

August 15, 2016

Mr. Daron R. Haddock
Division of Oil, Gas, and Mining
1594 West North Temple
Salt Lake City, Utah 84114-5801

RE: Vegetation updates - Canyon Fuel Company, LLC, Skyline Mine, C/007/0005

Attached to this letter is pertinent information addressing modifications to the Skyline Mine M&RP to include updates and clarification of baseline vegetative inventories and reference area mapping. Plate 2.7.1-2 originally had four "reference areas" mapped. These "reference areas" were actually the baseline vegetation inventories from Welsh's 1980 report in Appendix A-2. Maps A, B and C of this report shows the "validation" areas, which were the baseline inventories of the planned disturbances, and associated reference areas. Updates to plate 2.7.1-2 clarify locations of reference areas from the original pre-disturbance report, and adds relevant reference areas from subsequent reports for projects to date. See Appendix A-2 for these reports. Per direction from division staff, a single reference area for each plant community was chosen from Welsh 1980 using aerial imagery. Skyline has field verified these reference areas during the summer of 2016 using qualitative ocular methods. Plate 2.7.1-1a is removed and replaced by Plate 2.7.1-1 which is updated to show vegetation types in Eccles Canyon, east to the rail load out. Data from Welsh's 1980 inventory were used to expand this plate. The permit modification consists of: 1) update to text in sections 2.7 and 4.7, 2) updates to plates 2.7.1-2 and 2.7.1-1, and 3) removal of plate 2.7.1-1a.

Attached to this cover letter are completed C1 and C2 forms, redline-strikeout versions of M&RP modifications in Section 2.7 and 4.7 and two (2) plates. Two (2) hard copies of the information will be submitted at final approval.

If you have any questions regarding this information, please give me a call at (435) 448 – 2645.

Sincerely,



Jeremiah Armstrong
Canyon Fuel Company, LLC.
Environmental Engineer – Skyline Mines

Enclosure

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Canyon Fuel Company, LLC

Mine: Skyline Mine

Permit Number: C/007/005

Title: Vegetation Updates

Description, Include reason for application and timing required to implement:
Update of vegetation maps and text

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes No 1. Change in the size of the Permit Area? Acres: ___ Disturbed Area: ___ increase decrease.
- Yes No 2. Is the application submitted as a result of a Division Order? DO# _____
- Yes No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes No 6. Does the application require or include public notice publication?
- Yes No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes No 9. Is the application submitted as a result of a Violation? NOV # _____
- Yes No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
- Yes No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes No 13. Does the application require or include collection and reporting of any baseline information?
- Yes No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes No 15. Does the application require or include soil removal, storage or placement?
- Yes No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes No 19. Does the application require or include certified designs, maps or calculation?
- Yes No 20. Does the application require or include subsidence control or monitoring?
- Yes No 21. Have reclamation costs for bonding been provided?
- Yes No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Information submitted electronically in Adobe Acrobat .pdf format. (This number includes a copy for the Price Field Office.)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Corey Heaps
 Print Name

Core Heaps, GM, 8-15-16
 Sign Name, Position, Date

Subscribed and sworn to before me this 15 day of August, 2014

Melissa Willden
 Notary Public

My commission Expires: 3-19, 2019;
 Attest: State of Utah } ss:
 County of Carbon



For Office Use Only: 	Assigned Tracking Number: 	Received by Oil, Gas & Mining
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SECTION

2.7

browse species are common. Some of the slopes above riparian areas are covered by the upland sedge-grass community with Carx geyeri. The ridge tops also contain the sagebrush-grass community in some areas. The dominant species are Vasey sagebrush (Artemisia tridentata var. vaseyana), slender wheatgrass, and subalpine needlegrass (Stipa columbiana). Other common species in the sagebrush-grass community are low rabbitbrush (Chrysothamnus viscidiflorus), Louisiana sagewort (Artemisia ludoviciana), aster (Aster spp.), yarrow (Achillea millefolium), and Indian paintbrush (Castilleja spp.).

A few small meadows occur in the canyon. they are generally dominated by species of Poa with some sedges and carex intermixed. They are generally productive.

Riparian areas exist along streams and at seeps and springs. the vegetation along the water edge consists of species of Carex, Poa, and to a lesser extent sedges. Some willow is present along the streams."

Eccles Canyon is vegetated by similar plant communities as described for the rest of the project.

Plate 2.7.1-1 shows the locations of the various plant communities of the areas to be mined. The plant communities ~~for the train loadout area, the waste rock disposal area and overland conveyor area~~ are in the soil and vegetation section of Volume A-2 along with other vegetative studies and maps. Plate 2.7.1-2 shows the location of the various vegetative reference areas. GPS coordinates are included on plate 2.7.1-2 to simplify navigation to each area for division personnel. Per request from division staff, a single reference area was chosen from Welsh 1980 to represent each plant community. This was done using aerial imagery, and was field verified by qualitative ocular methods during the summer of 2016. Should any of these reference areas prove unsatisfactory in the future, one of the original reference areas from Welsh 1980, or subsequent studies, will be evaluated by the mine and submitted for division approval as a new reference area for the affected plant community. Each reference area comprises at least 1 ac² from the GPS point up to the extent of the representative plant community as outline on plate 2.7.1-1. The reference areas are marked at each corner with a steel post.—The limits of the surface disturbance are shown on Plates 3.2.1-1, 3.2.1-3, 3.2.3-3a thru 3.2.3-3h and 4.16.1-1B. A species list by plant community with a discussion of the methods used in the community analysis are presented in the Appendix Volume A-2.

2.7.2 Community Analysis - Results and Discussion

Greatest diversity of species was observed in the reference area transects occupied by aspen, and by the grass-forb-elderberry with which it is intergraded. Those two types includes from 23

to 32 plant species in transects and in the productivity plots. Spruce-fir transects yielded from 17 to 26 species of plants and the riparian communities 15 to 26 species. The community type with least diversity in the reference areas was the sagebrush community, ranging from 10 to 14 species.

Revised: ~~10/04/028/15/2016~~

2-58a

Sites in the reference areas differed in the production of herb INCORPORATED
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Division of Oil, Gas & Mining livestock. Aspen and grass-forb-elderberry communities vary from INCORPORATED
12/02/02
Division of Oil, Gas & Mining acre. Sagebrush exceeded that productivity with approximately 917.1 pounds per acre. Spruce-fir is assumed to be non-productive because of shading and poor representation of species in the forest floor. The riparian habitats measured in the reference areas yielded only 180.5 and 286 pounds.

The importance of the aspen and grass-forb-elderberry communities, which occupy approximately 42 percent of the permit area, is seen in the comparison of area occupied by that community and that occupied by other types.

The sagebrush-snowberry, sagebrush, and fringed sagebrush occupy only 13 percent of the project area. They occur mainly on shallow soils. Collectively they are diverse, with approximately 90 species of vascular plants. Fringed sagebrush occurs on only one percent of the area and is confined to ridge crests at high elevations. Only 16 species were noted in this type area.

The riparian community type consists of continuous strips of vegetation along the major drainages, as in the valley bottoms of Huntington Creek, Eccles Creek, and other minor tributaries. The community also occupies spring lines, seeps, and perennial channels down slope from minor springs, as in the valley of Huntington Creek. Dominant species on the wet lands are red top, silver sagebrush, sedge species, grasses, and numerous forbs.

Despite the importance of spruce-fir and spruce-fir-aspen community in the total vegetative cover of the permit area, these types are of little value in forage production. They are of value, however, in the protection of both wildlife and livestock. The dense shade provides cool bedgrounds and wildlife cover, while main grazing areas are in adjacent aspen and grass-forb-elderberry communities.

SECTION .

4.7

additional water will not be needed. If irrigation is needed, an irrigation plan will be developed at that time and submitted to the Division of Oil, Gas and Mining for approval. The special revegetation plan (see Section 4.7.3) for the conveyor route does include some drip irrigation for establishment.

4.7.5 Monitoring Procedures, ~~Portal, Train Loadout, Waste Rock Disposal Site, South Fork Breakout Areas and Other Small Areas~~

All areas of final revegetation will be qualitatively evaluated on an annual basis. In addition, shrub survival will be quantified using permanent transects for the first three years after planting. Woody plant density and total living cover will be estimated during the third year (and fifth year on areas with 10 year liability). **Woody plant success standards will meet the requirement of R645-301-356.231 & R645-301-356.232. Shrub density will be a minimum of 1500 woody plants per acre at bond release, determined for individual areas prior to cessation of mining in consultation with DOGM biologist and DWR to enhance wildlife habitat where appropriate.**

For bond release, data will be collected and submitted using a monitoring method designed to give empirical values sufficient to detect a 10 percent change in vegetative cover at a 90 percent statistical confidence interval. These data will be from those communities disturbed and for established reference areas which will be used for comparison (aspen & sagebrush, reference area for south slopes; spruce-fir, reference area for north slopes; riparian, reference areas for the riparian zone and the Reference Area for the waste rock disposal site). Vegetative parameters to be measured are: cover, density, productivity and species composition. Sampling of the approved reference area and revegetated area will occur for the last two years of the liability period and will meet sample adequacy tests for 90 percent confidence level with a 10 percent change in the mean.

A minimum of the following data will be provided: 1) canopy cover by species and total canopy cover excluding trees, 2) productivity by life form, and 3) density of woody species by life form (trees and shrubs). The Permittee will provide results

Revised 8/15/2016

4-46

~~R10/28/94~~

**INCORPORATED
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Division of Oil, Gas & Mining**

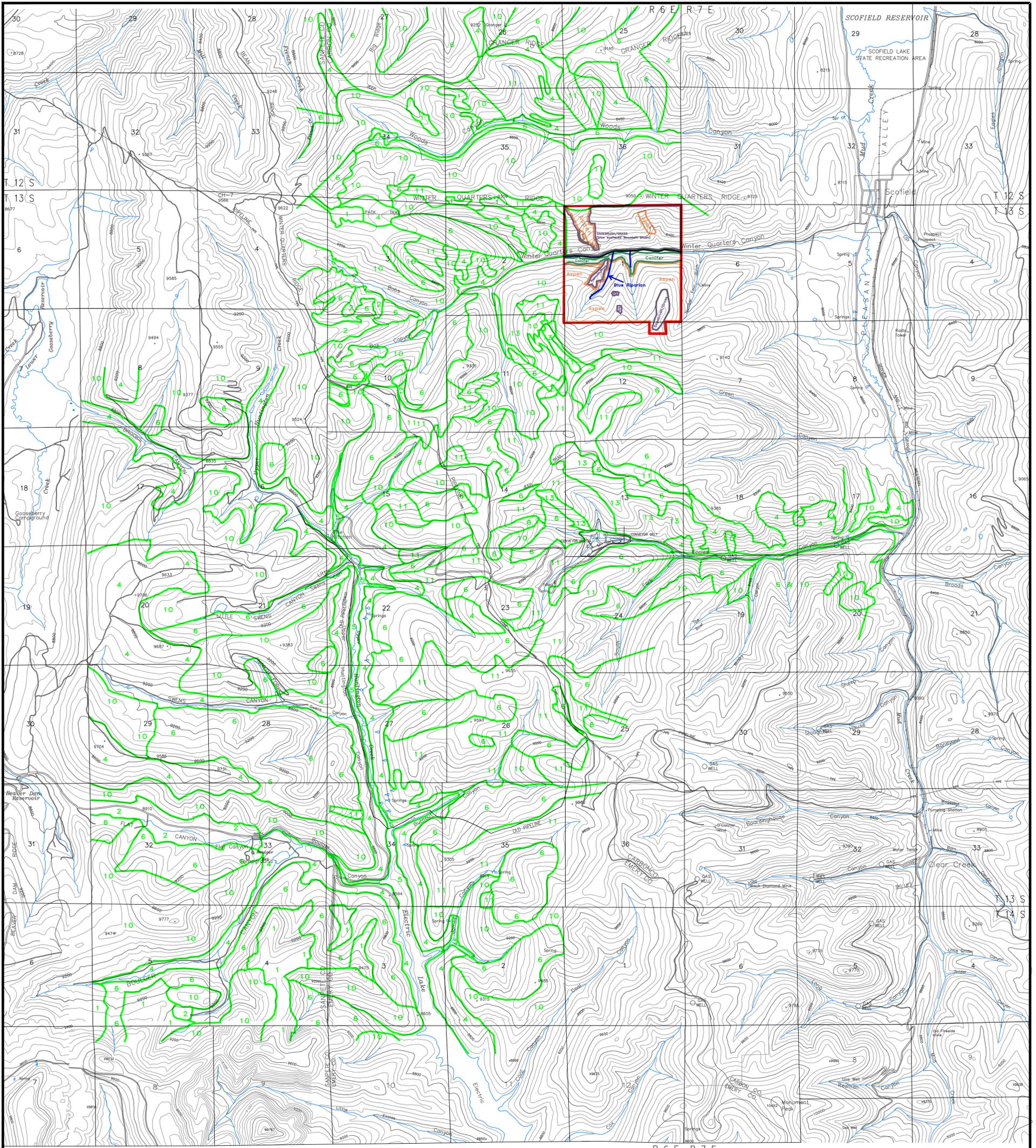
of statistical analyses showing similarity between disturbance areas and reference areas.

The Permittee has inspected all seeded areas at the end of each growing season to determine the success of the seeding program for a period of at least five years (reclamation years 1-5).

Any area not achieving 90 percent original cover in the first five years are investigated to determine the possible failure cause(s) so steps can be taken to establish the desired permanent vegetation.

The Permittee has monitored the vegetative reference area to determine if the reference areas have been subjected to heavy animal use or have been significantly altered by subsidence or other man-induced degradation. If the reference areas are subsided or subject to subsidence the Permittee will quantitatively monitor the reference areas. During the last two years of mining, prior to the initiation of final restoration efforts, reference areas will be evaluated to determine the adequacy of the reference area vegetative parameters. If damage is such that the reference area is no longer viable, an additional reference area proposal will be submitted to the regulatory authority for approval from existing reference areas from baseline studies in appendix A-2 or from areas representative of the baseline area. ~~The reference areas will be surveyed by the S.C.S. at five year intervals to determine their condition class.~~

The Permittee understands that the extended period of liability is ten years, unless site-specific data can be submitted which justifies a five-year period, beginning after the last period of augmented seeding, fertilizing or other mechanical practice and that the revegetated areas will be monitored the last years of liability and comparisons made with reference areas. On-site climatological data will be evaluated at the beginning of final reclamation to determine the liability period. The length of the liability period will be established based on the conditions outlined in R614-301-820.310.



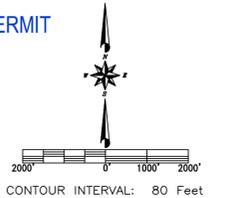
LEGEND

- 1 GRASSLANDS
- 2 MEADOWS
- 4 SAGEBRUSH
- 5 RIPARIAN
- 6 CONIFER TIMBER
- 10 ASPEN
- 11 ASPEN GRASS FORB ELDERBERRY
- 12 SANDSTONE LEDGES
- 13 SAGEBRUSH SNOWBERRY

- VEGETATION BOUNDARY*
- INFERRED VEGETATION BOUNDARY EXTENDED TO ADJACENT AREA

NOTES: 1. COORDINATE BASE ON MINE GRID DATA.
 2. MAP DIGITIZED FROM 1:24000 USGS QUADRANGLE MAPS, SCOFIELD, UTAH AND FAIRVIEW LAKES, UTAH.
 3. MINE FACILITY, CONVEYOR, AND NEW ECCLES CANYON ROAD LOCATIONS FROM EXISTING RECORD DATA AND INCORPORATED TO MAP IN BEST FIT LOCATIONS.
 4. UTM GRID TICK VALUES SHOWN ARE IN METERS.
 BASE PREPARED BY INTERMOUNTAIN AERIAL SURVEYS, SALT LAKE CITY, UTAH - M96147

SEE PLATE 1.6-3 FOR PERMIT AND ADJACENT AREAS



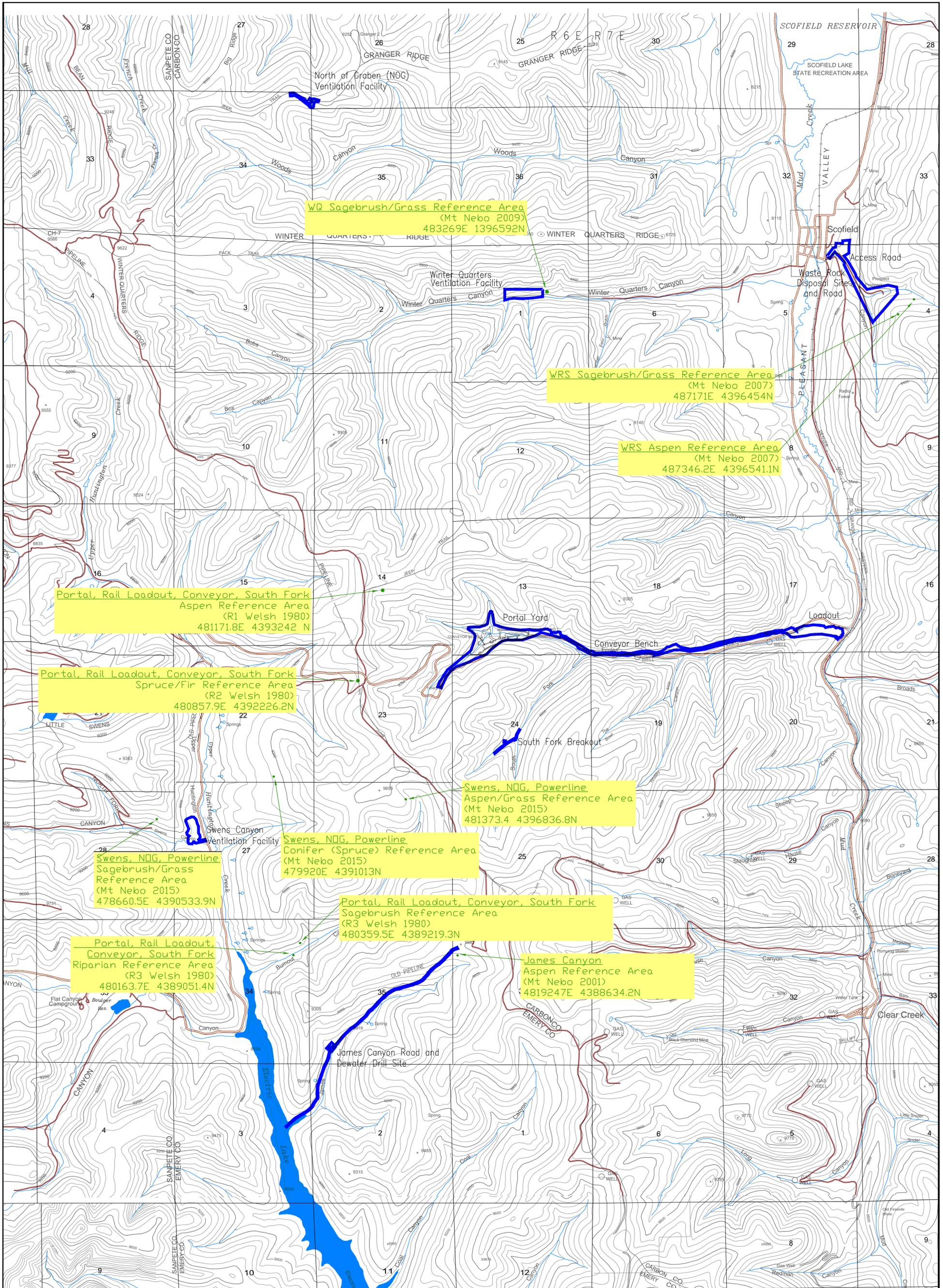
DATE	No.	REVISIONS	DR./CHK.
AUG 16	1	Removed incorrect reference areas. Added Veg types from Welsh 1980.	JCA/JCA

VEGETATION TYPES

Canyon Fuel Company, LLC
 Skyline Mines
 435-448-6463

SCALE: 1" = 2000' DATE: 7/01/02 CK.BY: DRB/VSM REVISION: 1
 DWG. NO.: 2.7.1-1 DR.BY: DRB/VSM
 CAD FILE: 2.7.1-1 08/15/2016

*Field Checked Vegetation Mapping October 2007, Eccles data from Welsh 1980. For Reference Area Detail see Plate 2.7.1-2 and Appendix A-2; Volumes 1 & 2.



LEGEND
 REFERENCE AREA*
 PERMIT AREAS

*For detailed information on reference areas, see studies in Appendix A-2; Volumes 1 & 2.
 Reference areas are at least 1 square acre surrounding the GPS coordinates, and within the representative plant community.
 For approximate plant community boundaries, see plate 2.7.1-1

SEE PLATE 1.6-3 FOR PERMIT AND ADJACENT AREAS

- NOTES:
1. COORDINATE BASE ON MINE GRID DATA.
 2. MAP DIGITIZED FROM 1:24000 USGS QUADRANGLE MAPS, SCOTSFIELD, UTAH AND FAIRVIEW LAKES, UTAH.
 3. MINE FACILITY, CONVEYOR, AND NEW ECCLER CANYON ROAD LOCATIONS FROM EXISTING RECORD DATA AND INCORPORATED TO MAP IN BEST FIT LOCATIONS.
 4. UTM GRID TICK VALUES SHOWN ARE IN METERS.

BASE PREPARED BY INTERMOUNTAIN AERIAL SURVEYS, SALT LAKE CITY, UTAH - M91647

DATE	No.	REVISIONS	BY / CHK
8/15/2016	1	Correct reference sites from all areas	JR / GG

VEGETATIVE REFERENCE AREAS

Canyon Fuel Company, LLC
 Skyline Mines

HW 35 BOX 380, HELPER, UT, 84529
 CAD FILE: 435-448-2632

DATE: 5/02/2016 CK.BY: G.GALECKI
 SCALE: FULL DR.BY: J.ARMSTRONG

REVISION: 1
 8/15/2016

DWG. NO.: 2.7.1-2