



July 20, 2019

**Technical Memorandum**

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SUBJECT: Review of Hale (S&K No. 1, LLC) sand/gravel mining permit application

I have reviewed the current (2019) permit application documents and numerous historical documents from the EL Paso Cy EDARP website.

**Summary of site and mining history**

- 1973- Zoning change request and approval of mining operation by El Paso Cy – Earl L. Hale
- 1981 - Received mining permit and reclamation permit from Colorado Division of Reclamation, Mining and Safety (CDRMS) - 9.9 acres -permit # M-1981-121
- Bond posted in 1981 -\$2500.00
- Sand /gravel mining occurred on property prior to 1981 permit
- S&K No. 1, LLC purchased mine in 2006
- In 2016 CDRMS- approved a technical revision to the 1981 permit – cleared up uncertainty regarding mine permit area vs. pre-permit area- apparently the pre-permit areas extended south and west of the current mine permit area -S&K committed to mining only in permit area. Uncertain how much reclamation has been done in pre-permit area.
- 2019 - S&K No. 1, LLC applied for an expansion of mined area to allow an additional 52.5 acres of mining

## Comments

1. Applicant should provide more current subsurface / geotechnical data on depth to groundwater and thickness of alluvial deposits to be mined. The El Paso Cy. records only include subsurface data from 1981 for the original 9.9 acre site. Applicant should provide data for the 52.5 acres. Geologic logs from cores taken in 1981 indicate that depth to groundwater is locally less than 10 ft. In a June 11, 1981 letter to Mr. Hale, the Division of Mined Land Reclamation expressed concern that *“it seems that some areas to be mined are below the water table”*. A 1981 report (Lincoln-Devore) refers to “free water” at a depth of 5 feet in one borehole. It is important to confirm that all mining occurs above the seasonally high-water table.
2. A June 21 letter from Kimley -Horn indicates that all diverted runoff will be released to Brackett Creek after temporary storage in a sediment pond. Need to confirm that this refers to storm water runoff and does not include water from pit dewatering. It should be noted that this runoff probably would have infiltrated into UBS alluvial aquifer and not run off to Brackett Creek.
3. There is no information in the mine plan about long term maintenance of the stockpiled topsoil and diversion berm. Measures need to be taken to prevent undue erosion. Will this soil be available for site reclamation?
4. How will future reclamation efforts be confirmed? At least one groundwater monitoring well should be installed downgradient of the area proposed for mining. In addition, Brackett Creek should be sampled when there is flow to monitor trends in suspended sediment.
5. Has a new bond been provided? In a January 26, 2016 CDRMS informed S&K No. 1, LLC that the site is under-bonded. There is nothing in the El Paso Cy records indicating that a revised bond amount was paid.
6. The historical documents included part of a report referred to as the Lincoln-Devore report which was apparently prepared to support the 1981 permit to mine. This report discusses a landfill - either existing or proposed - at the Hale site. It is unclear what this refers to. The applicant should provide clarification as to whether there is a landfill and, if so, was it remediated?