

0070

TO: PRISCILLA BURTON

FROM: VICKY MILLER

RESPONSE TO THE LAST DEFICIENCIES.

YOU CAN COMMUNICATE WITH ME BY TELEPHONE TODAY, BUT I WILL NOT BE NEAR A COMPUTER. WE CAN DISCUSSED ANY ADDITIONAL CHANGES, IF THERE ARE ANY.

THANKS, VICKY

Handwritten notes:
J...
C/007/005
Copy Priscilla
me

Handwritten mark: SK

RECEIVED
NOV 15 2002
DIV. OF OIL, GAS & MINING

Osmorhiza occidentalis	4.00	2.74
Penstemon strictus	1.00	13.59
Viguiera multiflora	0.15	3.63
GRASSES²⁾		
Bromus carinatus	2.00	4.59
Elymus glaucus	2.00	5.05
Elymus trachycaulus	1.50	5.51
Festuca Idahoensis	0.50	5.17
Festuca ovina	0.30	4.68
Phleum alpinum	0.50	11.48
Poa pratensis	0.10	5.00
Poa secunda	0.30	6.37
TOTALS	34.05	99.13
¹⁾ = Broadcast Rate ²⁾ = Species changes may be made by a qualified botanist based on availability. PLS = Pure Live Seed		

2.7.6 VEGETATION OF THE NORTH LEASE TRACT AREA

The North Lease Tract Area is located adjacent to the northernmost boundaries of the current Skyline Mine permit area. Much of this area is located within and adjacent to Winter Quarters Canyon.

Because no surface disturbance is planned for this area, no quantitative data were compiled of the vegetation. Instead, a review of the existing information and data of the North Lease Tract and adjacent areas was done.

During August 2002 aerial photographs were taken of the North Lease Tract area to provide a baseline *for comparison of changes in vegetation from year to year data*. Aerial photographs will be taken annually, changes between the baseline (*pre-mining disturbance*) and annual photograph will be interpreted by a qualified person and a report prepared for inclusion in the annual report.

Revised: 10/02 11/15/02

PLANT COMMUNITIES

A report was prepared earlier by *Mt. Nebo Scientific, Inc.* (Collins 1992) of the vegetation of the Winter Quarters Canyon area (North Lease Tract Area). This report was submitted to the USDA Forest Service. The report has been included in Appendix A-2.

Methodologies for this previous study relied on general vegetation mapping done by using existing information and limited ground-truthing techniques. Most of the mapping was done using existing maps and data from range analyses prepared by the USDA Forest Service (Manti-LaSal National Forest, Price, Utah).

Plant community named in the aforementioned study were revised to be consistent with the existing vegetation map of the permit area (Drawing 2.7.1-1a). The existing vegetation map of the area was revised using both black and white and color aerial photography. No field work or ground-truthing methods were implemented.

During the early Summer of 2003 the vegetation along the perennial streams within the North Lease will be ground truthed. This information will be gathered in conjunction with information being gathered for the Manti-La Sal Forest Service in the preparation of an Environmental Assessment. Total acreage of each vegetation type, productivity measurements, plant community descriptions and mapping of riparian areas along perennial streams for the North Lease area will be provided once this information has been gathered and compiled.

Aspen

The Aspen community was the most common vegetation type of the Winter Quarters Tract Area. Aspen (*Populus tremuloides*) was the dominant overstory species, whereas, depending on the area and environmental variables, snowberry (*Symphoricarpos oreophilus*) or Oregon grape (*Mahonia repens*) were the dominate understory species.

Conifer Timber

Also important by relative number of acres, these communities were dominated by Engelman
Revised 11/15/02

TO: GREGG GALECKI

FROM: VICKY MILLER

RESPONSE TO THE LAST DEFICIENCIES.

YOU CAN COMMUNICATE WITH ME BY TELEPHONE TODAY, BUT I WILL NOT BE NEAR A COMPUTER. WE CAN DISCUSSED ANY ADDITIONAL CHANGES, IF THERE ARE ANY.

(801) 531-0534

THANKS, VICKY

Canyon Fuel Company, LLC
Skyline Mine

Addendum to the Probable Hydrologic Consequences
July 2002

itself will contribute significant concentrations of total phosphorous to Scofield Reservoir. However, since the Scofield Reservoir is a drinking water source for Price, a top cold water fishery in the State, and has been listed as and impaired water body by the EPA, increases in total phosphorous released to the reservoir is of special concern. Several studies have been conducted since the mid 1970's by the Utah Division of Wildlife Resources, Utah Department of Environmental Quality, and the USGS to determine the sources of phosphorous pollution in the lake. Copies of several of these studies are included in Appendix E. Generally, the studies have identified two significant sources of phosphorous pollution - sediments entering the reservoir and runoff from lands carrying animal waste into the lake. A report written 1992 by Harry Lewis Judd of the Utah Division of Water Quality, Utah Department of Environmental Quality titled "Scofield Reservoir Restoration through Phosphorous Control" suggest that as much as 29% of the total phosphorous load in Scofield Reservoir is delivered by Mud Creek. He sites the poor conditions of stream banks in the lower sections of the creek south of the town of Scofield and the recreational and industrial activities that occur in the drainage as the source of much of the sediment that contains the phosphorous that is detrimental to the lake's water quality. The idea that sediments transported to the lake by its tributaries is a significant source of phosphorous is supported by previous studies.

Beginning in 2002, the total phosphorous concentration in the water discharged into Eccles Creek from the mine will be monitored. Orthophosphate concentrations have historically been monitored in the discharge water along with periodic monitoring for total phosphorous concentrations. A new monitoring plan to evaluate the effects of increased mine discharges on the stream channels of Mud and Eccles Creek was instigated in the summer of 2002. This study includes monitoring several locations on both creeks for changes in stream morphology and water chemistry. Two sites on Eccles and five sites on Mud Creek will be monitored for total flow, TDS, TSS, and total phosphorous. If significant increases in TDS, TSS, and total phosphorous are noted, the sources will be investigated. If they are related to Skyline Mine

Canyon Fuel Company, LLC
Skyline Mine

Addendum to the Probable Hydrologic Consequences
July 2002

activities, remedial actions will be taken. These actions may consist of but not limited to armoring stream channel banks, planting of stream bank stabilizing vegetation, or redirection of some flows to the Huntington Creek drainage. Monitoring information is provided in the "Addendum to the Probable Hydrologic Consequences, July 2002, Appendix D and the work plan for monitoring is provided in Attachment 3 of Section 2.12. Future monitoring information will be provided and incorporated into the M&RP.

Total and dissolved iron concentrations in the water are typically below 1 mg/l, similar to background water concentrations. Nickel concentrations have reached as high as 40 ug/l. This concentration is well below the UPDES permit levels. However, it has been determined that levels greater than 15 ug/l in the mine discharge inhibits the reproductive capabilities of *Ceriodaphnia dubia*, an invertebrate used to biologically monitor the quality of water of industrial and municipal discharges. The mine is working with the DWQ to mitigate the effects of discharging nickel at concentrations below established discharge limits. No other elements or compounds of concern have been detected in the increased mine water discharge.

The increased mine discharges have been a benefit to Scofield reservoir. Scofield Reservoir has a capacity of 31,500 acre feet of water storage. Currently, the mine discharges approximately 9.2 acre feet of water per day to the lake. Since August 2001, the mine has discharged approximately 2,500,000 acre feet of water to the lake (July-October 16, 2002). The mine water discharge not only helps to alleviate some of the problems related to water shortages within the Price River drainage area as a result of the ongoing drought but is also helping to maintain the first class cold water fishery in Scofield Reservoir. Low lake levels in past years have resulted in increased water temperatures and deadly algal blooms. The added water discharged from the mine reduces the potential for algal blooms related to low lake levels.

Revised 11/15/02