

# MINERALS PROGRAM INSPECTION REPORT PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME:	MINE/PROSPECTING ID#:	MINERAL: COUNTY:	
Nahcolite Project	M-1983-194	Carbonates Rio Blanco	
<b>INSPECTION TYPE:</b>	WEATHER:	INSP. DATE: INSP. TIME:	
Monitoring	Cloudy, Raining intermittently	June 5, 2023 11:30	
OPERATOR:	<b>OPERATOR REPRESENTATIVE:</b>	<b>TYPE OF OPERATION:</b>	
Natural Soda LLC	Kirk Dealing	112d-3 - Designated Mining Operation	
<b>REASON FOR INSPECTION:</b>	<b>BOND CALCULATION TYPE:</b>	BOND AMOUNT:	
Normal I&E Program	None	\$4,433,331.00	
DATE OF COMPLAINT:	POST INSP. CONTACTS:	JOINT INSP. AGENCY:	
NA	DRMS	U.S.BLM	
INSPECTOR(S):	<b>INSPECTOR'S SIGNATURE:</b>	SIGNATURE DATE:	
Amy Yeldell		June 12, 2023	
Todd Jesse	Amy Gellell		

## **GENERAL INSPECTION TOPICS**

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS <u>N</u>	(FN) FINANCIAL WARRANTY <u>Y</u>	(RD) ROADS <u>Y</u>
(HB) HYDROLOGIC BALANCE <u>Y</u>	(BG) BACKFILL & GRADING <u>Y</u>	(EX) EXPLOSIVES <u>NA</u>
(PW) PROCESSING WASTE/TAILING <u>N</u>	(SF) PROCESSING FACILITIES Y	(TS) TOPSOIL <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE <u>Ү</u>	(RV) REVEGETATION <u>Y</u>
(SM) SIGNS AND MARKERS Y	(SP) STORM WATER MGT PLAN Y	(RS) RECL PLAN/COMP <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION Y	(ST) STIPULATIONS <u>Y</u>
(AT) ACID OR TOXIC MATERIALS <u>N</u>	(OD) OFF-SITE DAMAGE <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

PERMIT #: M-1983-194 INSPECTOR'S INITIALS: ACY INSPECTION DATE: June 5, 2023

# **OBSERVATIONS**

This inspection was conducted as part of the Colorado Division of Reclamation, Mining, and Safety (Division) normal monitoring program. The Nahcolite Project is a 112d-3 permitted site that includes a total of 12,248 permitted acres with a maximum disturbance of 260 acres. At this time, approximately 100 acres have been affected. The site is located approximately 25 miles southwest of Meeker, Colorado in Rio Blanco County. Kirk Daehling and Jerry Daub represented the operator and accompanied Amy Yeldell and Todd Jesse of the Division on the inspection. James Roberts represented the White River Field Office BLM.

This is the second quarter inspection for 2023. The focus of this inspection was reclamation success of recently reclaimed areas. No acreage reduction or other release request has been submitted to date. There are no open revision for this permit. No changes to production level or staffing have occurred or are anticipated in the near future. Division staff first checked in at the main office.

### **Backfilling and Grading:**

All grading around the reclaimed pads (Pad 8, 93-4H, 91-2H, BG-9, BG-5, and DS-4) have been completed. Topography naturally blends with surrounding areas. All sloped have been graded to a 3H: 1V or less and are easily traversable by livestock and wildlife.

### Explosives:

Explosives are not used in conjunction with this operation.

### Financial Warranty:

The Division holds \$4,466,425.00 in financial warranty. The Division last updated the reclamation cost estimate in February of 2023 for TR-50. The bond is considered sufficient at this time and will not be recalculated as part of this inspection.

### Fish and Wildlife:

No animals were observed grazing the reclaimed pads during the inspection. Evidence of land use in the form of scat/manure was observed.

Wildlife (animal) deterrents for the evaporation pond remain in place and appear functional. A perimeter fence excludes terrestrial animals from accessing the pond. A laser and sound deterrent for avian creatures also remains operational. Bird netting is on site but no longer utilized.

#### Hydrologic Balance:

No spills/leaks were observed along the pipeline during this inspection, nor were any reported this quarter to date.

This site is a zero discharge facility. All spills within the plant, process water and excess stormwater are directed to the evaporation pond located to the north of the plant.

#### Other:

No new wells have been drilled or plugged during this quarter.

All snow has melted and rain showers have been frequent throughout the spring and into early summer. It was intermittently raining during the inspection.

# Right of Entry:

The Operator has a valid Plan of Operations with the BLM which meets the requirements of Rule 6.3.7 for maintaining its Legal Right of Entry.

## Reclamation Success:

No areas are being released at this time.

Pad 93-4H, 91-2H was reclaimed a number of years ago (Photo One). Vegetation on the reclaimed pad area is generally 70% cover or greater and comparable to surrounding undisturbed areas. Grasses such as Basin wildrye, brome and western wheatgrass; Forbs such as Gooseberry globe-mallow, vetch; and Shrubs such as sage, and rabbit brush appear to be thriving. There were some noxious species such as cheatgrass and tansy mustard but they do not appear to be impacting positive growth of desirable species.

## Revegetation:

No evaluations to interim reclaimed pads were conducted.

Final reclamation of Pad 8 occurred in fall of 2021 (Photo Two). A small portion on the southeast corner was reclaimed in fall of 2022. Overall cover of desirable species is less than 50%. Yellow-sweet clover and cheatgrass appear to be the predominant species. Some perennial grasses, sage and rabbit brush are beginning to establish. Higher densities of noxious weeds were observed in the reclaimed area as compared to undisturbed areas adjacent to the pad. Multiple weed treatments throughout the growing season may help relieve competitive pressure on desirable plants.

Pads BG-9 (DS-5); BG-5, and DS-4 (BG-8) were initially interim reclaimed, then final reclamation was completed after the wells were plugged and abandoned in fall of 2020. Generally the exterior interim reclaimed portions of the pads are thriving. The recently reclaimed interior portions and access roads have varying degrees of success.

The access road to BG-9 (DS-5) is sparse with very little desirable vegetation evident (Photo Three). Within the fenced in portion of the pad perennial grasses and some forbs and shrubs have established. Cheat grass is intermixed in the exterior or reclaimed areas. However the desirable species appear to be competing well with the noxious threats. Skeletons of dead annual weeds were also observed throughout the recent final reclamation area (Photo Four). These weeds appear to be displacing desirable species. Additional seeding of the access road is recommended. The recently reclaimed interior portions may continue to establish without additional seeding if noxious weeds are sufficiently managed.

The access road to BG-5 is beginning to establish well despite the rocky soil material (Photo Five). Unfortunately within the fenced in area the recently reclaimed area has very little reclamation success. Annual noxious weeds appear to be choking out nearly all desirable vegetation (Photo Six). Perimeter interim reclaimed areas have well established grasses and shrubs that appear to be resilient to the intermixed cheatgrass. Vegetation in the interim areas is similar in composition to the adjacent undisturbed areas. Reclamation efforts should focus on controlling noxious weeds within the recent reclaimed areas (and adjacent areas) and additional seeding this fall.

The access road to DS-4 (BG-8) is varied (Photo Seven). Vegetation is some areas is well established with desirable species or pockets of completely bare ground. Conditions within the pad were similar. The interim areas have well established perennial grasses with a few shrubs and minimal cheatgrass infestation (Photo Eight). While the recently reclaimed areas are nearly bare. This pad may have some soil quality issues given the distinct difference in reclamation success. The pad within the fence should be reseeded this fall. Soil sampling

to see if a larger problem is to blame for the failure also is recommended.

Overall reclamation conditions were extremely favorable the previous winter and spring. Record snow fall fell in the area and the spring has been cool and wet. If reclaimed areas are not doing well, additional time is unlikely to produce better results. Additional management inputs such as soil sampling, seeding and ongoing noxious weed management are necessary.

## Support Facilities On-site:

The processing facility was not inspected this quarter.

The Division inspected the evaporation/process water pond (EPF). The pond appeared to be functional at the time of the inspection. The evaporation pond consists of two compartments. One is approximately 3 acres and contains process water (process pond #1) which can be recycled throughout the system. The second compartment (process pond #2) is approximately 7 acres and contains fluids which do not meet food grade standards and thus cannot be reused (Ex. boiler blowdown water), (Photo Nine). There is a dike between the two ponds that is approximately three feet lower than the perimeter of the pond to allow additional freeboard if needed. The pond itself is double lined, the primary top is 60 mil HDPE liner, and the second bottom is a 40 mil HDPE liner. Between the two liners is drainage netting that assist the flow of fluids leaked from the primary liner to the sump (leach pump) located between liners.

## Signs and Markers:

A mine sign was posted at the turn off from CR 24 as required by Rule 3.1.12(1).

### Special Categories Of Mining:

This is a Designated Mining Operation (DMO). The Evaporation Pond is considered and Environmental Protection Facility (EPF). It was inspected, see the Support Facilities on-site section for comments.

### Permit Stipulations:

Evidence of recent rainfall was observed base on the damp ditches and sediment catch ponds. All BMP's appeared to be functioning properly. No specific maintenance items were identified. A small stormwater channel bisects the south side of Pad 8. This area should be monitored for erosion as vegetation is unlikely to establish if run-off is frequent. The operator is encouraged to clean out any sediment traps that are nearing capacity in preparation for the summer monsoons.

### Storm Water MGT Plan:

Evidence of recent rainfall was observed base on the damp ditches and sediment catch ponds. All BMP's appeared to be functioning properly. No specific maintenance items were identified. A small stormwater channel bisects the south side of Pad 8. This area should be monitored for erosion as vegetation is unlikely to establish if run-off is frequent. The operator is encouraged to clean out any sediment traps that are nearing capacity in preparation for the summer monsoons.

### Topsoil:

A small stockpile of topsoil still remains on the southwest corner of the 93-4H, 91-2H pad. It appears to be self-reclaimed and stabile (Photo Ten).

Conclusion:

No problems or violations were noted during this inspection.

Responses to this inspection report should be directed to Amy Yeldell at the Division of Reclamation, Mining and Safety, Room 215, 1001 E 62nd Ave, Denver, CO 80216. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us

## **Inspection Contact Address**

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

Enclosures: 10 Photos

EC:

Travis Marshall, Senior EPS, Grand Junction DRMS James Roberts, BLM-White River Field Office Nathan Fisk, Natural Soda LLC Jerry Daub, Daub and Associates, Inc.

# **PHOTOGRAPHS**





#### PERMIT #: M-1983-194 INSPECTOR'S INITIALS: ACY INSPECTION DATE: June 5, 2023







