



OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;

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## May 1, 2017 Crandall Canyon partial inspection report

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**Priscilla Burton** <priscillaburton@utah.gov>

Fri, May 19, 2017 at 3:32 PM

To: OGMCOAL DNR <ogmcoal@utah.gov>, "Madsen, Karin Odendahl" <kmadsen@coalsource.com>

Cc: Steve Christensen <stevechristensen@utah.gov>, Justin Eatchel <jeatchel@utah.gov>, Arati Umarvadia <aumarvadia@utah.gov>, WSherlock@fs.fed.us

Hello Karin,

I have attached the Division's report for the partial inspection conducted on May 1, 2017. As a reminder, during this inspection, we noted that the trash rack on the primary spillway needs repair.

Priscilla Burton, MS, CPSSc  
Environmental Scientist III  
Utah Division of Oil, Gas & Mining  
Price Field Office  
phone: [435-613-3733](tel:435-613-3733)

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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

# Inspection Report

Permit Number:	C0150032
Inspection Type:	PARTIAL
Inspection Date:	Monday, May 1, 2017
Start Date/Time:	5/1/2017 11:30:00 AM
End Date/Time:	5/1/2017 2:30:00 PM
Last Inspection:	Monday, April 17, 2017

Representatives Present During the Inspection:	
OGM	Priscilla Burton
Company	Karin Madsen
OGM	Steve Christensen

Inspector: Priscilla Burton,

Weather: 50 F sun

InspectionID Report Number: 5835

Accepted by:DHADDOCK

5/16/2017

Permittee: **GENWAL RESOURCES INC**  
 Operator: **GENWAL RESOURCES INC**  
 Site: **CRANDALL CANYON MINE**  
 Address: **PO BOX 910, EAST CARBON UT 84520-0910**  
 County: **EMERY**  
 Permit Type: **PERMANENT COAL PROGRAM**  
 Permit Status: **INACTIVE**

#### Current Acreages

1,257.75	<b>Total Permitted</b>
34.23	<b>Total Disturbed</b>
11.89	<b>Phase I</b>
	<b>Phase II</b>
	<b>Phase III</b>

#### Mineral Ownership

- Federal
- State
- County
- Fee
- Other

#### Types of Operations

- Underground
- Surface
- Loadout
- Processing
- Reprocessing

#### Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:

OGM staff were given an overview of the Crandall Canyon mine water treatment system. Samples of the pre-treatment and post treatment mine water discharge were taken. Arati Umarvadia (new DOGM hydrologist) and Justin Eatchel (new DOGM engineer) and Wes Sherlock (Geologist, USFS/Price Ranger District) were also present during the inspection.

Refer to Plate # 5-3 Surface Facilities for locations of the permit area boundary, USFS ownership boundary, structures and culverts.

Inspector's Signature: *Priscilla Burton*

Date: Monday, May 1, 2017

Priscilla Burton,  
Inspector ID Number: 37

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining. telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • www.ogm.utah.gov



**REVIEW OF PERMIT, PERFORMANCE STANDARDS PERMIT CONDITION REQUIREMENTS**

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
  - a. For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.
  - b. For PARTIAL inspections check only the elements evaluated.
2. Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performance standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.

	Evaluated	Not Applicable	Comment	Enforcement
1. Permits, Change, Transfer, Renewal, Sale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Signs and Markers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Topsoil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.a Hydrologic Balance: Diversions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.b Hydrologic Balance: Sediment Ponds and Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.c Hydrologic Balance: Other Sediment Control Measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.d Hydrologic Balance: Water Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.e Hydrologic Balance: Effluent Limitations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Explosives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Disposal of Excess Spoil, Fills, Benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Coal Mine Waste, Refuse Piles, Impoundments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Noncoal Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Protection of Fish, Wildlife and Related Environmental Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Slides and Other Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Contemporaneous Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Backfilling And Grading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Revegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Subsidence Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Cessation of Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.a Roads: Construction, Maintenance, Surfacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16.b Roads: Drainage Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Other Transportation Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Support Facilities, Utility Installations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. AVS Check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Air Quality Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Bonding and Insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **1. Permits, Change, Transfer, Renewal, Sale**

A revised reclamation plan is under review as Task 5399. The plan includes the concept of overland flow and a wetland to further aerate and treat the mine water at final reclamation. We discussed some details of the reclamation plan which differ from the currently approved plan, including the concept of terracing the south slope and leaving a cut slope above the Memorial parking area. Further discussion with UEI permitting staff will be scheduled. Mr. Sherlock was present because the USFS has an interest in the reclamation details, as it is the surface managing agency for North half of the disturbed area.

As a result of the mid-term review Task 5277, a Special Use Permit from the USFS was signed September 22, 2016 to allow continued operations on federal land since the federal lease was relinquished by the BLM.

### **4.b Hydrologic Balance: Sediment Ponds and Impoundments**

The water level in pond 001 is far below the primary spillway. The oil skimmer on the primary spillway of pond 001 is not functional. The trash rack is missing from the principal spillway and the access walkway is functioning as a trashrack. Maintenance is required on the primary spillway to allow the trash rack and oil skimmer to function as designed. The primary sediment pond sediment markers were inspected. Two of the sediment markers were visible during the inspection. The third sediment marker (located in the south-west section of the sediment pond) was not visible. Karin Madsen indicated that Cody Ware (Ware Surveying) would be surveying the sediment markers when the sediment pond had dried out. At that time, the 60% sediment clean-out levels will be re-established on the three sediment markers. The jersey barriers located adjacent to the primary sediment ponds access road were observed in disrepair and require maintenance. Several of the barriers were leaning excessively and unstable. The Permittee must repair these barriers.

### **4.d Hydrologic Balance: Water Monitoring**

Ms. Madsen gave us a tour of the treatment facilities and described the treatment process in detail. At the time of the inspection, mine water was flowing at 261 gpm. To treat the water, coagulant (Al+Cl-) was being added at 6.5 ppm and flocculant (polyacrilimide) was being added at 5.7 ppm. Samples of the mine water pre-treatment (location pre-001) and at the discharge point post-treatment (discharge location 001) were taken.

#### **4.e Hydrologic Balance: Effluent Limitations**

The mine-water discharge treatment system was inspected and found to be functioning as designed. Karin Madsen indicated that the treatment system settling pond had last been cleaned approximately two months ago. With the exception of the re-circulation cell (cell one), excessive accumulations of iron sludge accumulations were not observed in the remaining cells. The flocculant and coagulant injections were noted during the inspection. At the time of the inspection, a flocculant (Nalco 7763) injection rate of 5.77 parts per million (ppm) was noted. The coagulant (Nalco 8187) injection rate was 6.5 ppm. The storage unit that houses the aforementioned treatment chemicals was inspected. The secondary containment units and bulk storage tanks were observed to be in good condition. No evidence of leaks or spills were noted during the inspection.

#### **16.a Roads: Construction, Maintenance, Surfacing**

We observed damage to the gabion baskets supporting the USFS road directly above sediment pond 001. A plan for reconstruction is being formulated. The damage is within the permit area boundary. An application will be filed with the Division if changes to the approved plan are necessary.



pre-treatment  
sample point



# NALCO

# NALCLEAR® 7763

LOT NO.	DENSITY	NET WEIGHT
GV3F1854A1	8.6 - 9.0 lb/gal	1,046.00 KG / 2,306.03 LBS

FDA: 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods. 21 CFR 173.315 chemicals used in washing or to assist in the lye peeling of fruits and vegetables. Limitation: For use as an adjuvant in the manufacture of paper and paperboard in an amount not to exceed that necessary to accomplish the technical effect and not to exceed 2 percent (as polymer) by weight of the paper or paperboard. 21 CFR 173.315 Limitation: For use only in the washing of sugar beets as a flume mud dewatering aid applied to the underflow of the final flume water clarifier just prior to the flume mud belt press at maximum concentration of 500 ppm as product.

NSF: The official name is "Polyacrylamide." This product has received NSF/International certification under NSF/ANSI Standard 60 in the coagulation and flocculation category. This product has received NSF/International certification under NSF/ANSI Standard 60 in the Filtration Aid category. Maximum dosage 1 mg/l. Only product manufactured at Plant 150 (Burlington, Canada) and whose container label bears the NSF/ANSI Mark may be used in potable water treatment applications. Only product manufactured at Plant 109 USA and whose container label bears the NSF/ANSI Mark may be used in potable water treatment applications. Only product manufactured at Plant 140 USA and whose container label bears the NSF/ANSI Mark may be used in potable water treatment applications. Only product manufactured at Plant 101 USA and whose container label bears the NSF/ANSI Mark may be used in potable water treatment applications.



**NFPA** **HMIS**



Degree of Hazard  
 4 = Extreme  
 3 = High  
 2 = Moderate  
 1 = Low  
 0 = Insignificant  
 \* = Chronic Health Hazard  
 A = See MSDS  
 UNLESS OTHERWISE INDICATED

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>^</b>

**CAUTION!** May cause irritation with prolonged contact. Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Use a mild soap if available. Protect product from freezing. Water in contact with the product will cause slippery floor conditions. Wear suitable protective clothing, gloves and eye/face protection.

floculant = polyacrilimide

ATTENTION: For more information refer to the material safety data sheet. Empty containers may contain residual product. DO NOT reuse containers unless properly reconditioned.



EMERGENCY TELEPHONE NUMBER(S): (800) 424-9300 (24 Hours) CHEMTREC

Nalco Company  
 Garyville Manufacturing Plant 3628 Highway 44 (River Road),  
 GARYVILLE, LA, USA 70051-0844  
 985-535-2221

Material: 7763.61 Generated: 6/21/2013

U.S. DOT Shipping Name: PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO): PRODUCT IS NOT REGULATED DURING TRANSPORTATION

P

Action Link Emergency Response Team  
800-424-9300  
24 hour response to medical and transportation emergencies involving Nalco Company products.  
Form 589 (8-01)

# NALCO BULK SERVICE

**NALCO**  
An Ecolab Company

Nalco Company  
Narragansett & 8th Plaza, 4216 West  
84th Place, BEDFORD PARK, IL, USA  
60533  
708-494-5000

U.S. DOT SHIPMENT NAME:

PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMOL)

PRODUCT IS NOT REGULATED DURING TRANSPORTATION

**ULTRION™ 8187**  
WATER CLARIFICATION AID

Not a hazardous substance or mixture

Prevention: Wash hands thoroughly after handling

Response: Specific measures: consult SDS Section 4

Storage: Store in accordance with local regulations.

coagulant = Al+Cl-

EMERGENCY TELEPHONE NUMBER(S): (800) 424-9300 (24 Hours) CHEMTREC	311 31
MATERIAL:	BULK
NET WEIGHT:	8142715
GENERATED:	

ATTENTION: For more information refer to the material safety data sheet. Empty containers may contain residual product. DO NOT reuse containers unless properly reconditioned.

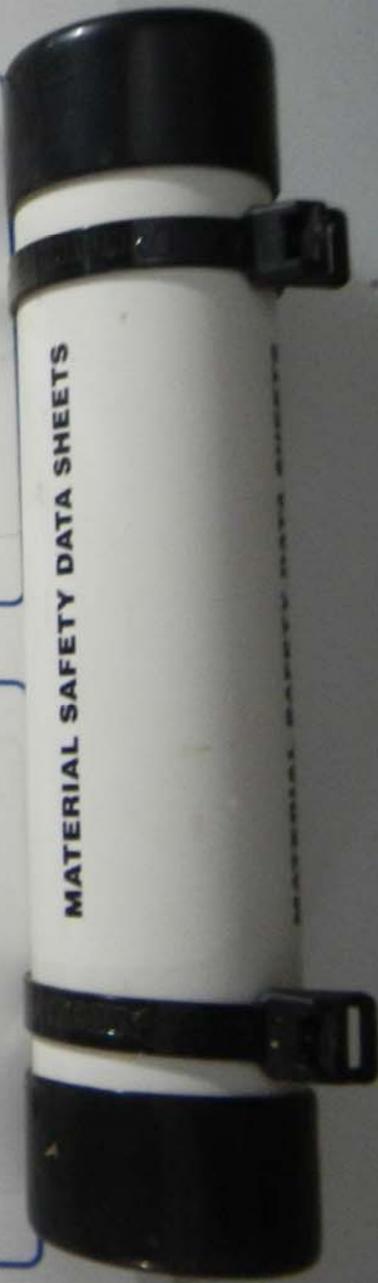


NSF: The official name is "Polyaluminum Chloride". This product has received NSF International certification under NSF/ANSI Standard 60 in the coagulation and flocculation category. Maximum dosage: 180 mg/l. Only product containers bearing the NSF/ANSI Mark that are manufactured at the following plant(s) may be used in potable water treatment applications: 0123, 0140, 0109

W

**TANK**  
**C35071**

**GALLONS**  
**2,000**



A large volume of orange-brown water is being poured from a high pipe into a series of rectangular basins. The water is splashing and creating a misty spray as it falls. The basins are made of concrete or metal and are arranged in a row. In the background, there are industrial structures and a rocky mountain slope. The overall scene is an industrial water treatment or processing facility.

chemical addition  
and aeration



settling pond with baffles directing flow



Post treatment Mine  
Water discharge  
sampling point



stream bypass culvert

Treated Mine water discharge culvert



gabion failure  
above pond



primary spillway



gabion failure and  
primary spillway