



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:	C0070001
Inspection Type:	COMPLETE
Inspection Date:	Tuesday, July 9, 2019
Start Date/Time:	7/9/2019 10:30:00 AM
End Date/Time:	7/9/2019 6:00:00 PM
Last Inspection:	Tuesday, June 5, 2018

Representatives Present During the Inspection:
OGM Priscilla Burton

Inspector: Priscilla Burton,
 Weather: sun 70 F
 InspectionID Report Number: 6467
 Accepted by: SCHRISTE
 7/25/2019

Permitee: **LODESTAR ENERGY INC**
 Operator:
 Site: **WHITE OAK MINE**
 Address: ,
 County: **CARBON**
 Permit Type: **PERMANENT COAL PROGRAM**
 Permit Status: **RECLAIMED**

Current Acreages		Mineral Ownership	Types of Operations
3,906.00	Total Permitted	<input checked="" type="checkbox"/> Federal	<input checked="" type="checkbox"/> Underground
1.00	Total Disturbed	<input checked="" type="checkbox"/> State	<input checked="" type="checkbox"/> Surface
	Phase I	<input checked="" type="checkbox"/> County	<input checked="" type="checkbox"/> Loadout
	Phase II	<input checked="" type="checkbox"/> Fee	<input type="checkbox"/> Processing
	Phase III	<input type="checkbox"/> Other	<input type="checkbox"/> Reprocessing

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

I observed conditions at the Loadout, the Whiskey Creek drainage, the reclaimed mine site, mine access road and the Eccles Creek reclamation.

Refer to 2010 construction specifications AR11035 map WO-9 for Whiskey Creek reach designations and Map WO-15 for Whiskey Creek slope measurements. Refer to 2011 Innovative Construction Final Report (Incoming folder 9/6/2011) for drop structure identification. Refer to Dwg R645-301-521.150 Sheet 1 for the Loadout facilities.

Inspector's Signature:

Priscilla Burton,
 Inspector ID Number: 37

Date Wednesday, July 17, 2019



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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Topsoil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.a Hydrologic Balance: Diversions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Noncoal Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Protection of Fish, Wildlife and Related Environmental Issues	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Slides and Other Damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Contemporaneous Reclamation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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

The total reclaimed area 96.5 acres = 49.9 acres mine surface facilities + 21.6 acres loadout + 25 acre haul road.

3. Topsoil

"Vegetative Supporting Material" remains in a stockpile adjacent to the RR tracks at the Loadout.

4.a Hydrologic Balance: Diversions

At the mine site, the reclaimed side channel on the East Facing slope is stable and dry. The reclaimed Whiskey Creek channel is stable in all reaches, with some undercutting of the channel banks in Reach 3. This erosion has not changed noticeably since August 2017.

Only the right fork of Whiskey Creek is flowing. Historically, in the 3rd quarter, the average flow in Whiskey Creek was 4.48 gpm at VC4 (MRP Chap 7, p. 700-26, VC4 flow data). Seeps emanating from the toe of the East facing slope in Reach 2 are contributing further water. (Seeps were analyzed, see Incoming document 11142012). Much further downstream, flow was observed in The Bowl side canyon (on the West) and in Sheep Canyon (on the East), both contributing to Whiskey Creek. Whiskey Creek is flowing all the way to its confluence with Eccles Creek and the water is clear.

The Eccles Creek restoration is stable. The beaver still maintain a dam at the upper end of the reconstruction. The beaver dam has ponded water approximately 50 feet upstream of the reclamation. On June 19, 2019, Eccles Creek was flowing at approximately 2,300 gpm (~ 5.0 cfs) based on monitoring data from the Skyline Mine.

Water continues to flow into culvert C-14-42 at the Loadout. The outlet is evidenced by a thicket of willows near Mud Creek.

4.b Hydrologic Balance: Sediment Ponds and Impoundments

The Loadout sediment pond 001A is holding water. A deer was at the pond.

4.c Hydrologic Balance: Other Sediment Control Measures

The 2010 regrading and installation of terraces on the East facing slopes has stabilized those slopes. All wood straw and mulch applied in 2010 and 2011 has decomposed. The West facing slope, which was not reworked, has many erosion gullies. Most of these gullies are 9 - 12 inches deep and have exposed underlying rock fragments. This sediment has been carried down to the Whiskey Creek channel where it has silted in the drop structures. Photographs of each drop structure are attached.

Sediment logs on the Eccles Creek reclamation are staying in place and still functioning. The UDOT ditch and culvert installation have resolved the problem of road outwash eroding the reclaimed Eccles Creek slopes.

4.d Hydrologic Balance: Water Monitoring

The Eccles stream channel reclamation work is between two of Skyline mine water monitoring points on Eccles Creek: upstream at VC6 (South Fork) and downstream at VC 9 (below the Skyline loadout).

4.e Hydrologic Balance: Effluent Limitations

A seep high in iron stains a portion of the reclaimed Whiskey Creek in Reach 2. By Reach 3, the presence of iron is no longer visible. A seep high in iron flows through the bypass culvert at the loadout and into Mud Creek. The oxidized iron leaves a rust stain on the culvert and stream bank.

7. Coal Mine Waste, Refuse Piles, Impoundments

A railroad car overturned on the White Oak loadout reclamation site. During the clean up, the flat surface of the reclaimed area was affected by vehicles and there is little vegetation growing. The overturned RR car and a pile of coal remain on the reclaimed area.

8. Noncoal Waste

Piles railroad ties, gravel, wood and metal debris have been stacked along the access road at the loadout. An overturned railroad car remains along with a pile of coal on the reclaimed area adjacent to the loadout tracks.

9. Protection of Fish, Wildlife and Related Environmental Issues

I removed thistle rosettes along the Whiskey Creek drainage, mine site and access road, until my polaski broke. It was encouraging to see that there is very little thistle on the site. I saw one squirrel and several marmots and their mounds at the site.

10. Slides and Other Damage

The reclaimed upper and lower sink holes appear stable. The stability of the upper sinkhole could be confirmed through a survey of the current elevation compared to the elevation provided by Innovative Excavation in 2011 in their final (as-built) report. Two roof bolt markers were installed at that time and are still in place.

A new sink hole may be developing near the reclaimed upper portal sink hole. This depression is approximately 7 feet across and has a sunken appearance, with edges abruptly dropping down a foot or so.

11. Contemporaneous Reclamation

As I walked, I scattered seed of sweet anise, bitterbrush, bluebunch wheatgrass, black sage, and spiny hopsage. This seed was purchased through a WRI grant in 2016.

13. Revegetation

The slopes and access roads look very green. The location of biosolids placement is still very evident. Grasses and shrubs are vigorous in the biosolids locations. The dominant vegetation on the steepest slopes in Reach 4 was alfalfa. Reach 4 slopes were not well covered by hydroseeding and were reseeded in 2012, with the same seed mix, which included alfalfa (Incoming document 10152012). During this inspection I scattered bluebunch wheatgrass, bitterbrush, black sage, and bud sage shrub seed in this area. Some containerized woody plants installed along the reclaimed Whiskey Creek survive. (i.e. redosier dogwood, woods rose, golden currant, skunkbush sumac, chokecherry and willow) Western clematis survives on the terraces. Containerized sagebrush grew decadent and died out on the terraces. Grass growth has increased along the access road. I scattered the aforementioned shrub seed as I walked down the mine site access road. Grass growth on the North facing slope of Eccles Creek is very impressive. Growth on the South facing slope of Eccles Creek is less so.

16.b Roads: Drainage Controls

Reclaimed roads are stable and show no sign of erosion. Water bars were placed every 100 ft (every 50 ft for the steeper grade at the turn above The Bowl). All water bars are functioning on the access road. Swales replaced culverts in the small drainages. Swales are stable and vegetated with no sign of erosion. Water flows through the culvert at The Bowl, beneath a swale of riprap with a d50 of 2 ft. The trash rack on this culvert was unobstructed.

In 2016 UDOT installed a ditch and 18" culvert along Utah Hwy 264 to protect the South facing reclaimed slope of Eccles Creek. This culvert was functioning.

18. Support Facilities, Utility Installations

Utility pole with transformer remains standing at the cement well pad on the NW disturbed area boundary. The transformer should be removed.

21. Bonding and Insurance

Total bond recovered from bankruptcy Court was \$1.217 million. AMR reclamation used \$664 thousand. \$288 thousand was used for reclamation of Whiskey Creek channel and East facing slopes in 2010 - 2011, along with a \$40 thousand grant from DEQ for biosolid application. Biosolids were donated from the Price River Water Treatment plant and the Spanish Fork Water Treatment plant. \$240 thousand was used to reclaim the asphalt access road. Carbon County recycled the asphalt removed from the road, saving haulage costs. The remaining \$25,000 was combined with funds from Watershed Restoration Initiative grant #3352 and Civil Penalties grant S14AP20030 to finish asphalt removal and remove the culvert in Eccles Creek and restore the creek. Utah Geological Service contributed survey work for the stream application permit. Skyline mine utilized a portion of the cut removed from the stream channel, saving haulage costs. WRI grant #4130 provided funding for the installation of excelsior logs along the reclaimed Eccles stream and purchased seed for use in the project area. The Utah Department of Transportation installed drainage control along Hwy 264. WRI Grant #3453 paid for the removal of a plugged culvert and installation of a swale in Whiskey Creek. The Skyline CWMA provided 3 years of weed control through the Whiskey Creek to Clear Creek project. The Utah Department of Agriculture and Food provided Invasive Species Mitigation grants #15037 and grant #161362 to purchase herbicide and map the weeds in the area. In total, the community contributions amounted to approximately \$278,000, approximately 23% more than the amount received through bankruptcy proceedings (P. Burton presentation, How to Do More With Less, April 6, 2016, updated 2018.)

PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Flow in Whiskey Creek across constructed swale at bottom of canyon



Flow exiting Whiskey Creek swale



Mine site West facing slope



Mine site East facing slope

PHOTO ATTACHMENT – White Oak Mine July 9, 2019





Utility pole with transformer and slopes of reclaimed Reach 3 and Reach 4



Looking downstream at drop structure 1 and undisturbed area



Looking upstream from drop structure 1 at Reach 4 (43% slope)



Looking downstream on drop structure 2

PHOTO ATTACHMENT – White Oak Mine July 9, 2019



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Looking upstream from drop structure 2 at Reach 4



Looking downstream on drop structure 3



Looking upstream from drop structure 3 at Reach 3 (29% slope)



Looking downstream at drop structure 4

PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Looking upstream from drop structure 4 at Reach 3



Looking downstream on drop structure 5



Looking upstream from drop structure 5 at Reach 2 (13% slope)



Undercutting just above drop structure 5

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PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Looking at drop structure 6 and seep



Looking downstream on drop structure 7



Looking upstream from drop structure 7 at Reach 2 (7% slope)



Drop structure 8 and seep

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PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Looking upstream at Reach 2 (7% slope) from drop structure 8. This section of Reach 2 was reclaimed in 2005 and was not reaffected in 2011.



Looking downstream at Reach 2 reclaimed in 2011.



Exposed geotextile in Reach 2 reclaimed in 2005.



Reach 1 and boulder above former sinkhole.

PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Vegetation on West facing slope reclaimed 2005.



Vegetation on East facing slope reclaimed 2001.



Terraces C, B, and A (lowest) on East facing slope



Edge of new depression and reclaimed upper sinkhole.

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PHOTO ATTACHMENT – White Oak Mine July 9, 2019



Terrace C



Terrace B



Terrace A



Reclaimed asphalt access road.

PHOTO ATTACHMENT – White Oak Mine July 9, 2019





Swale above The Bowl trash rack and culvert.



Eccles Creek reclamation



Loadout RR car spill



Loadout sediment pond 001A

