

OGMCOAL - Crandall Canyon Inspection Report: 03/07/12

From: Steve Christensen
To: Dave Shaver; JD Leonard
Date: 3/20/2012 8:50 AM
Subject: Crandall Canyon Inspection Report: 03/07/12
CC: Daron Haddock; Ken Hoffman; OGMCOAL
Attachments: Crandall_Cyn03072012.pdf

Good morning,

For your records, I've attached the inspection report from March 7th, 2012 at Crandall Canyon. Please respond to the inquiries within the report regarding the injection rates of the flocculant and coagulant as soon as you can.

Regards,
Steve

Steve Christensen
Environmental Scientist III
Utah Division of Oil, Gas and Mining
(801) 538-5350



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:	Wednesday, March 07, 2012
Start Date/Time:	3/7/2012 10:00:00 AM
End Date/Time:	3/7/2012 12:30:00 PM
Last Inspection:	

Representatives Present During the Inspection:
Steve Christensen
OGM Kenneth Hoffman

Inspector: Steve Christensen

Weather: 35 degrees F., 10 mph winds, Overcast.

InspectionID Report Number: 3042

Accepted by: jhelfric

3/20/2012

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: **ACTIVE**

Current Acreages

6,235.80	Total Permitted
27.15	Total Disturbed
	Phase I
	Phase II
	Phase III

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:

On March 7th, 2012, the Division of Oil, Gas and Mining (the Division) conducted a partial inspection of the Crandall Canyon Mine in Emery County Utah. The purpose of the field visit was to inspect the mine-water treatment system, obtain a sample of the raw mine-water effluent (pre-treatment) and inspect the primary sediment pond.

The Division was represented by Steve Christensen and Ken Hoffman. Crandall Canyon (the Permittee) was represented by JD Leonard, Dale Davis. Additionally, Jerry Cripps (Scamp Construction) was also on site during the time of the inspection.

At the time of the inspection, the mine-water treatment system was observed operating as designed. According to Mr. Leonard, the mine flow had jumped significantly within the past 24 hours (from approximately 350 gpm the day before to 655 gpm during the time of the inspection).

A mine-water sample was obtained and submitted to the Unified State Labo

Inspector's Signature:

Steve Christensen,
Inspector ID Number: 54

Date Tuesday, March 06, 2012



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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Signs and Markers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Topsoil	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.a Hydrologic Balance: Diversions	<input type="checkbox"/>	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Disposal of Excess Spoil, Fills, Benches	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Coal Mine Waste, Refuse Piles, Impoundments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Noncoal Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Protection of Fish, Wildlife and Related Environmental Issues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Slides and Other Damage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Contemporaneous Reclamation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Backfilling And Grading	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Revegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Subsidence Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Cessation of Operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.a Roads: Construction, Maintenance, Surfacing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.b Roads: Drainage Controls	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Other Transportation Facilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Support Facilities, Utility Installations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. AVS Check	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Air Quality Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Bonding and Insurance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.b Hydrologic Balance: Sediment Ponds and Impoundments

The primary sediment pond and the mine-water treatment system basin were inspected during the field visit. At the time of the inspection, the 10-year, 24-hour marker (located in the north-western portion of the sediment pond) was buried with snow. The sediment pond did contain water that was frozen at the surface and snow covered.

The mine-water treatment basin was also inspected. During the inspection, the treatment basin appeared to be functioning as designed. Accumulations of sludge material were not observed in the eastern most cells. According to Mr. Jerry Cripps (Scamp Construction), cleaning of the treatment basin is on-going (approximately 2-3 times a week for 3-4 hours each clean-out event). According to Mr. Cripps, this clean-out frequency has been adequate in containing the accumulated sludge material to the 1st and 2nd cells (i.e. western most cells).

The highwall seep conveyance system was also observed during the inspection. Less than 1 gpm was observed discharging from the collection pipe located at the outfall of the mine-water treatment basin.

The highwall located directly adjacent to the treatment basin was observed. It did not appear that additional material had dislodged from the highwall into the mine-water treatment system below.

4.d Hydrologic Balance: Water Monitoring

Mr. Leonard stated he had been monitoring the pretreatment water with an ampule test and had the following results: January 12, 2012 Total Iron 2.401 mg/L & Ferrous Iron 0.960 mg/L; February 29, 2012 Total Iron 1.9777 mg/L & Ferrous Iron 0.707 mg/L; March 7, 2012 Total Iron 2.906 & Ferrous 1.236 mg/L. The water monitoring requirements for the Crandall Canyon and West Ridge Mines were discussed. Mr. Steve Christensen (DOGM) provided Mr. Leonard with hard copies of the approved Crandall Canyon mining and reclamation plan (MRP) sections that discuss the monitoring/reporting requirements relative to the pre-treatment mine-water (Pre-002) as well as the post-treatment water (UPDES Outfall 002). Mr. Leonard was reminded that the Division is to receive the Pre-002 and UPDES Outfall 002 data (via e-mail) every month as required by the MRP. Additionally, it was discussed that the MRP requires that this information must be also submitted to the Division's electronic water monitoring database. It was discussed that the input of the Pre-002 and UPDES Outfall 002 data to the database can occur at the end of the quarter when it's required (i.e. 1st quarter data must be submitted electronically by the end of the 2nd quarter). Mr. Christensen explained that the monthly e-mail of the data was necessary in order to avoid the lag-time effect normally associated with the reporting of water monitoring data. Additionally, it was discussed that the Pre-002 and UPDES Outfall 002 data must be submitted via e-mail no later than one month following the month the data was collected (i.e. January's data must be submitted to the Division prior to the end of February). Mr. Leonard indicated that he understood the requirements.

Additionally, the water monitoring requirements of the West Ridge Mine were also briefly discussed. Mr. Christensen indicated that several flow values for Outfall 002 at the West Ridge Mine needed to be submitted to the Division as soon as possible.

Additionally, it was advised that prior to submitting the data electronically to the Division (regardless of mine site), Mr. Leonard must double and triple check that all of the required data for each respective monitoring site was provided. Mr. Christensen indicated that as a matter of Division policy, failure to obtain the required water monitoring data in the approved time periods will result in the issuance of a hindrance violation (NOV).

4.e Hydrologic Balance: Effluent Limitations

The effluent limitation for total iron (T-Fe) at UPDES Outfall 002 was discussed with Mr. Leonard. According to Mr. Leonard, the January sample for T-Fe was approximately 1.7 parts-per-million (ppm). As discussed previously, Mr. Leonard was reminded that the approved Crandall Canyon MRP requires that the Pre-002 and 002 samples be submitted to the Division on a monthly basis. The January samples for Pre-002 and UPDES Outfall 002 had not been received by the Division at the time of the inspection.

A sample of raw mine-water effluent (Pre-002) was collected by the Division for laboratory analysis of total iron and sulfate (Sample Date: 03/07/2012. Sample ID: Pre-002. Collection Time: 11:15 a.m.). Prior to the collection of the mine-water samples, Mr. Leonard had begun to purge the collection port. According to Mr. Leonard, the sample port had been purged for approximately 30 minutes prior to collecting the sample. The samples were submitted to the Utah Department of Health's Unified State Laboratories: Bureau of Chemical and Environmental Services the following day (03/08/2012). The mine-water flow at the time of the sample collection was reported as 655 gpm by mine representative Dale Davis. Mr. Davis indicated that the flow values the previous day had been approximately 350 gpm. Mr. Davis indicated that high pressure systems in the area produce a reduction in mine-water flow. A flocculant injection rate of 5.8 ppm was reported at the time of the sample collection. Additionally, the coagulant injection rate was reported as 14 ppm. It was observed that 2 coagulant tanks were empty and that the third was approximately 1/3 full. The operator stated chemical resupply was on order. Page 3 of Appendix 7-65 discusses injection rates for both the flocculant (Nalco 7763) and the coagulant (Nalco 8187). Specifically, the MRP states, "The company will monitor the dosage rate (in mg/L) for all treatment chemicals used. The company will monitor treated water for carryover of treatment chemicals on a monthly basis or when dosage rates or chemical products are changed. Dosage rates will not exceed the NSF60 certified concentrations without a prior demonstration to the Division, Forest Service and DWQ that elevated dosage rates are acceptable based on analytical results for the treated water samples".

Based on the reported injection rate at the time of the inspection for the flocculant (5.8 ppm), the NSF60 rating has been exceeded without a prior demonstration that residual polymers are within an acceptable range. The currently approved MSDS sheet for the Nalco 7763 product (incorporated March 1st, 2012) identifies an NSF60 maximum product application rate of 1.0 ppm. However, the NALCLEAR 7763 holding tank placard states a NSF60 maximum product application rate of 3.0 ppm (see attached photo taken November 9, 2011).

The historical injection rate for the coagulant (Nalco 8187) has been in the range of 30-40 ppm. The reported injection rate during the time of the inspection for the coagulant was 14 ppm.

The Permittee must address the revised injection rates immediately. If the 5.8 ppm injection rate for the flocculant is verified by the Permittee, residual polymer testing

must resume immediately. Failure to do so will result in enforcement action. Based on historical injections rates, the flocculant injection rate has doubled (2.5 ppm to 5.8 ppm) and the coagulant injection rate has been cut in half (30 ppm to 14 ppm).

The mine-water treatment system was further discussed with Mr. Jerry Cripps and Mr. Dale Davis. Mr. Davis indicated that a back-up power supply (i.e. generator) is not located on site. In the event of a power outage, a back-up power supply will need to be brought to the site. As the calculated retention time of the detention basin is approximately 9 hours, the Permittee would have less than that time to bring the system back on-line and avoid non-compliant water discharging from the treatment basin.

Mr. Davis further indicated that currently there is no remote automated alert system for the mine-water treatment system. In order for the automated alarm system to be effective, someone from the Company must be monitoring the system 24-hours a day/7 days a week. Mr. Davis did indicate that the monitoring system in the Crandall Canyon Mine office is equipped with a buzzer in the event that a component of the mine-water treatment system fails. Additionally, the computer terminal has a "warning" that is flashed in the event that something fails. However; if the mine-water treatment system were to go down and not be detected by someone either at the Crandall Canyon office, or monitoring remotely from the West Ridge Mine, no system is in place to alert someone (either via phone, e-mail or fax) in the event of a system failure.