

C7007005 Incoming



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#5255

August 30, 2016

RECEIVED

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

SEP 02 2016

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RE: Vegetation updates - Canyon Fuel Company, LLC, Skyline Mine, C7007/0005
Task ID #5255

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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, clean versions of M&RP modifications in Section 2.7 and 4.7 and two (2) plates. Two (2) clean hard copies of the information are being submitted for 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 -Task ID #5255

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

Corey Heaps, GM, 8-30-16
Sign Name, Position, Date

Subscribed and sworn to before me this 30 day of August, 20 16

Melissa S Willden
Notary Public

My commission Expires: 3-19, 20 19
Attest: State of Utah } ss:
County of Carbon



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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 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 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.

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2.7.2 Community Analysis - Results and Discussion

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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.

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

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 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 sampling techniques approved in the Division "Vegetation Information Guidelines" Appendix A. These data will be from those communities disturbed and for established reference areas which will be used for comparison. 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

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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 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.

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4-47

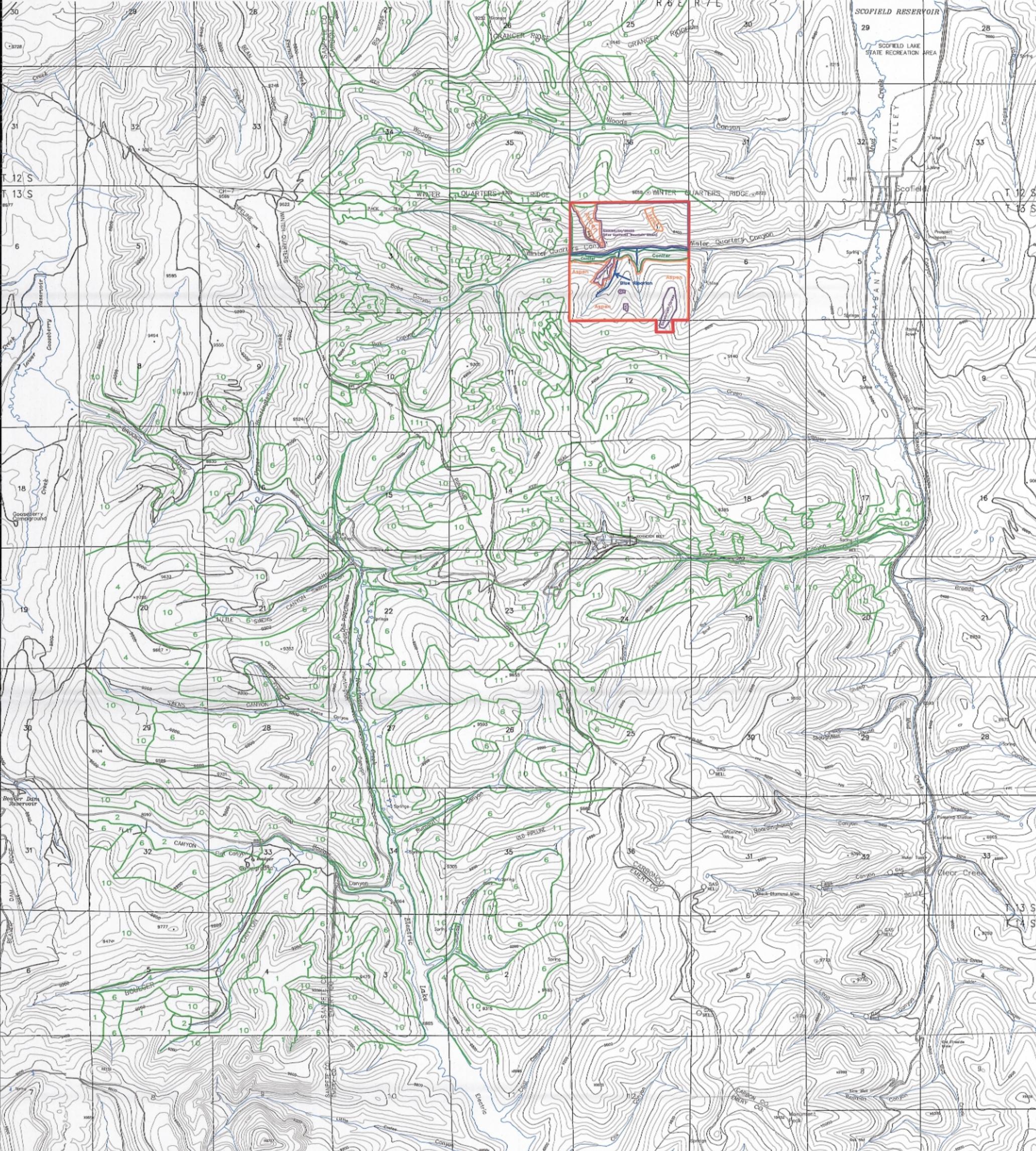
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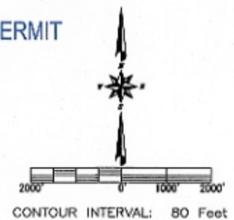
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- LEGEND**
- 1 GRASSLANDS
 - 2 MEADOWS
 - 4 SAGEBRUSH
 - 5 RIPARIAN
 - 6 CONIFER TIMBER
 - 10 ASPEN
 - 11 ASPEN GRASS FORB ELDERBERRY
 - 12 SANDSTONE LEDGES
 - 13 SAGEBRUSH SNOWBERRY
- VEGETATION BOUNDARY*
- INFERRED VEGETATION BOUNDARY EXTENDED TO ADJACENT AREA

NOTES: 1. COORDINATE BASE ON MINE GRID DATA.
 2. MAP DIGITIZED FROM 1:24000 USGS QUADRANGLE MAPS, SCOPIELD, UTAH AND FARVIEW LAKES, UTAH.
 3. MINE FACILITY, CONVEYOR, AND NEW EDDIES 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 - 006147

SEE PLATE 1.6-3 FOR PERMIT AND ADJACENT AREAS



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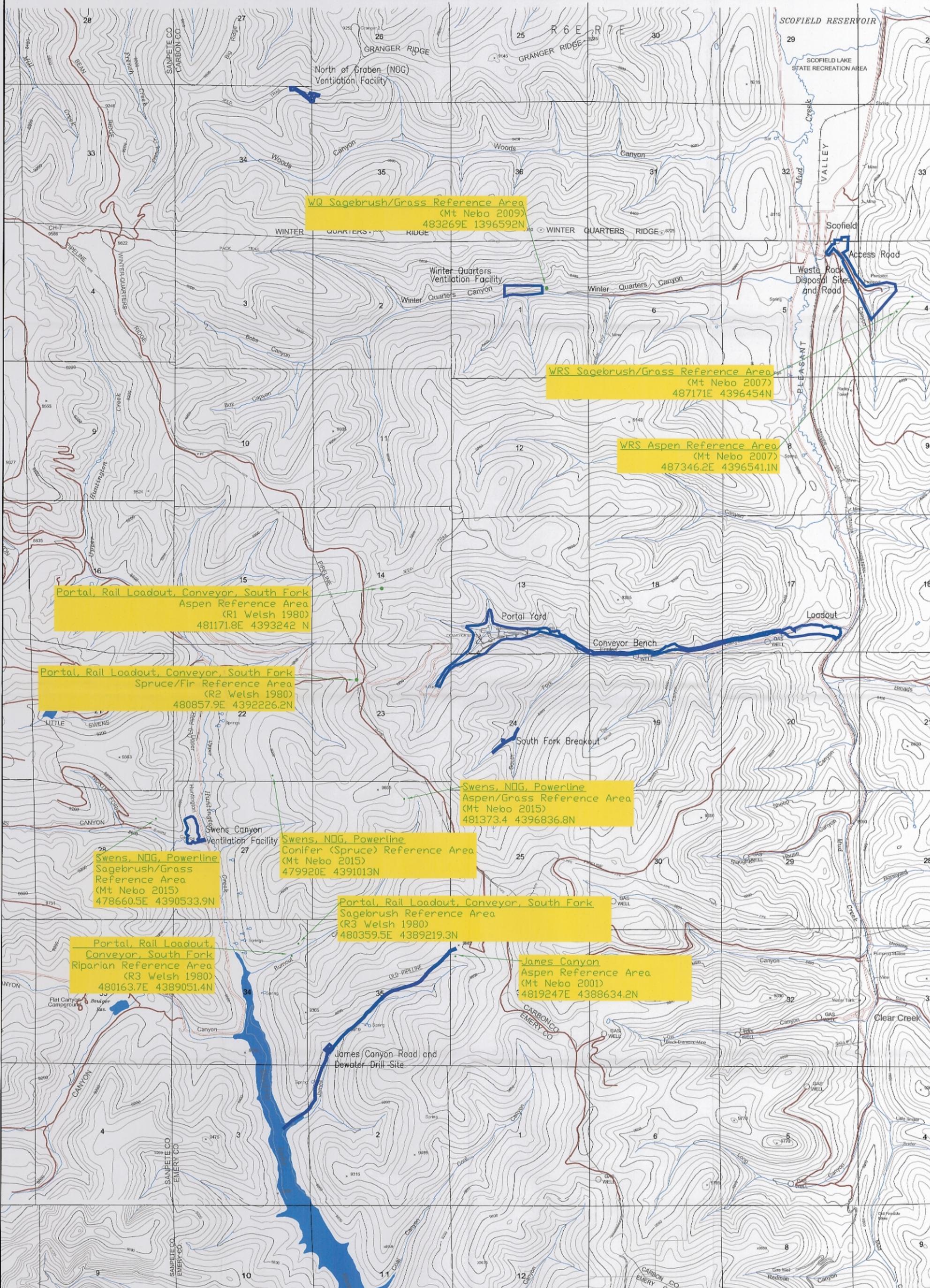
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DATE	No.	REVISIONS	BY
AUG 16	1	Removed incorrect reference areas. Added Veg types from Welsh 1980.	JCA/JCA

Canyon Fuel Company, LLC
 Skyline Mines

SCALE: 1" = 2000' DATE: 7/01/02 CK.BY: DRB/VSM REVISION: 1
 DWG. NO.: 2.7.1-1 DR.BY: DRB/VSM 08/15/2015
 Dwg File: 2.7.1-1

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



WQ Sagebrush/Grass Reference Area
(Mt Nebo 2009)
483269E 1396592N

WRS Sagebrush/Grass Reference Area
(Mt Nebo 2007)
487171E 4396454N

WRS Aspen Reference Area
(Mt Nebo 2007)
487346.2E 4396541.1N

Portal, Rail Loadout, Conveyor, South Fork
Aspen Reference Area
(R1 Welsh 1980)
481171.8E 4393242 N

Portal, Rail Loadout, Conveyor, South Fork
Spruce/Fir Reference Area
(R2 Welsh 1980)
480857.9E 4392226.2N

Swens, NOG, Powerline
Aspen/Grass Reference Area
(Mt Nebo 2015)
481373.4 4396836.8N

Swens, NOG, Powerline
Sagebrush/Grass
Reference Area
(Mt Nebo 2015)
478660.5E 4390533.9N

Swens, NOG, Powerline
Conifer (Spruce) Reference Area
(Mt Nebo 2015)
479920E 4391013N

Portal, Rail Loadout, Conveyor, South Fork
Sagebrush Reference Area
(R3 Welsh 1980)
480359.5E 4389219.3N

Portal, Rail Loadout,
Conveyor, South Fork
Riparian Reference Area
(R3 Welsh 1980)
480163.7E 4389051.4N

James Canyon
Aspen Reference Area
(Mt Nebo 2001)
4819247E 4388634.2N

LEGEND
 REFERENCE AREA*
 PERMIT AREAS

SEE PLATE 1.6-3 FOR PERMIT
AND ADJACENT 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

NOTES: 1. COORDINATE BASE ON NAD 83 DATA.
 2. MAP DERIVED FROM 1:25000 USGS QUADRANGLE MAPS, SCOTSDALE, UTAH AND PARKER LAKES, UTAH.
 3. MINE FACILITY, CONVEYOR AND NEW EGGES CANYON ROAD LOCATIONS FROM EXISTING REDDED DATA AND INCORPORATED TO MAP IN BEST FIT LOCATIONS.
 4. UTM GRID TICK VALUES SHOWN ARE IN METERS.
 DATE PREPARED BY: INTERMOUNTAIN AERIAL SURVEYS, SALT LAKE CITY, UTAH - M08147

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

VEGETATIVE REFERENCE AREAS RECEIVED

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Canyon Fuel Company, LLC
Skyline Mines

DATE: 5/02/2016 CK.BY: G.GALECKI REVISION: 1
 SCALE: FULL DR.BY: J.ARMSTRONG 1
 DWG. NO.: 2.7.1-2 8/15/2016