



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

December 22, 2020

Kirk Daehling
Natural Soda LLC
3200 CR 31
Rifle, CO 81650

RE: Nahcolite Project, Permit No. M-1983-194, Elevated Groundwater

Dear Mr. Daehling:

On November 25, 2020 the Division of Reclamation Mining and Safety (Division) was initially notified of groundwater analyticals for BG-9 departing from baseline levels. Then on December 11, 2020 an additional well, BG-5, also exhibited elevated chemistry. Follow up formal documentation was received by the Division on December 15, 2020. Given the urgency of this problem, on Friday December 18, 2020 the Division scheduled a conference call to discuss the recent elevated groundwater results at the Nahcolite Project. Below is a summary of the meeting topics, learning and commitments agreed to between the Division and Natural Soda LLC.

Natural Soda believes that the source of the contamination for both wells is the dissolution zone, which is immediately above the dissolution surface (DS). The water which migrated upward into the B-Groove is suspected to be caused by potentially damaged casing or a faulty placed bridge plug. This resulted in localized high concentrations of high conductivity water. Other B-Groove wells, BG-6 (approx. 1000 linear feet) and BG-4 (approx. 1300 linear feet) located up-gradient and to the west have not shown levels departing from baseline. The only downgradient well is BG-7 which is approximately 2000 linear feet to the East. Given the distance and rate of transport, if the contaminations are isolated, it is unlikely that BG-7 will be affected.

A video log of BG-9 indicated that the DS water appeared to be entering from the 2018 plug and four areas in which the casing appeared to be parted. BG-9 has recently been remediated with a new bridge plug and cement plug back to isolate the aquifer. The well was then air lifted for three days, at which time conductivity levels began to decline. A new nitrogen lift pump was installed and weekly samples are being taken. The Division has since been provided with two weekly samples (12/10/2020 and 12/15/2020) of BG-9. Field data collection indicates that groundwater chemistry is continuing to decline.

Natural Soda will continue to conduct weekly sampling of BG-9 for up to four weeks, January 12, 2021. Field sample results will be provided to the Division on a weekly basis. At which time, if analyticals do



not significantly trend downward by January 12, 2021 the well will be completely evacuated. This pumping, if necessary, shall occur the week of January 18, 2021. Pumping the well will attempt to pull all contaminated water surrounding the BG-9 out of the aquifer, to re-establish baseline water quality levels. If pumping is necessary, weekly sampling will resume January 25, 2021 to February 15, 2021.

BG-5 is beginning to exhibit elevated water chemistry, similar to BG-9. The tubing and nitrogen pump has been pulled in preparation for video logging which is scheduled for December 29, 2020. Following the investigation a remediation plan will be developed and weekly sampling will commence. Natural Soda shall provide the Division with the findings of the video log and submit a remediation plan by January 12, 2021.

All field data should be submitted to the Division as soon as practical in lieu of official laboratory analysis. Natural Soda is encouraged to increase groundwater sampling frequency of other nearby monitoring wells. If TDS levels do not begin to significantly decrease DRMS may require Natural Soda to plug and abandon the well(s) ASAP. Furthermore the installation of additional downgradient monitoring wells may be required.

If you have questions or concerns regarding this correspondence please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-8663567 Ext 8183 or via email at amy.yeldell@state.co.us

Sincerely,



Amy Yeldell

Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS
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