




COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
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: St Jude Mine	MINE/PROSPECTING ID#: M-1978-039-HR	MINERAL: Uranium and vanadium	COUNTY: San Miguel
INSPECTION TYPE: Monitoring	INSPECTOR(S): Bob Oswald	INSP. DATE: July 16, 2014	INSP. TIME: 15:30
OPERATOR: Energy Fuels Resources (USA) Inc.	OPERATOR REPRESENTATIVE: David Turk	TYPE OF OPERATION: 110d - Designated Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$47,700.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: U.S. BLM	JOINT INSP. AGENCY: U.S. BLM
WEATHER: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: August 5, 2014

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

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

OBSERVATIONS

This was a routine inspection conducted by the Division as part of its monitoring of 110 DMO permits. The operator's representative named on page one was present throughout the inspection. The site was not active on the day of the inspection. The required permit ID sign was observed posted at the entrance gate to the permitted area. Permit boundary markers were observed at several boundary corners. All mining disturbances were within the permit boundary.

An intense precipitation event occurred the night before the inspection, which resulted in the partial or complete failure of most of the stormwater control structures on the site. The structures were designed by the operator's engineers during the formulation of the Environmental Protection Plan (EPP) several years ago, to provide sufficient capacity for the design storm. They were installed and maintained regularly as required. However, the intensity and/or total amount of precipitation in this event was beyond the design capacity of most of the structures. Only a few of the structures were intact (and full) at the time of the inspection.

The range of stormwater controls observed during this inspection includes upland diversion ditch, dikes and sediment cells on the top of the dump pad, and sediment pond below the dump. This report will describe only the particularly notable individual items observed. What was apparent about the storm-related damage was that all the structures appeared to have functioned properly up to a point of maximum capacity and strength, usually evident by visible high-water marks of organic debris (indicating impoundment) and vertical down-cutting through the berm or dike.

The access road to the site crosses two gulches. Storm-related runoff through the gulches was backed up at the culverted crossings, resulting in one gulch overtopping the road, and the other gulch causing erosion of part of the culvert structure. At each site there was evidence of a large volume of runoff water being temporarily impounded above the road, and both culverts were at least partially open.

There are a group of sediment catchment ponds at the east end of the pad, which were still intact and holding the collected stormwater from the eastern part of the pad. There was a breach of the safety berm at the northern crest of the dump pad. This site also showed evidence of temporarily impounding runoff before failing; the failure was probably due to the berm being quite porous which allowed piping of water to gradually erode the berm's integrity. This uncontained water reported to the sediment pond at the toe of the dump. The operator should definitely repair and upgrade this specific berm. Also, there appeared to be a small pile of darker material on the pad next to the breach, which the operator should check to determine if it is ore. If it contains any elevated amount of mineralization (levels above benign country rock) it must be removed and placed in a proper location.

The operator should review the plan's structures and ensure there is still sufficient diversion or catchment capacity (such as waterbarring, armoring, riprapping, and berms). The upland diversion ditch did not ultimately catch and convey all runoff from the slope above the pad, which may have contributed to the collected runoff that caused the breach of the northern berm.

The approved stormwater control structures have been inspected previously and found to be installed according to the approved criteria, and in a maintained condition. The damaged condition of the structures and resultant release of sediment, as observed during this inspection, are not being noted as a problem, since

size and intensity of this storm event is considered to be beyond the design specifications in the EPP. The operator is, however, urged to perform the following measures as soon as possible:

1. repair all damaged stormwater control structures, at least to the specifications in the approved EPP;
2. upgrade the strength (cross-sectional thickness) of the dikes wherever possible, but do not raise only the height of the dikes;
3. consider designing and installing armored outlets (spillways) for at least the critical impoundments;
4. remove the sediment and debris from the impoundments, to re-establish the design capacity;
5. consider using the salvaged sediments as growth media, and either stockpile them for later use or spread them on graded surfaces and seed them;
6. reseed disturbed areas so that they become better protected against erosion; and
7. monitor for new areas of weeds since seeds may have been deposited with the sediments.

For all changes that may be considered at the site, please contact this office to see if a revision is needed.

The bond was recently calculated and is considered sufficient. There were no contaminants or inadequately contained hydrocarbons observed. The operator is controlling noxious weeds. No problems are noted in this report.

For questions related to this report, please contact this inspector at the Division's Durango Field Office: telephone 970-247-5193, or 303-866-3567 ext 8175.

All written correspondence should be sent directly to the Division's Denver Office:
Division of Reclamation, Mining & Safety
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Denver, CO 80203

Inspection Contact Address

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EC: James Blair, BLM, Tres Rios Field Office, Dolores

Photographs from the inspection are on the following page.

PHOTOGRAPHS

