




# COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY COAL PROGRAM INSPECTION REPORT



## PERMIT INFORMATION

<b>Permit Number:</b> C-1981-014 <b>Mine Name:</b> Southfield Mine <b>Operator:</b> Energy Fuels Coal, Inc. <b>Operator Address:</b> Mr George Patterson P.O. Box 459 Florence, CO 81226	<b>County:</b> Fremont <b>Operation Type:</b> Underground <b>Permit Status:</b> Permanent Cessation <b>Ownership:</b> Private
<b>Operator Representative Present:</b>  George Patterson	
<b>Operator Representative Signature:</b> (Field Issuance Only)	

## INSPECTION INFORMATION

<b>Inspection Start Date:</b> August 20, 2013 <b>Inspection Start Time:</b> 11:50 <b>Inspection End Date:</b> August 20, 2013 <b>Inspection End Time:</b> 18:00	<b>Inspection Type:</b> Coal Complete Inspection <b>Inspection Reason:</b> Normal I&E Program <b>Weather:</b> Cloudy
<b>Joint Inspection Agency:</b>  None	<b>Joint Inspection Contacts:</b>
<b>Post Inspection Agency:</b>  None	<b>Post Inspection Contacts:</b>
<b>Inspector(s):</b>  Janet H. Binns	<b>Inspector's Signature:</b>  8/23/2013
<b>Signature Date:</b>	

**Inspection Topic Summary**

NOTE: Y=Inspected N=Not Inspected R=Comments Noted V=Violation Issued NA=Not Applicable

Y - Air Resource Protection	R - Roads
R - Availability of Records	R - Reclamation Success
Y - Backfill & Grading	R - Revegetation
NA - Excess Spoil and Dev. Waste	Y - Subsidence
NA - Explosives	R - Slides and Other Damage
Y - Fish & Wildlife	Y - Support Facilities On-site
R - Hydrologic Balance	R - Signs and Markers
R - Gen. Compliance With Mine Plan	R - Support Facilities Not On-site
NA - Other	NA - Special Categories Of Mining
R - Processing Waste	R - Topsoil

**COMMENTS**

This was a complete inspection conducted by Janet Binns of CDRMS. The weather was hot and partly cloudy. The mine is a reclaimed underground mine with a partially reclaimed loadout located approximately 12 miles northwest of the mine site. No mine personnel remain on the mine site. George Patterson of EFCI met the inspector at the mine office in Florence to allow access to the mine records. Mr. Patterson was not present during the inspection at the load out or at the mine site.

**AVAILABILITY OF RECORDS – Rule 5.02.4(1):**

Records were checked at the mine office in Florence. Mr. Patterson of EFCI met the inspector at the mine office to allow access to the records. Results of the records check are included later in this report.

George provided responses to MR61 during the inspection. The inspector requested and EFCI provided copies of the June 24, 2013 water sampling results for MW23 and MW65.

Records were also checked in the Fremont County Clerk and Records office, in Canon City, Colorado. TR40 public notice has not yet run in the newspaper. The file was not yet in place at the county courthouse. Upon arriving at the mine office in Florence, the inspector asked Mr. Patterson about the copy of the public record. Mr. Patterson had received the notification of TR 40 completeness on 8/19/2013. He indicated a folder containing the public copy of TR40 that he said he was planning to deliver to the courthouse later that afternoon. In accordance with Rule 2.07.3(4)(b) a copy of the complete application needs to be filed by the first date of the newspaper advertisement. Mr. Patterson indicated that the notice is scheduled to begin publication on 8/22/2013.

**HYDROLOGIC BALANCE - Rule 4.05** □ Drainage Control 4.05.1, 4.05.2, 4.05.3; Siltation Structures 4.05.5, 4.05.6; Discharge Structures 4.05.7, 4.05.10; Diversions 4.05.4; Effluent Limits 4.05.2; Ground Water Monitoring 4.05.13; Surface Water Monitoring 4.05.13; Drainage – Acid and Toxic Materials 4.05.8; Impoundments 4.05.6, 4.05.9; Stream Buffer Zones 4.05.18:

The load out site was dry. There was no evidence of recent rains at the load out site. Drainage to the ponds were intact, ditches and berms were in place. Both ponds P1 and P2 were dry. Primary and emergency

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spillways were clear of debris. An old discarded mattress remains on the outslope of Pond P2 that needs to be removed.

Although the mine site was dry, there was evidence of sediment deposited on Fremont County Road No. 92 at the green gate, indicating that a large precipitation event had occurred since the last inspection.

Pond 5 was holding a shallow pool of water in the north portion of the pond. This pool of water was several feet below the bottom of the primary spillway pipe. There was no evidence that the pond had discharged recently. There continues to be numerous annual sunflowers growing in Pond 5. Both pond culvert inlets remain clear. The north culvert outlet into Pond 5 is clear. A small amount of sediment had deposited at the outlet of the southern culvert into pond 5. Due to the slope of the southern culvert, the Division does not consider this small deposition of sediment at the outlet to impede the function of the culvert.

Ditches throughout the mine site appear in good condition and functional. Pond 4 was not holding any water, but was damp on the bottom. Pond 4 has a healthy stand of annual sunflowers growing in the bottom of the pond. Primary spillway and emergency spillway on both Pond 5 and Pond 4 are clear of debris, and functional. There was no evidence that Pond 4 had held any pooled water recently.

No concerns were identified with ground cover or function of SAEs

NOV CV-2013-002 remains unabated. EFCI had previously requested this item to be heard at the August MLR Board meeting on August 14, 2013. Subsequent to the request, EFCI submitted additional information for TR40, and requested the formal hearing before the MLRB be postponed to allow the Division to evaluate the additional information. The Division concurred with the request to postpone the hearing.

#### GENERAL MINE PLAN COMPLIANCE:

The Division continues to evaluate EFCI's submittal of TR40 in response to NOV CV-2013-002.

#### PROCESSING WASTE/COAL MINE WASTE PILES – Rule 4.10 and 4.11 □ Drainage Control; Surface Stabilization; Placement:

The vegetative cover on the Refuse Disposal Area is responding well to the recent precipitation events. Slopes on the southwest portion of the RDA are showing recovery of the vegetation. No rilling or gullying was noted, even on areas that had expressed thinner vegetative cover prior to the rains. RDA ditches are functioning well. No problems were noted at the RDA.

#### ROADS – Rule 4.03 □ Construction 4.03.1(3)/4.03.2(3) □ Drainage 4.03.1(4)/4.03.2(4) □ Surfacing and Maintenance 4.03.1(5) and (6)/4.03.2(5) and (6) □ Reclamation 4.03.1(7)/4.03.2(7):

EFCI has recently graded portions of the mine access road. Water bars remain in place and functional. Water bars aid in directing runoff off of the roadway and into the designed ditches.

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**RECLAMATION SUCCESS - Rule 4.15, Rule 3:**

The inspector located Plot B reference area using a Yuma GPS tablet and Map 16 loaded into the GPS. Map 16 had previously been geo-referenced, and landmark points on the map aligned with on the ground features.

Plot B is located on a very steep rocky north facing slope. Dense decadent oak brush dominates Plot B. Juniper and Pinyon pine are prevalent as well. The dense overstory results in poor herbaceous ground cover. Litter in Plot B appears considerable consisting of a lot of oak leaves and duff.

**REVEGETATION – Rule 4.15 □ Vegetative Cover; Timing:**

The late summer precipitation has improved the condition of the vegetation on the mine site; portal area and RDA. Warm season grasses were robust and seed heads were forming. Many of the transplanted shrubs were vigorous, particularly many of the pines. A number of the transplanted junipers on the reclaimed portal area showed signs of herbivory as the tips of the plant have been browsed off. However, many of the browsed junipers were surviving and the lower branches showed positive growth.

EFCI is preparing to conduct vegetation sampling at the site. The condition of the vegetation with the response to the recent moisture is very positive. Until TR39 is issued, EFCI needs to use the previously approved reference area: Plot B, as well as Plot A, and load out reference area for comparisons.

The vegetation at the loadout appeared dry. It appears that the loadout has not received much moisture. No problems were noted with the vegetation at the loadout.

**SLIDES and DAMAGE - Rule 4.12:**

Wattles previously secured by EFCI on the north side of the permanent gravel parking area have held well and appear to be aiding in slope stabilization. Several localized spots on the wattles appear to be undercutting. Fill and additional staking would help keep these erosion control structures effective.

Silt fence at the north west corner of the permanent truck tunnel is holding up, as well as the rock armoring at the base of this slope. It appears some sediment is still being transported down the slope. Limited repair could be implemented to retard rill formation in this location. EFCI has removed the sediment that had accumulated at the base of this slope.

Some sediment movement appears to be occurring on the south side of the reclaimed portal area at the base of the slope adjacent to the Magpie Diversion. Some filter fabric has become exposed and should be removed or covered. This location is adjacent to a large (~1/2 cubic yard gray boulder). Limited rill prevention could be implemented on this short slope.

**SIGNS AND MARKERS – Rule 4.02:**

The mine ID sign at the loadout has been covered with graffiti. Please repaint the sign to maintain its legibility.

**OFFSITE SUPPORT FACILITIES - Rule 4.04, 4.28:**

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Both gates were down at the load out site. There was evidence of recent tire tracks on both East and West sides of the load out. Recent deposition of trash was observed. On the west side of the loadout, trash appears to be limited to bottles, cans in addition to the previously mentioned mattress.

On the East side of the load out a pair of glasses and 4 vehicle tires have been dumped as well as approximately 2.5 cubic yards of broken concrete and bricks. Vehicle tracks could be seen leading to this recent deposit of trash. EFCI remains responsible for maintenance of the load out.

TOPSOIL – Rule 4.06□ Removal 4.06.2; Substitute Materials 4.06.4(4); Storage and Protection 4.06.3; Redistribution 4.06.4:

Two topsoil piles remain at the mine site, One is located northwest of the RDA, and the second pile is located south of the permanent gravel parking area. One knapweed plant was identified on the west side of the small topsoil pile to the south of the gravel parking area. It appeared that there was only this one individual plant. Removal of this individual knapweed plant should help reduce the potential spread of this noxious weed.

**DOCUMENTS RECEIVED:** Mr. Patterson provided the Division with responses to MR61 adequacy concerns. Mr. Patterson also provided copies of results of the 6/24/2013 water sampling.

**OTHER (SPECIFY) NA**

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**ENFORCEMENT ACTIONS/COMPLIANCE**

**Infraction Number:** CV2013002

Inspection Date: January 23, 2013

Date Issued: January 28, 2013

Primary Topic: Hydrologic Balance

Secondary Topic:

Tertiary Topic:

Description: Failure to ensure that water monitoring well MW-NW continues to function as designed.

Abatement #: 1

Abatement Due Date: 4/1/2013

Abatement Due Extended Date: 6/20/2013

Abatement Description: Remove the obstruction from MW-NW or establish a replacement water monitoring well that intercepts the Southfield Mine workings in the Red Arrow or Jack O' Lantern Coal seam.

Abatement #: 2

Abatement Due Date: 4/1/2013

Abatement Due Extended Date: 6/20/2013

Abatement Description: Provide evidence to the Division that Energy Fuels Coal Inc. has applied for a monitoring well permit with CDWR in accordance with Rule 2.03.10.

Abatement steps have been extended due to EFCI's request for a board hearing. Upon submittal of additional information with TR40, the board hearing, and hence the abatement due dates have been extended.

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## **PHOTOGRAPHS**



Photo 1: looking across truck tunnel area towards Proposed PJ reference area and Black hawk mine grassy feature.



Photo 2: looking westward from south end of truck tunnel across reclaimed portal area.



Photo 3: Thin cover area north of Magpie diversion EFCI needs to implement limited rill mitigation.



Photo 4: Reclaimed portal area

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Photo 5: rill repairs adjacent to truck tunnel holding well but poor seedling emergence



Photo 6: healthy tree transplant on Portal area.



Photo 7: effective wattle placement on slope north of permanent parking area.



Photo 8: wattles stabilizing slope.

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Photo 9: SW corner of Plot B looking north.



Photo 10: SE corner of Plot B looking northward.



Photo 11: NE corner of Plot B looking SSW.



Photo 12: NW corner of Plot B looking S.  
Natural drainage runs through reference area.

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Photo 13: broken concrete & bricks dumped on east Side of load out (west of Pond 1)



Photo 14: Graffiti on Load Out ID sign.



Map 1: GPS track of Plot B overlaid on 2011 NAIP and Map 16. GPS trail not straight lines due to thick Oak Brush and steep rocky slope.

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**AVAILABILITY OF RECORDS****PERMIT RECORDS**

DRMS Permit	Exp. 7/30/2014
Permit Application w/Revisions	X through TR40
Findings Document	RN5 5/21/2009
Insurance Certificate	Exp. 10/1/2013
Bond Document	16-66-96
Phased Bond Release	RN5
Documents/Findings	SL2
Air Emission Permits	cancelled
County Special Use Permits	CUP-98-3
UG Mining Landowner Notification	X
Subsidence Monitoring Reports	due in 2013
Subsidence Monitoring Data	due in 2013
Rill & Gully Survey	2012 ARR
Vegetation Monitoring Data	2010
Specific Variance Approvals	NA
Annual Reclamation Reports	2012
Midterm Review Documents	2013
DRMS/OSM Inspection	Thru 4/15/2013
Reports/Enforcement Actions (3 Years)	
Transfers/Succession of Operator	X
Temporary Cessation Notification	X--
Reclamation Cost Estimate	MT6 2/19//2013
<b>CERTIFICATIONS</b>	
Pond Certifications	X
Annual Certifications for Impoundments	X
Fill Certifications for Excess Spoil or Underground Development Waste	NA
• Quarterly Inspections	
• Compaction Testing	
• Final Certification	
Coal Processing Waste Banks	RDA Term.2010
Haul Road Certifications	X
Access Road Certifications	X

**HYDROLOGIC RECORDS**

NPDES Permit	6-30-2013 *1
NPDES Records	Thu 1 <sup>st</sup> ¼ 2013
Stormwater Management Plan	terminated 5/25/04
SPCC Plan	Updated 9/11/12
MSHA Pond Inspections	NA
State Engineer's Pond Inspection	NA
Quarterly Pond Inspections	Thru 6/7/2013
Annual Hydrology Reports	2012
• Ground Water Monitoring	06-25-13
• Surface Water Monitoring	11-30-12 *2
• Spring & Seep Monitoring	NA
• Mine Water Discharge Monitoring	NA
• Mine Inflow Study	NA-after mine closure
• Water Consumption Records	
Well Permits	X

**BLASTING RECORDS**

Blasting Publication	NA
Blasting Records (3 years)	NA
ATFE Explosives Permit	NA
Blasting Variances	NA
Pre-Blast Surveys	NA

**ADDITIONAL RECORDS (specify)**

Subsidence 11/2006	Due by 12/31/13

COMMENTS:\*1 EFCI sent NPDES renewal app. To CDPHE 12/20/2012

\*2 Newlin Creek still dry..

3) George provided me with responses to mr61 adequacy letter.

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