to remain on the pad.

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil Comments 2 and 3, and the Topsoil Corrective Action

COGCC was on-site during topsoil removal. Topsoil removal was not complete at the time the COGCC Inspector was on-site. As shown below, the topsoil pile is significantly larger than documented in COGCC Photo 12, and additional topsoil was removed from the area documented in COGCC Photo 13.

Noble Energy –9/19/18



Photo NBL5. Topsoil stockpile in the southwest corner of the pad.

Noble Energy –9/19/18



Photo NBL6. Topsoil stockpile in the southwest corner of the pad.

Photo log for Response to September 7, 2018 Inspection

Photos regarding COGCC Topsoil comments 2 & 3: Topsoil Segregation

COGCC – 9/7/18



Photo 14: Photo taken from the southeast corner of the pad, facing south. Photo shows contractor scraping soil. Un-salvaged topsoil appears to remain on the pad. Upon contacting contractor operator scraper, inspector was told that topsoil salvage activities have been completed, and that no additional topsoil salvage was planned. Contractor was currently scraping soils to be used as fill material; IT APPEARS AS THOUGH TOPSOIL IS BEING USED AND INCORPORATED AS FILL MATERIAL. SEE PHOTO 10

COGCC – 9/7/18



Photo 15: Photo taken from the northern area of the pad, facing south. Photo shows unsalvaged topsoil appears to remain on the pad.. It was observed that the scraper collected soils (photo 14) from areas of the pad for fill material on the southern end of the location; it appears as though topsoil is being incorporated with subsoils as fill material. See comments under photo 13 and 14

Response (no photos): Noble was actively using scrapers to remove and segregate topsoil while the COGCC inspector was on-site (COGCC Photos 14 and 15). Topsoil was piled in the southeast corner of the pad, as COGCC observed. The pile was then recontoured to facilitate future maintenance, such as seeding, mulching, and mowing.