



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:	C0070039
Inspection Type:	PARTIAL
Inspection Date:	Tuesday, October 14, 2014
Start Date/Time:	10/14/2014 2:00:00 PM
End Date/Time:	10/15/2014 3:00:00 PM
Last Inspection:	Thursday, September 18, 2014

Inspector: Priscilla Burton,

Weather: partly cloudy 50 F

InspectionID Report Number: 3992

Accepted by: JHELFRIC

10/29/2014

Representatives Present During the Inspection:	
OGM	Priscilla Burton
OGM	Amanda Daniels
OGM	Joe Helfrich
OGM	Lisa Reinhart
OGM	Steve Demczak
Company	David Spillman
Company	Bill King

Permitee: **CANYON FUEL COMPANY**

Operator: **CANYON FUEL COMPANY**

Site: **DUGOUT CANYON MINE**

Address: **PO BOX 1029, WELLINGTON UT 84542**

County: **CARBON**

Permit Type: **PERMANENT COAL PROGRAM**

Permit Status: **ACTIVE**

Current Acreages

9,801.00	Total Permitted
108.70	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:

All degassification well sites in Pace Canyon were evaluated, including those noted in the recently received Phase I and Phase II bond release application. The dates of reclamation of some of these sites are outlined in the MRP Degas Volume Attachment Table 5-2. Sites 4 was the first to be reclaimed in 2005. Site 3 was reclaimed in 2006. Site 6 was reclaimed in 2007. Site 2, 5, 7 and 13 were reclaimed in 2009. Sites 10 and 14 were reclaimed in 2010. Sites 9, 12, 18, 19 and 31 and a portion of the AMV road were reclaimed in 2012. Sites 16, 22 and access to 22, 25, 26, and 30 were reclaimed in the fall of 2013. Site 17 is a topsoil storage only site. The topsoil at this site was utilized in the process of reclaiming sites 16 and 22 and their associated access roads. The site will be returned to its former use as a corral. Site 16 access was reclaimed this fall (2014). Site 15 is scheduled for reclamation this fall (2014). The AMV road and site 11 will be reclaimed next year (Fall 2015). Overall the reclamation efforts have indicated that the sites are stable and vegetation has established. Cattle have free range to the unfenced access roads and the comparison between fenced and unfenced reclaimed areas is striking. Since the grasses and forbs are fairly heavily grazed on the access roads the shrubs (mostly sage and snowberry) seem to be more prevalent than in the fenced areas. Plant succession over time will result in a higher woody species density in the fenced areas. Maintenance is required along the AMV road and site G19. A more detailed description is provided in item 4c.

Inspector's Signature:

Priscilla Burton,
Inspector ID Number: 37

Date Thursday, October 16, 2014



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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.e Hydrologic Balance: Effluent Limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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 type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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 type="checkbox"/>	<input type="checkbox"/>	<input 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

The MRP Degas Volume Attachment 5-2 Table provides dates for the reclamation of some of the sites. The table was last updated in 2010. The bond release application was received the 10/15/2014, Task 4705.

2. Signs and Markers

The identification signs at Pace Canyon complied with the performance standards of the R645 Coal Rules. All necessary information was given as required by the regulations.

3. Topsoil

Topsoil stored at G16, G17, G22, G25, G26, and G30 sites were utilized last year in reclamation of the associated sites. After topsoil was graded, the sites were pocked and hand seeded and either mulch was not used (site G10) or mulch was incorporated into the soil (alfalfa hay at G22, certified weed free hay at site G30) or the site was hydromulched (sites G31, G30, G25, G26 and the access to G10) or the site was protected with excelsior matting (AMV section between G31 and G18) or the site was protected with straw matting (road between sites G16 and G22). The excelsior matting laid down on the AMV road between G31 and G18 has almost completely degraded.

Former topsoil stockpile utilized for the AMV road between sites G31 and G18 was reclaimed in 2012. This former stockpile location for site G31 and the segment of AMV reclamation is on a very steep slope. The vegetation is very weedy. Recommend weed control at this location and reseeding/hydromulching when the remainder of the AMV road is reclaimed.

4.a Hydrologic Balance: Diversions

Berms along the G19 trail have eroded undisturbed area at their outlets. Although the sediment is captured downstream in a catch basin that is maintained by the landowner, sediment control such as straw bale or excelsior logs should be installed to minimize this sediment contribution to this stream that is fed by a perennial spring. The spring was flowing at the time of the inspection between 5 - 10 gpm (variably estimated by those present)

4.b Hydrologic Balance: Sediment Ponds and Impoundments

The Pace Canyon catch basin at the fan portal site was functioning as designed. No hazardous conditions were noticed during the inspection. The catch basin was not discharging.

4.c Hydrologic Balance: Other Sediment Control Measures

The degasification well sites had pocking as the main sediment control measure for reclamation. This method of controlling sediment runoff performs best with terrain that is not extremely steep in grade. The majority of the reclaimed degasification sites (19) at Dugout showed little or no signs of erosion or sediment runoff on lands with a slight to medium grade. However, degasification site #19 is fairly steep by comparison. This site has signs of erosion above and below the ATV trail where a gully has formed in the middle of the site and sediment could potentially go off site although none was noticed at the time of the inspection. It is suggested that additional sediment control measures be employed at this site to ensure approval of Phase II bond release. The unreclaimed AMV road was walked and the sediment control measures were inspected. Recently work has taken place to shore up sediment control measures along the out slopes of the road by adding additional waddles. The sediment controls appeared to have been effective during recent storms, but maintenance needs to be done on the sediment controls to ensure ongoing stability. Maintenance work on water bars and drainages along the road occurred late this summer, but due to very large storm events in September, the water bars could use additional work. The waddles that filter drainage going into culverts could also use maintenance work.

8. Noncoal Waste

The degasification sites and Pace Canyon portals were clear of non-coal waste materials.

9. Protection of Fish, Wildlife and Related Environmental Issues

The success of reclamation is definitely tied to the degree of grazing the reclaimed sites receive. Adjacent fenced and unfenced sites reclaimed with the same process (topsoil, seed, and mulch) in the same year show marked difference in appearance. i.e. site 31 vs. the site 31 access road and topsoil pile; site 18 and the reclaimed AMV access road; site 16 and 22 vs. the access road between the two. Cattle have free range over the site and are able to graze grasses down to the crown. The plants are not able to sustain vigorous growth under this grazing regime. The newly established plants must have a rest from grazing to allow above ground development that will sustain and increase root growth.

11. Contemporaneous Reclamation

Site G15 will be reclaimed this fall using topsoil stored on the G15 pad and topsoil stored along the road at G13. The AMV road is scheduled to be reclaimed next year. Site 11 will be the last site to be reclaimed also next year.

12. Backfilling And Grading

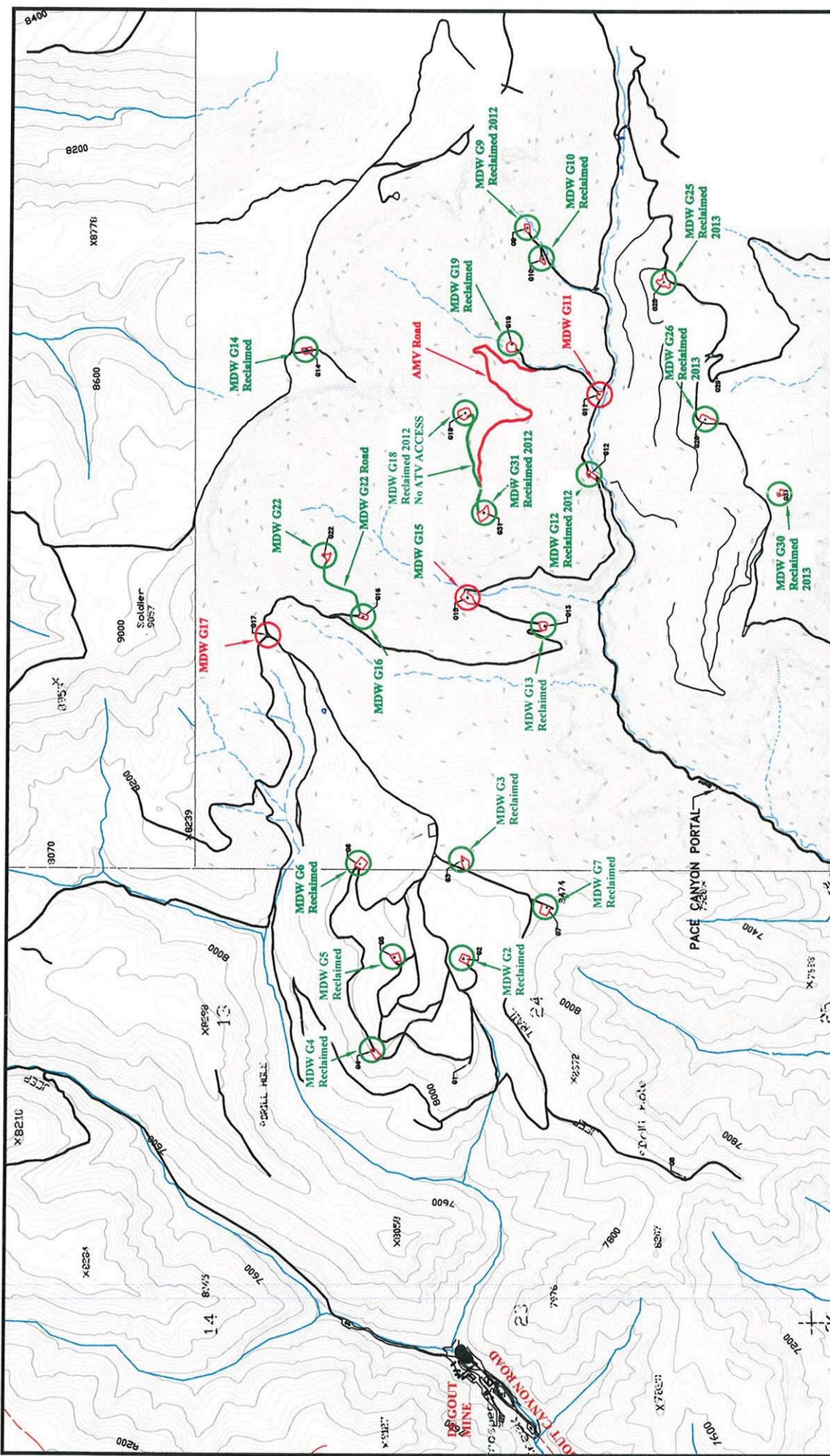
Site 13 a cut was left. Site 17 a pad was created with topsoil from a landowner stockpile. The pad was graveled also by the landowner to suit the post mining land use of grazing. Landowner indicated the pad would be the site of a salt storage shed.

13. Revegetation

Vegetation from the seed mix and natural recruitment was well established on G2, G3, G4, G5, G6, G7, G12, G13, G16, G18,, G22 and the access road to G22, G30 and G31. More recently seeded pads (reclaimed in 2013) are stable and have vegetation growing as well as some weedy species. but do not have perennial vegetation well established yet. The upper portion of G19 is eroding and sediment control could be improved- recommend monitoring and implement additional sediment control. Continue to monitor and apply aggressive weed control on G2, G6, G31, G9--emphasis on canada thistle, and houndstongue. G11, G15, G17, and the AMV road have not been reclaimed. The contractor/landowner has scheduled the work this fall.

Perennial grasses outcompeted kochia on Site G12 this year. Site G2 is much improved since 2013, although thistle is still evident and needs further control as stated above. The reclaimed segment of the AMV road is heavily grazed, but where kochia was dominant last year, penstamen, yarrow and sage have gained ground. Site 18 is dominated by grass with a vetch being the only other planted encountered. Knotweed and Triticale dominates site G25 Triticale and sagebrush seedlings are numerous at site 26 and site 30. Site 30 has a developing understory of native grasses.

The revegetation seed mix is attached. Permittee asked for suggestions to improve the revegetation seed mix to make it better able to withstand grazing pressure. Since the mix has four bunch grasses and only one sod former, the following recommendations were made: replace lupine with the forbes pacific aster and yarrow. Replace bottlebrush (a bunch grass) with the sod formers intermediate wheatgrass (*Thinopyrum intermedium*) and foxtail grass (*Alopercurus arundinaceus*).



CF Canyon Fuel Company, LLC
Dugout Canyon Mine

PACE CANYON MDW Sites

P.O. BOX 1029
WILLIAMSON, UTAH 84642

DATE: 07/17/13
 DESIGNED BY: JCS
 DRAWN BY: JCS
 CHECKED BY: DCS

REVISIONS OF UP-DATES

NO.	DATE	BY
1		JCS
2		DCS
3		

SCALE: 1"=750 FT
 PREPARED FOR THE DRAWING

LEGEND

- - FACILITY SITE - NOT RECLAIMED
- - FACILITY SITE - RECLAIMED

CONTOUR INTERVAL: 20 FT
 CONTOUR INTERVAL: 40 FT

354 Revegetative: Timing

Dugout Canyon will follow the recommended guidelines for revegetation and planting during the first normal period for favorable planting conditions after replacement of the topsoil. In Utah the planting period is usually Fall due to the precipitation events.

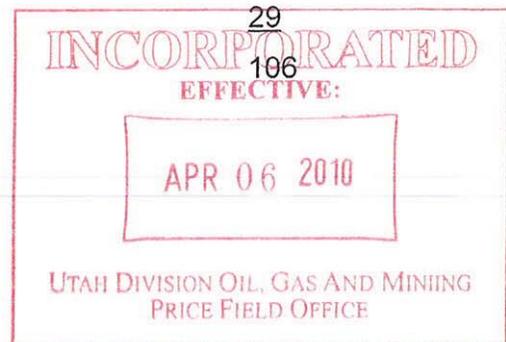
355 Revegetation: Mulching and Other Soil Stabilizing Practices

Mulch and/or other soil stabilizing practices (roughing, etc.) will be used on all areas that have been regraded and covered by topsoil (Section 341.200). Dugout Canyon Mine will exercise care to guard against erosion during and after application of topsoil.

**Table 3-2
 Reclamation Seed Mix**

<u>SPECIES</u>	<u># pls/acre</u>	<u># pls/sq. ft.**</u>
Grasses, Forbs, and Shrubs		
Kentucky Bluegrass (1,390,000 seeds/lb)*	0.5	16
Mountain Brome (64,000 seeds/lb)*	2.0	3
Sandberg Bluegrass (1,100,000 seeds/lb)*	1.0	25
Bluebunch Wheatgrass (126,000 seeds/lb)*	4.0	12
Bottlebrush Squirreltail (192,000 seeds/lb)*	1.0	4
Rocky Mountain Penstemon (478,000 seeds/lb)*	1.0	11
Mountain Lupine (12,000 seeds/lb)*	3.0	1
Mtn. Snowberry (54,000 seeds/lb)*	4.0	5
Wyoming Big Sage (2,500,000 seeds/lb)*	0.5	29
TOTAL	17	106

* Native Plants



Stevenson Intermountain Seed, Inc.

P.O. Box 2
 Ephraim, Utah 84627
 (435) 283-8639

Variety/Species	Purity% Germ%	Hard/ Dorm%	Total Viable%	Origin	Test Date
Quickguard	26.45		96.00	WA	8/25/2012
Mt. Showberry	15.05		90.00	UT	9/12/2013
Bluebunch Wheatgrass	14.41		94.00	WA	8/14/2013
Mt. Lupine	11.96		94.00	UT	8/5/2013
Mt. Brome	7.13		95.00	WA	8/25/2013
Sandberg Bluegrass	3.72		91.00	WA	6/12/2013
Rocky Mt. Penstemon	3.68		92.00	CO	7/22/2013
Bottlebrush Squinetail	3.56	17.00	95.00	WA	6/25/2013
Wyoming Big Sagebrush	1.95		88.00	UT	8/7/2013
Kentucky Bluegrass	1.82		88.00	WA	9/11/2013

Total 89.81

Inert% 10.00 Crop% 0.15 Weed% 0.03 Restricted Weed(s) None

Noxious Weed(s) None

Net Weight(lbs) 38.52 Customer Order No. DMRFGA Seed Mixture Lot No. M-3115

Seed Mix Name or Project 0-30

NOTICE TO THE BUYER: Stevenson Intermountain Seed, Inc. guarantees its seed to be of promised quality and true to name as specified, unless otherwise indicated, within the original container. No other warranty is made, expressed or implied. Our liability to the buyer or others is limited to the amount of the purchase price of the seed. Seed not incorporated above terms and conditions must be returned within 10 days in the original unopened container.

Stevenson Intermountain Seed, Inc.

P.O. Box 2

Ephraim, Utah 84627

(435) 283-8639

Variety/Species	Purity% Germ%	Hard/Dorm%	Total Viable%	Origin	Test Date
Quickguard	26.45		96.00	WA	8/25/2012
Mt. Showberry	15.05		90.00	UT	9/12/2013
Bluebunch Wheatgrass	14.41		94.00	WA	8/14/2013
Mt. Lupine	11.96		94.00	UT	6/5/2013
Mt. Brome	7.13		95.00	WA	8/25/2013
Sandberg Bluegrass	3.72		91.00	WA	6/12/2013
Rocky Mt. Penstemon	3.68		92.00	CO	7/22/2013
Bottlebrush Squinttail	3.56	17.00	95.00	WA	8/25/2013
Wyoming Big Sagebrush	1.95		88.00	UT	8/7/2013
Kentucky Bluegrass	1.82		88.00	WA	8/11/2013

Total 99.81

Inert% 10.00 Crop% 0.15 Weed% 0.03 Restricted Weed(s) None
 Noxious Weed(s) None Seed Mixture Lot No. M-3115
 Net Weight(lbs) 38.52 Customer Order No. DIMRFGA
 Seed Mix Name or Project Q-20

NOTICE TO THE BUYER: Stevenson Intermountain Seed, Inc. guarantees its seed to be of promised quality and true to name as specified, unless otherwise indicated. No other warranty is made, expressed or implied. Our liability to the buyer or others is limited to the amount of the purchase price of the seed. Seed not to be resold without our written consent. All other terms and conditions must be returned within 10 days in the original unopened containers.

G-3 reclaimed in 2006. Fenced but cows continually break in.



G-3



G-7 fenced, reclaimed in 2009.



G-7



G-2 reclaimed in 2009. Fenced, but cows continually break in.



G-5 reclaimed in 2009.



G-5



G-6 reclaimed in 2007.



G-6



G-4 first site to be reclaimed in 2004.



G-4



G-4



G-17 former topsoil stockpile location (utilized in Fall 2013 and 2014) will become the site of a corral.



G-17



G-17 graveled pad



G-17



G-17



Road to G-16 unfenced, recently seeded and covered with straw matting Fall 2014.



G 16 fenced, seeded hydromulched in Fall 2013.



G-16



Unfenced Road to G-22, seeded covered with straw matting in Fall 2013.



Road to G-22



Road to G-22



Unfenced Road to G-22, seeded covered with straw matting in Fall 2013.



Road to G-22



Road to G-22



Road to G-22



Road to G-22



Road to G-22



Road to G-22



G-22 fenced, hand seeded and alfalfa hay mulch Fall 2013.



G-22



G-22



G-13 south side of road, reclaimed in 2009



G-13 north side of road, reclaimed 2009



G-15 reclamation scheduled for this year.



G-15



G-12 reclaimed in 2012



G-12



G-31 unfenced access road reclaimed 2012 no mulch.



G-31 fenced, seeded then hydromulched .



G-31 fenced



AMV Road – unfenced reclamation between G31 and G18
in 2012



Unfenced AMV Road – Penstamen and Remnants of excelsior matting



AMV Road – Drainage 3 just before G18



G-18 fenced



G-18 fenced



AMV Road reclaimed and un-reclaimed sections



Unfenced reclaimed topsoil stockpile near site 31 on AMV road. Reclaimed in 2012



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road – topsoil pile



AMV Road



AMV Road



AMV Road



AMV Road



AMV Road – topsoil pile



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AMV Road



AMV Road



AMV Road



AMV Road



G-19



G-19 fenced reclaimed Fall 2012



G-19 fenced



G-19 pre-existing trail through G19 site.



G-19 erosion from drainage off of the trail.



G-11



G-11



G-11



G-9 fenced, reclaimed 2012 road continues into site and then ends.



G-9 this location reseeded and hydromulched in 2013



G-9 this location reseeded and hydromulched in 2013



G-10 access and former topsoil storage location



G-10 fenced, reclaimed 2010



G-25 fenced , hand broadcast and hydromulched in Fall 2013.
(Former location of salt lick. Flat area remained for hydromulching
equipment access.)



G-26 fenced, hand broadcast and hydromulched in Fall 2013



G-26



G-30 access road: fenced hand broadcast, hand mulched with certified weed free hay Fall 2013.



G-30 fenced, hand broadcast and hand mulched with certified weed free hay Fall 2013.



G-30



G-14 reclaimed in 2010



G-14

