



0019  
STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

June 22, 1983

Mr. Scott Raymond  
Beaver Creek Coal Company  
P. O. Box AU  
Price, Utah 84523

RE: Preliminary Vegetation  
Comments & List of  
Archeology Consultants  
CV Spur Prep Plant  
ACT/007/022  
Folder #2  
Carbon County, Utah

Dear Scott,

As per your request, enclosed is the preliminary comments on the Vegetation Information provided in the CV Spur Mining and Reclamation Plan. Unless a response is recieved prior to July 8, 1983, they will remain essentially unchanged in the next review document.

Also enclosed is a list of Consulting Firms that perform Archeology studies.

Should you have any questions, please don't hesitate to call.

Sincerely,

  
LYNN KUZLER  
RECLAMATION BIOLOGIST

IK/rb

Enclosures

cc: Allen Klein, OSM

Preliminary Vegetation Comments  
CV Spur Prep. Plant  
ACT/007/022, Carbon County, Utah

783.19 Vegetation Information

The applicant has not answered all of the questions asked in the original ACR. i.e., "It is not clear whether the weed community will be disturbed...? Did a sedge meadow occur on the site in the past? Is it now drained by the french drain on the west end of the permit area ?"

Also, there are some major discrepancies that exist in the vegetation report (Chapter 9) that was submitted:

1. Table 9-3 reports production for the affected area as 167.9 g/m<sup>2</sup>, sample size as 25 and a standard deviation as 198.87. Yet, table 9-4 reports production for the affected area as 110.9 g/m<sup>2</sup>, sample size as 65 and a standard deviation as 150.4. Please clarify. Also, a t-test shows affected area vs. reference area productivity not equal at p=.10.
2. Please provide rationale for sampling reference area cover outside the two-acre reference area vs. within the reference area.
3. Why was shrub density not sampled within the affected area?
4. Similarity has not been demonstrated between the reference area and the affected area (cover reported for the reference area was similar but was not sampled within the reference area). Which species were found in the affected area? which in the reference area?
5. The formula for calculating minimum sample size =  $\frac{t^2 s^2}{d^2}$

where:

- t = the t-value for a 2-tailed test at 80% or 1.282
- s = sample standard deviation
- d = .1 x the sample mean.

From this, sample adequacy was not reached for any of the parameters for either the affected area or the reference area. Please justify why sample adequacy was not met.

6. On a minor scale, the sum of the cover values on tables 9-2 & 9-15 are 19.3% and 17.8% respectively vs. 18.8% and 17.5%. Also, Table 9-8 should show shrub density as 6801.6 stems per acre vs. 6798.9 stems/acre.

If these discrepancies cannot be cleared up to the satisfaction of the Division, resampling will be required.

Survey/Minimal Test Excavations

Dr. Peter S. Miller  
Director  
Agency for Conservation Archaeology  
Eastern New Mexico University  
Portales, NM 88130

Mr. Steve Baker/Dr. Paul Nickens  
Centuries Research, Inc.  
Box 1869  
Montrose, CO. 81401

Dr. Richard Hauck  
Archaeological-Environmental Research Corp.  
1931 South 11th East, Suite 208  
Salt Lake City, UT 84106

Gordon & Kranzush  
2920 Pearl Street  
Boulder, CO 80301

Mark E. Sullivan, President  
Western Cultural Resource Mgt. Inc.  
P. O. Box 1192  
Boulder, CO 80306

Dr. Meade F. Kemrer  
Division of Conservation Archaeology  
San Juan County Archaeological  
Research Center & Library  
Route 3, Box 169  
Farmington, NM 87401

Excavation

Dr. James O'Connell  
Department of Anthropology  
Stewart Building  
University of Utah  
Salt Lake City, UT 84112

Dr. Alexander Lindsay  
Museum of Northern Arizona  
Route 4, Box 720  
Flagstaff, AZ 86001

Dr. David B. Madsen/Mr. La Mar W. Lindsay  
Antiquities Section  
Utah State Division of History  
307 West Second South  
Suite 1000, Crane Building  
Salt Lake City, UT 84101

Dr. Richard Thompson  
International Learning and Research, Inc.  
484 South 300 East  
Cedar City, UT 84720

Archeology Consultants

Camp, Dresser & McKee, Inc.  
Environmental Sciences Division  
11455 West 48th Ave.  
Wheat Ridge, Colorado 80033  
(303) 422-0469

Espey, Huston & Associates, Inc.  
7800 East Union Ave., Suite 930  
Denver, Colorado 80237  
(303) 694-0808

Mariah Associates  
P. O. Box 1048  
Laramie, Wyoming 82070  
(307) 742-3843

Mr. Patrick Collins  
Mt. Nebo Scientific Research and Consulting  
290 East 1230 North  
Springville, Utah 84663  
(801) 489-6937