



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

September 16, 2014

Mr. Bob Warneke  
Natural Soda, Inc.  
3200 Rio Blanco CR 31  
Rifle, CO 81650

Re: **Nahcolite Project, Permit No. M-1983-194, Surety Increase, Revision No. SI-3**  
**Revised Borehole Calculation**

Dear Mr. Warneke

On August 27, 2014 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$3,098,807.55, in accordance with Rule 4.2.1 of the Rules and Regulations. This was an increase of \$245,861.89 over the currently held \$2,852,945.66 financial warranty. The reason for the August 27, 2014 surety increase was to cover reclamation costs for an additional 8 monitoring wells that were not included in the previous reclamation cost estimate.

Upon receipt of the updated reclamation cost the operator identified one well that had been plugged and abandoned and requested a revised reclamation cost estimate that reflected the change in reclamation liability. Please see the enclosed revised borehole plugging and abandonment estimate along with a cost estimate summary. The revised required reclamation bond is now \$3,067,525.80 which is an increase of \$214,580.14 over the currently held amount.

The Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase is due within 60 days from the date of this letter. If you wish to submit a different type of Financial Warranty or have questions regarding modification of the existing financial warranty please contact Barbara Coria at (303) 866-3567 extension 8148.

If you have any other questions regarding this permit activity please contact me at 970.241.2042.

Sincerely,

Travis Marshall  
Environmental Protection Specialist

Enclosure - Reclamation Cost Estimate (Revised)



cc: Russ Means, DRMS  
Barbara Coria, DRMS

Paul Daggett  
BLM - WRFO  
220 East Market Street  
Meeker, CO 81641

Gerald Daub  
Daub & Associates, Inc  
1985 ½ South Broadway  
Grand Junction, CO 81507



## COST SUMMARY WORK

Task description: **Final Reclamation Cost Estimate (Revised)**

Site: **Nahcolite Project**

Permit Action: **SI-3**

Permit/Job#: **M1983194**

### PROJECT IDENTIFICATION

Task #: **001**

State: **Colorado**

Abbreviation: **None**

Date: **8/27/2014**

County: **Rio Blanco**

Filename: **M194-001**

User: **THM**

Agency or organization name: **DRMS**

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demo. of NSI Plant, Pipelines and Powerlines	DEMOLISH	1	80.00	\$656,170.36
02a	Borehole P&A	BOREHOLE	1	460.00	\$1,449,896.30
03a	Re-grade Process Ponds	DOZER	2	141.43	\$59,092.00
04a	Re-grade Plant Area	DOZER	2	41.97	\$17,537.00
05a	Re-grade Well Pads	DOZER	2	100.17	\$41,851.00
06a	Distribute 6" of topsoil over 8 acre process pond area	DOZER	2	5.92	\$2,473.00
07a	Distribute 6" topsoil over 6.2 acre process area	DOZER	2	4.59	\$1,916.00
08a	Replace topsoil over re-graded well pads and access roads	DOZER	2	25.45	\$10,631.00
09a	Rip compacted areas	RIPPER	2	14.08	\$6,276.00
10a	Distribute 6" topsoil over 18.7 acres of decompact area	DOZER	2	10.27	\$4,292.00
11a	Revegetate 73.76 acres	REVEGE	1	73.76	\$136,105.00
12a	Mobilization	MOBILIZE	1	8.00	\$6,399.00
<b><u>SUBTOTALS:</u></b>				<b>965.64</b>	<b>\$2,392,638</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance: 2.02%

Total = \$48,331.29

Performance bond: 1.05%

Total = \$25,122.70

Job superintendent: 482.82 hrs

Total = \$36,288.75

Profit: 10.00%

Total = \$239,263.80

TOTAL O & P = \$349,006.54

CONTRACT AMOUNT (direct + O & P) = \$2,741,644.54

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 4.25%

Total = \$116,519.89

Reclamation management and/or administration: 5.00%

\$137,082.23

CONTINGENCY: 3.00

Total = \$71,779.14

TOTAL INDIRECT COST = \$674,887.80

**TOTAL BOND AMOUNT (direct + indirect) = \$3,067,525.80**

## BOREHOLE SEALING WORK

Task description: Borehole P&A

Site: Nahcolite Project

Permit Action: SI-3

Permit/Job#: M1983194

### PROJECT IDENTIFICATION

Task #: 02A

State: Colorado

Abbreviation: None

Date: 8/21/2014

County: Rio Blanco

Filename: M194-02a

User: THM

Agency or organization name: DRMS

### UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
3M-TDR	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
89-1	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$8.04	\$13,087.75
89-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1417	1,417.00	LF	\$8.04	\$11,398.49
89-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	347	347.00	LF	\$8.04	\$2,791.30
90-1	Portland cement grout - 10 in. (labor, equip, materials)	9.625"	1417	1,417.00	LF	\$18.36	\$26,018.25
90-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$8.04	\$13,087.75
90-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1417	1,417.00	LF	\$8.04	\$11,398.49
BG-1	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1627	1,627.00	LF	\$8.04	\$13,087.75
BG-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5	1627	1,627.00	LF	\$8.04	\$13,087.75
DS-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
DS-3	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
EX-2	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
IRI-1	Portland cement grout - 4 in. (labor, equip, materials)	4"	347	347.00	LF	\$8.04	\$2,791.30
IRI-4	Portland cement grout - 4 in. (labor, equip, materials)	4"	1417	1,417.00	LF	\$8.04	\$11,398.49

IRI-5	Portland cement grout - 4 in. (labor, equip, materials)	4.625"	347	347.00	LF	\$8.04	\$2,791.30
IRI-6	Portland cement grout - 4 in. (labor, equip, materials)	4"	1627	1,627.00	LF	\$8.04	\$13,087.75
IRI-7	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
IRI-8	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	347	347.00	LF	\$8.04	\$2,791.30
7H-1R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$12.22	\$22,927.72
7H-1V	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$12.22	\$22,927.72
7H-2I	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1876	1,876.00	LF	\$12.22	\$22,927.72
12H-1	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
12H-R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
10H-1	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
11H-1	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
10H-R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
11H-R	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1935	1,935.00	LF	\$12.22	\$23,648.80
DS-4	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1876	1,876.00	LF	\$8.04	\$15,090.73
BG-5	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1645	1,645.00	LF	\$8.04	\$13,232.54
DS-5	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1902	1,902.00	LF	\$8.04	\$15,299.88
BG-6	Portland cement grout - 4 in. (labor, equip, materials)	4.5"	1639	1,639.00	LF	\$8.04	\$13,184.28
WSW-2	Portland cement grout - 8 in. (labor, equip, materials)	7.625"	1460	1,460.00	LF	\$12.22	\$17,843.54
DVPW-1(A)	Portland cement grout - 8 in. (labor, equip, materials)	7"	2350	2,350.00	LF	\$12.22	\$28,720.76
DVPW-(B)	Portland cement grout - 8 in. (labor, equip, materials)	7"	2350	2,350.00	LF	\$12.22	\$28,720.76



	in. (labor, equip, materials)						
10H-1V	Portland cement grout - 8 in. (labor, equip, materials)	7"	2010	2,010.00	LF	\$12.22	\$24,565.42
13H-I	Portland cement grout - 8 in. (labor, equip, materials)	8"	2335	2,335.00	LF	\$12.22	\$28,537.44
13H-R	Portland cement grout - 8 in. (labor, equip, materials)	8"	2310	2,310.00	LF	\$12.22	\$28,231.90
8H-I	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
8H-R	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
14H-I	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
14H-R	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
WSW-3	Portland cement grout - 8 in. (labor, equip, materials)	7"	1420	1,431.00	LF	\$12.22	\$17,489.11
WSW-4	Portland cement grout - 8 in. (labor, equip, materials)	7"	1431	1,431.00	LF	\$12.22	\$17,489.11
A (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1844	1,844.00	LF	\$12.22	\$22,536.63
B (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1879	1,879.00	LF	\$12.22	\$22,964.39
C (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1898	1,898.00	LF	\$12.22	\$23,196.60
D (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1949	1,949.00	LF	\$12.22	\$23,819.90
E (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1967	1,967.00	LF	\$12.22	\$24,039.89
F (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1933	1,933.00	LF	\$12.22	\$23,624.35
G (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	2012	2,012.00	LF	\$12.22	\$24,589.86
H (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1983	1,983.00	LF	\$12.22	\$24,235.43
I (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1986	1,986.00	LF	\$12.22	\$24,272.10
J (Phase 1)	Portland cement grout - 8 in. (labor, equip,	6.5"	2038	2,038.00	LF	\$12.22	\$24,907.62

	materials)						
K (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1963	1,963.00	LF	\$12.22	\$23,991.00
L (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1901	1,901.00	LF	\$12.22	\$23,233.26
M (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1917	1,917.00	LF	\$12.22	\$23,428.81
DS-7 (Phase 1)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1897	1,897.00	LF	\$12.22	\$23,184.38
N (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1859	1,859.00	LF	\$12.22	\$22,719.95
O (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1807	1,807.00	LF	\$12.22	\$22,084.43
P (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1817	1,817.00	LF	\$12.22	\$22,206.65
Q (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1836	1,836.00	LF	\$12.22	\$22,438.86
R (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1835	1,835.00	LF	\$12.22	\$22,426.64
S (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1744	1,744.00	LF	\$12.22	\$21,314.47
T (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1739	1,739.00	LF	\$12.22	\$21,253.36
U (Phase 2)	Portland cement grout - 8 in. (labor, equip, materials)	6.5"	1694	1,694.00	LF	\$12.22	\$20,703.39
DS-6 (Phase 3)	Portland cement grout - 4 in. (labor, equip, materials)	4"	1882	1,882.00	LF	\$8.04	\$15,139.00
9H-I	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
9H-R	Portland cement grout - 8 in. (labor, equip, materials)	7"	2110	2,110.00	LF	\$12.22	\$25,787.58
IRI-2	Portland cement grout - 4 in. (labor, equip, materials)	4"	604	604.00	LF	\$8.04	\$4,858.64
IRI-3	Portland cement grout - 4 in. (labor, equip, materials)	4"	1100	1,100.00	LF	\$8.04	\$8,848.51
IRI-9	Portland cement grout - 4 in. (labor, equip, materials)	4"	1710	1,710.00	LF	\$8.04	\$13,755.41
IRI-10	Portland cement grout - 4 in. (labor, equip, materials)	4"	1761	1,761.00	LF	\$8.04	\$14,165.66

IRI-11	Portland cement grout - 4 in. (labor, equip, materials)	4"	1550	1,550.00	LF	\$8.04	\$12,468.36
IRI-MW-1	Portland cement grout - 6 in. (labor, equip, materials)	5.5"	1770	1,770.00	LF	\$11.24	\$19,890.20
IRI-PW-1	Portland cement grout - 6 in. (labor, equip, materials)	5.5	1849	1,849.00	LF	\$11.24	\$20,777.95
IRI-PW-2	Portland cement grout - 6 in. (labor, equip, materials)	5.5	600	600.00	LF	\$11.24	\$6,742.44

Job Hours: 460.00Total Cost: \$1,449,896.00