

Mr. Mark Delligatti
Spent Fuel Project Office
Office of Nuclear Material Safety & Safeguards
U.S. Nuclear Regulatory Commission
Rockville, MD 20852

July 18, 2001

SWEC J.O. No. 05996.02
Letter No. S-O-73
File No. R9.2B

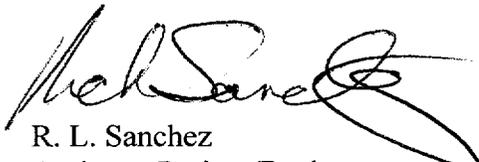
REFERENCES: KASS, MAY 1999 AND PRITCHETT, MAY 2001
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE L.L.C.

Attached, please find the following per your request.

1. Study, PGS Proposed Alternate Rail Route Plant Species of Special Concern Inventory, Skull Valley, Utah, Intermountain Ecosystems, LC, May 12, 1999
2. Letters May 6, 2001, May 10 2001, and May 18, 2001, related to Pocket Gophers, Clyde Pritchett

Please note that on the 6 May letter, the coordinates for N40 24 09.1/W112 44 16.0, N40 24 10.9/W112 44 01.9, and N40 24 11.1/W112 44 26.0 should be N40 24 10.2/W112 45 15.1, N40 24 10.2/W112 45 14.0, and N40 24 10.3/W112 45 15.7. A corrected map is included.

If you have any questions, please contact me at 303-741-7067.



R. L. Sanchez
Assistant Project Engineer

fax

TO: Mark Delligatti 301-415-8555 and Marty Salk 865-576-8543

FROM: Rick Sanchez

DATE: 18 July 2001

Subject: Kass May 1999 and Pritchett May 2001 References

Attached please find the following:

1. Study, PFS Proposed Alternate Rail Route Plant Species of Special Concern Inventory Skull Valley , Utah, Intermountain Ecosystems, LC, 12 May 1999
2. Letters 6 May 2001, 10 May 2001, and 18 May 2001 related to Pocket Gophers, Clyde Pritchett

Please note that on the 6 May letter, the coordinates for N40 24 09.1/W112 44 16.0, N40 24 10.9/W112 44 01.9, and N40 24 11.1/W112 44 26.0 should be N40 24 10.2/W112 45 15.1, N40 24 10.2/W112 45 14.0, and N40 24 10.3/W112 45 15.7. A corrected map is included.

Express mail copy will follow to Mark.



Rick Sanchez
Assistant Project Engineer, PFS

Orem, Utah
6 May 2001

Mr. John Donnell
Project Director
Private Fuel Storage L.L.C.
7677 Berry Avenue
Denver, CO 80111-2137

Dear Mr. Donnell

Here are the data we looked at last Wednesday at the Private Fuel Storage Site.

ENVIRONS OF LOCATIONS 30 and 31, Two active burrow systems.

N 40 24 11.0 W 112 46 48.8

ENVIRONS OF LOCATIONS 35, 36, AND 37, these recorded were the burrows
that were active

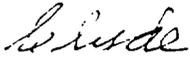
N 40 24 09.1	W 112 44 16.0
N 40 24 10.3	W 112 45 15.7
N 40 24 09.9	W 112 45 05.9
N 40 24 09.8	W 112 45 06.2
N 40 24 10.2	W 112 44 59.7
N 40 24 10.2	W 112 44 58.9
N 40 24 10.1	W 112 44 58.9
N 40 24 10.1	W 112 44 57.5
N 40 24 10.2	W 112 44 55.7
N 40 24 10.1	W 112 44 55.5
N 40 24 10.1	W 112 44 53.8
N 40 24 10.9	W 112 44 01.9
N 40 24 11.1	W 112 44 26.0
N 40 24 12.8	W 112 44 58.8
N 40 24 12.7	W 112 44 58.4
N 40 24 14.4	W 112 44 57.0
N 40 24 14.2	W 112 44 57.7
N 40 24 15.8	W 112 44 54.9
N 40 24 17.7	W 112 45 09.1
N 40 24 17.7	W 112 45 08.5
N 40 24 16.2	W 112 45 06.7

Active burrow systems found just north of location 37.

N 40 24 20.1	W 112 45 11.5
N 40 24 22.8	W 112 45 14.2
N 40 24 23.3	W 112 45 16.4
N 40 24 24.1	W 112 45 14.1

John as I looked farther north there were only two or three fresh mounds, I did not open them. Towards the north end of the Reservation I could not find any fresh mounds. It was rare to find any old mounds. I add this just in case changing the roadway is a possibility.

Respectfully



Clyde L. Pritchett

05996.02-W1

Orem, Utah
10 May, 2001

Mr. Paul Gaukler
2300 N Street, N W
Washington, D C 20037-1128

Re: Documents Related to Utah Comention D D (Ecology and Species) Section 11 pp 120-123.

Dear Paul:

With regards to your concern about there being more than one subspecies of Pocket Gophers in the environs of Skull Valley, my response is, yes there is. However, the other two subspecies, as far as I have been able to tell, have not been collected in the environs of the proposed P F S F facility or rail road right of way. The three possibilities are Thomomys bottae robustus, Skull Valley pocket gopher, T. bottae stansburyi, Botta pocket gopher, and T. bottae albicaudatus, also called Botta pocket gopher.

The "Skull Valley pocket gopher," is found in Skull Valley, obviously. There are records of it being collected as far south as Indian Springs in the Simpson Mountains and I have seen sign of them on the north near Hwy I 80, giving this subspecies a north/south range of approximately 60 miles in length. The range of the "Stansbury" Pocket Gopher is on the Stansbury Mountains. The Stansbury Mountains are located on the North East side of Skull Valley. According to Dr. Durrant there appears to be an interaction, in some locations, between these two subspecies. The third subspecies, T. b. albicaudatus, are found from the south end of Davis County south into Juab County and west into Tooele County to the Onaqui and Sheeprock mountain. According to Dr. Durrant this subspecies has the largest geographic population of any subspecies in North and Central Utah. Dr. Durrant also indicates there appears to be intergradation between this subspecies and the Skull Valley pocket gopher on the south end of their ranges.

What I am trying to say is that there appears to be interactions between all three subspecies, but the location of the pocket gophers we are concerned with, in distance, are completely separated from these other two subspecies of pocket gophers.

I hope this answers your questions.

Respectfully,


Clyde L. Pritchett

cc: Mr. John Donnell

05996.02 - W1

Orem, Utah
18 May 2001

Mr. John Donnell
Project Director
Stone & Webster
7677 East Berry Avenue
Greenwood Villa, CO 80111-4421

Dear John:

As of yesterday, I think our survey of the PFSF railroad line is complete. If I had known, at the onset, what the railroad portion involved, I would never have taken the project on. However, it is finished and I hope everyone involved feels all right about the work that has been completed.

I have one question. When we began this survey I did not realize how important an ATV would be in speeding up the work, so I did not include that in my budget. Tuesday, 15 May I had a piece of greasewood puncher one of the tires on my ATV. Wednesday, without an ATV, but using my truck where it could be used, then walking for several hours, it took me a very long day just to check two gopher burrows I had opened the day before. On the ATV the burrows could have been checked in four hours or less. Do you think it improper of me to charge the project the going rate, whatever that is, for the rental of an ATV? I feel without the ATV it would have taken me at least another two to three weeks to have completed this project.

Unlike the gopher mounds in Areas 35,36,37, which were fairly close together, the gopher mounds along the rail corridor were scattered. I was able to only find ten fresh gopher mounds and of these six burrows were closed when checked the following day. I will list the locations of these active burrow sites below.

When you and I visited the active burrow sites in the environs of areas 35, 36, and 37 you ask me if these burrows could have come into the area after the last survey was made a few years ago I have thought a lot about it. My first reaction was that they had been there for a long time. I still feel that way, but in all fairness to the individual making that survey, it is certainly possible that this little group might have moved in since that 1998 wildlife survey was made.

Please let me know soon if there is something else I should have completed, or that you would like me to do.

Respectfully Submitted:

Clyde L. Pritchett

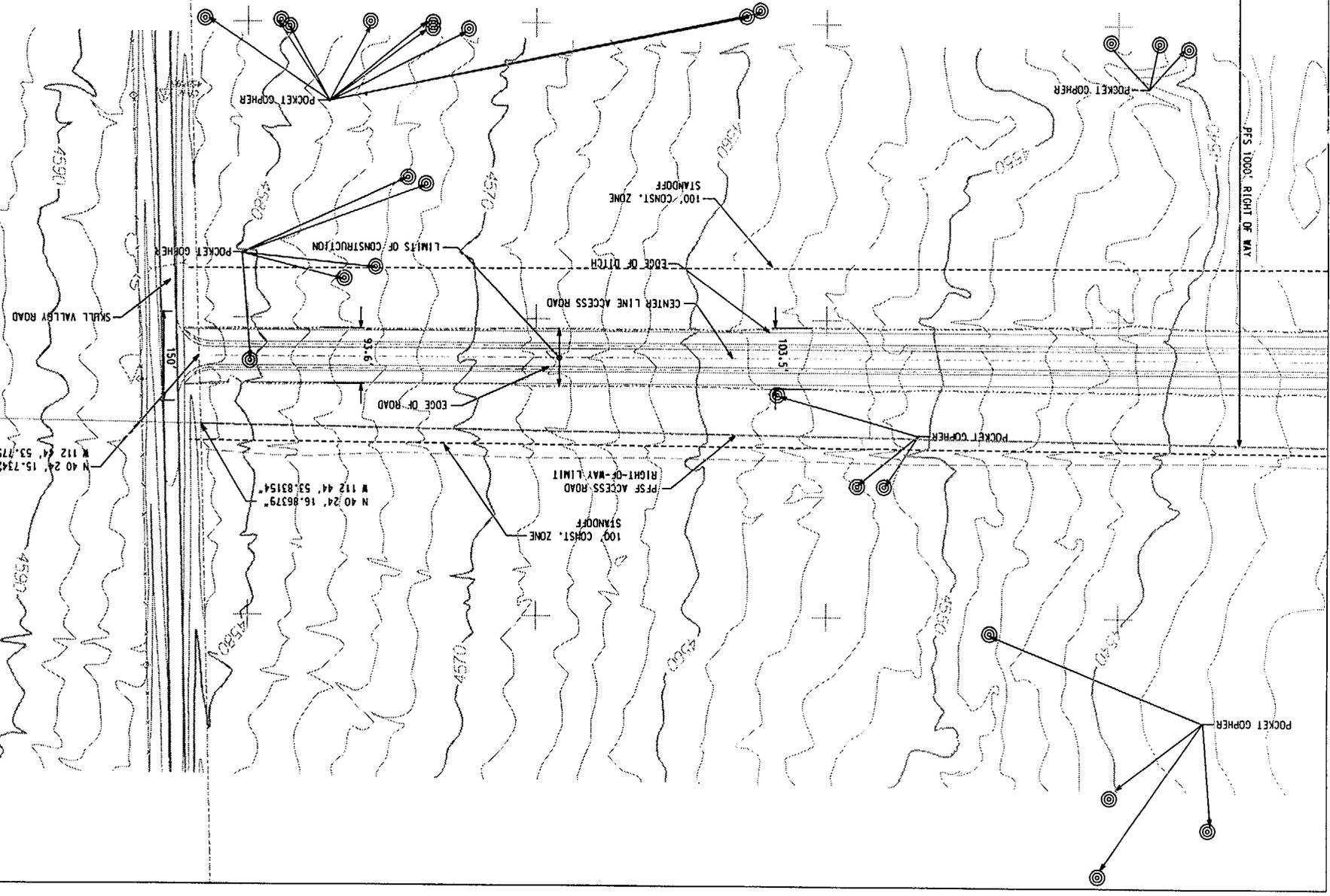
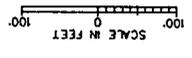
Page 2

POCKET GOPHER ASSESSMENT ON PROPOSED SKUNK RIDGE RAIL CORRIDOR

1	N 40 49 11.6	W 112 53 26.6	
2	N 40 48 56.5	W 112 52 50.0	
3	N 40 48 53.2	W 112 52 45.9	
	N 40 48 53.0	W 112 52 46.0	(probably the same gopher as #3)
4	N 40 42 26.3	W 112 50 33.5	
5	N 40 37 44.0	W 112 50 42.5	
6	N 40 37 16.0	W 112 50 48.4	

John, with very few reference points to go by as I went from one waypoint to the next, it was difficult to know when I was two hundred feet from the center of the proposed track. Will you please check that for me. I purposely tried to go what I thought was more than two hundred feet on each side just to be certain. You can always delete those burrows that are outside of the four hundred foot right of way.

RIGHT-OF-WAY LIMIT
PFSF ACCESS ROAD
N 40 24' 06.98306"
W 112 44' 53.33023"



SECTION #5
N 40 24' 15.73424"
W 112 44' 53.77563"

N 40 24' 16.86379"
W 112 44' 53.83154"

100' CONST. ZONE
PFSF ACCESS ROAD
RIGHT-OF-WAY LIMIT

EDGE OF ROAD
EDGE OF DITCH
CENTER LINE ACCESS ROAD

100' CONST. ZONE
STANDOFF

SKULL VALLEY ROAD

PFS 1000' RIGHT OF WAY

4590

4570

4550

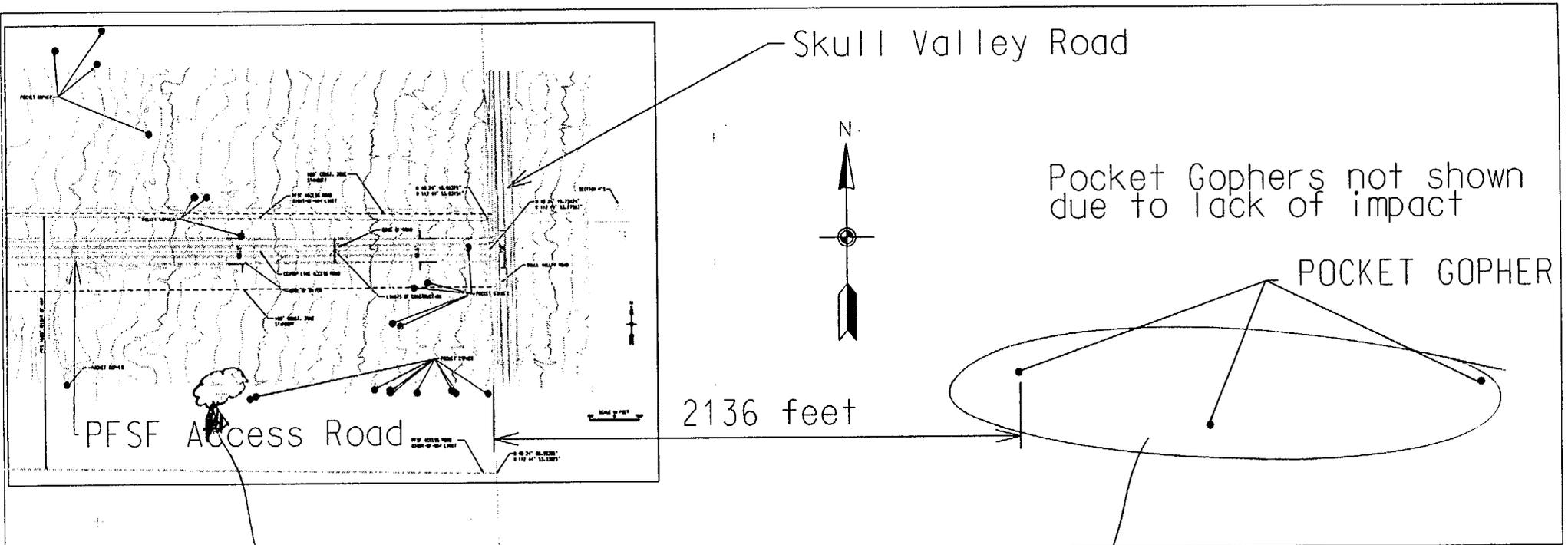
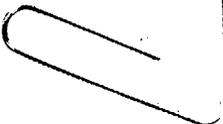
4590

4570

4550

4530

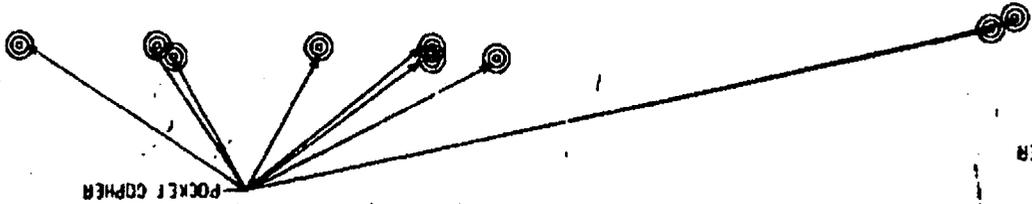
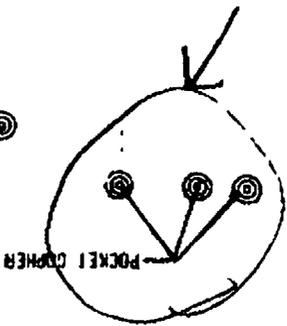
4510



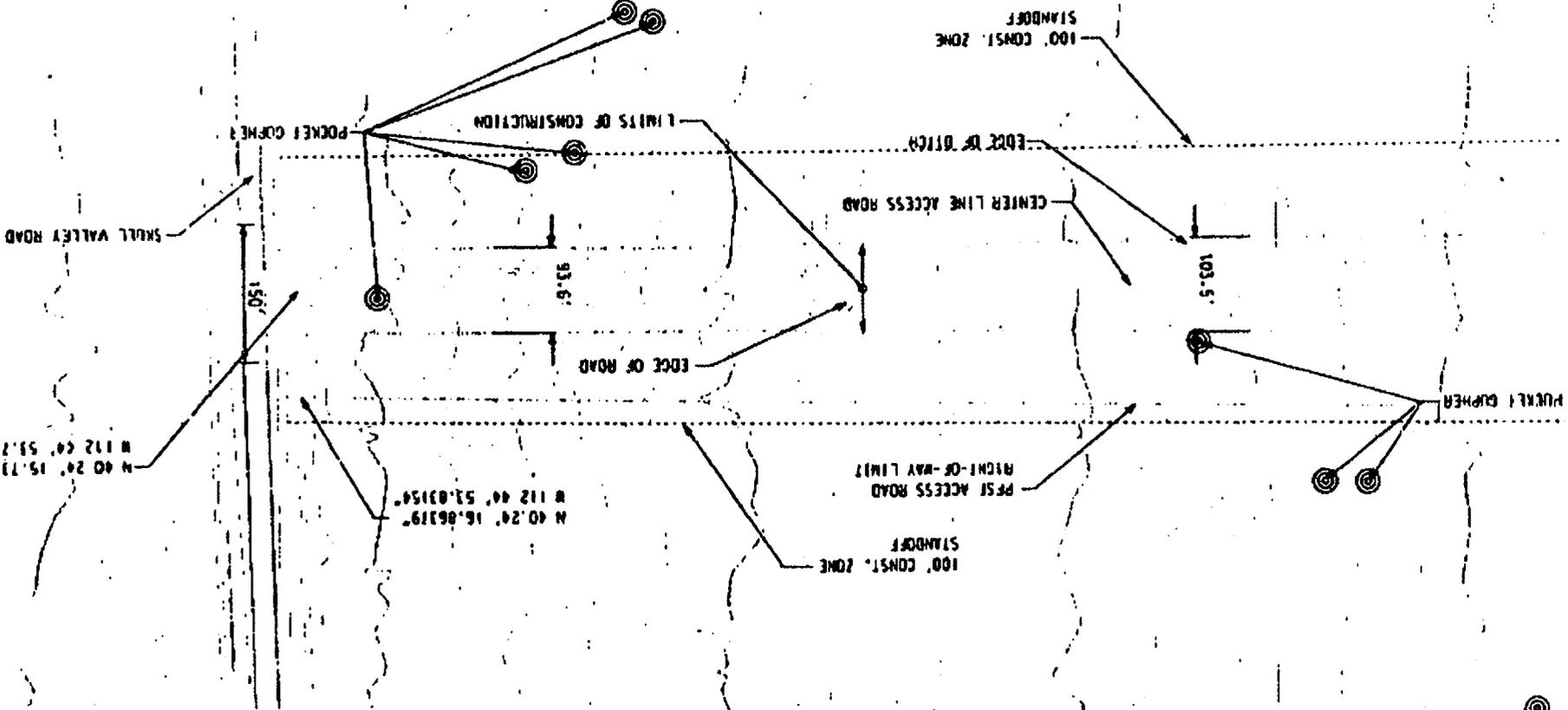
...civil\0599602\site\gopher.dgn Jul. 02, 2001 12:41:54

Typo in Lat/Long DATA

*New
GWS
Added*



RIGHT-OF-WAY LIMIT
 P 40 24 06.98306
 N 112 44 53.31023



SECT
 N 40 24 15.71424
 N 112 44 53.71563

N 40 24 16.86319
 N 112 44 53.83154

100' CONST. ZONE
 PEST ACCESS ROAD
 RIGHT-OF-WAY LIMIT

EDGE OF ROAD

LIMITS OF CONSTRUCTION

93.5'

POCKET GOPHER

SHULL VALLEY ROAD

150'

EDGE OF DITCH

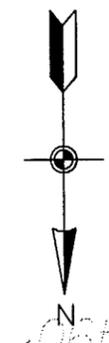
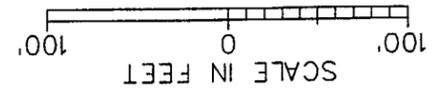
100' CONST. ZONE
 STANDOFF

CENTER LINE ACCESS ROAD

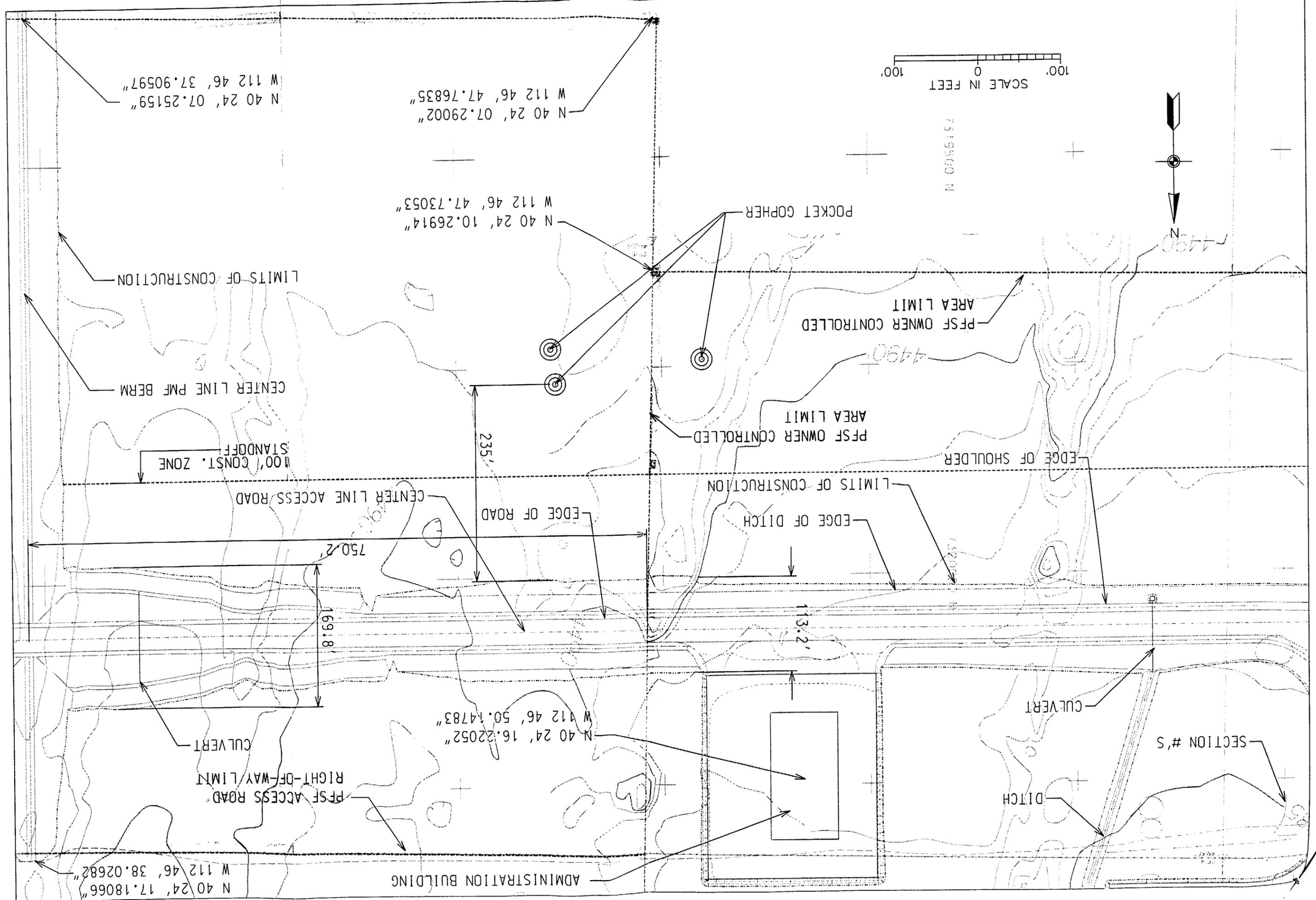
103.5'

POCKET GOPHER

100' CONST. ZONE
 PEST ACCESS ROAD
 RIGHT-OF-WAY LIMIT



7519500 N



N 40 24' 07.25159"
W 112 46' 37.90597"

N 40 24' 07.29002"
W 112 46' 47.76835"

N 40 24' 10.26914"
W 112 46' 47.73053"

N 40 24' 16.22052"
W 112 46' 50.14783"

N 40 24' 17.18066"
W 112 46' 38.02682"

LIMITS OF CONSTRUCTION

CENTER LINE PMF BERM

100' CONST. ZONE
STANDOFF

CENTER LINE ACCESS ROAD

EDGE OF ROAD

LIMITS OF CONSTRUCTION

EDGE OF DITCH

EDGE OF SHOULDER

PFSF OWNER CONTROLLED
AREA LIMIT

PFSF OWNER CONTROLLED
AREA LIMIT

POCKET GOPHER

PFSF ACCESS ROAD
RIGHT-OF-WAY LIMIT

ADMINISTRATION BUILDING

CULVERT

DITCH

SECTION #'S

235.1'

750.2'

1691.8'

113.2'

4490

4490

4490

0599602

PO # 21

PR 1.2C § WS

**PRIVATE FUEL STORAGE FACILITY
PROPOSED ALTERNATE RAIL ROUTE
PLANT SPECIES OF SPECIAL CONCERN INVENTORY
SKULL VALLEY, UTAH**



Phone (801) 489-4590 • Fax (801) 489-8236
270 East 1230 North • Springville, Utah 84663

**PRIVATE FUEL STORAGE FACILITY
PROPOSED ALTERNATE RAIL ROUTE
PLANT SPECIES OF SPECIAL CONCERN INVENTORY
SKULL VALLEY, UTAH**

Prepared for:

**Stone & Webster Engineering Corp.
7677 East Berry Avenue
Englewood, Colorado 80111-2137**

Prepared by:

**Intermountain Ecosystems, L.L.C
270 East 1230 North
Springville, Ut. 84663**

12 May 1999

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1.0 INTRODUCTION

1.1 Project Scope

The following report is a summary of the 1999 Plant Species of Special Concern field inventory conducted at the proposed Private Fuel Storage Facility (PSFS) located on the Skull Valley Goshute Indian Reservation. In 1998, a similar inventory was conducted in the project area and the following proposed facilities were inventoried: (1) Intermodal Transfer Point, (2) Low Transportation Corridor (LTC), and (3) the existing Skull Valley Road (Kass 1998).

The 1999 inventory was conducted on the proposed Alternate Rail Route, a revised portion of the LTC which includes approximately the last 6 miles of the rail line. The new potential route will turn east approximately 3 miles north of the PFSF, proceed east for approximately 3 miles, and then turn south for 3 miles to the PFSF (Fig 1). The majority of the revised portions are located on land administered by the Bureau of Land Management (BLM) Salt Lake District Office.

One directive of the BLM is a requirement for addressing threatened, endangered, and species of special concern as part of the requirements of the Endangered Species Act of 1973. BLM is required to comply with mandates under the Endangered Species Act, and its own mandate, the BLM 6840 Manual for sensitive species. As a result of these mandates, Stone & Webster Engineering of Englewood, Colorado has requested a rare plant inventory in the proposed project area .

The following plant species were suggested as possibly occurring within the proposed project area and include: (1) Pohl's milkvetch (*Astragalus lentiginosus* var. *pohlii* Welsh & Barneby), (2) small spring parsley (*Cymopterus acaulis* var. *parvus* Goodrich), and (3) big saltbush (*Atriplex lentiformis*) (Torr.) Wats.

1.2 Physiography

The project area occurs on the eastern boundary of the Great Basin Physiographic Province. It is characterized by a series of long, parallel, north and south trending mountain ranges separated by broad valleys filled with unconsolidated alluvium (Hunt 1967). These fault-block ranges are slowly rising, and the valleys between are downthrown as horsts and grabens. Since these valleys were formed by crustal movement and not carved by flowing rivers, no overall drainage pattern develop (Hunt 1967). Locally, the project area is mainly confined to Skull Valley which occurs between the Stansbury Mountains to the east, and Cedar Mountains to the west. Project area elevation is approximately 1355 m (4445 ft).

1.3 Geology

The Stansbury and Cedar Mountains consists of very thick limestones and fine sandstones of marine origin, and form a member of the Pennsylvanian-Permian Oquirrh Group. Skull Valley proper is composed of fine-textured Quaternary sediments which reflect the geologic history of Pleistocene Lake Bonneville with its alluvial deposits and formation of shorelines (Currey et al. 1984).

1.4 Climate

The nearest location with long-term climatic records is the town of Tooele, located north of the project area at 1545 m (5070 ft). Average January and July temperatures are -1.7° C (30° F) and 24.7° (76° F) respectively, with average annual temperatures of 10.6° C (50° F). High and low temperatures are 35.6° C (95° F) and -22.2 C° (-8° F). Average annual precipitation is 41.4 cm (16.3 in) with largest amounts falling in the months of March thru May. Average annual precipitation in Skull Valley is probably much less (Ashcroft et al. 1992).

1.4 Vegetation

For the most part, the project area is dominated by greasewood (*Sarcobatus vermiculatus*) typically found in saline valley bottoms. Native salt desert shrubs such as shadscale (*Atriplex confertifolia*), budsage (*Artemisia spinescens*), horsebrush (*Tetradymia glabrata*), winterfat (*Ceratoides lanata*), and native grasses such as galleta grass (*Hilaria jamesii*), Indian ricegrass (*Stipa hymenoides*), sand dropseed (*Sporobolus cryptandrus*), and alkali sacaton (*Sporobolus airoides*) are sparse to virtually absent from most of the project area.

The most commonly occurring species are invasive annuals such as cheatgrass (*Bromus tectorum*), peppergrass (*Lepidium perfoliatum*), bur buttercup (*Ranunculus testiculatus*), and tansy mustard (*Descurainia sophia*). The abundance of invasive annuals and paucity of native plant communities reflects the past history and repeated cycles of overgrazing, drought, and fire (Cottam 1976, Rogers 1982, Billings 1990).

2.0 METHODS

2.1 Herbarium Search and Field Inventory

A herbarium search of the target taxa was conducted in May of 1998 prior to the field inventory (Kass 1998). The 1999 field inventory was conducted in T4S, R9W, S22-25, 36, and T5S, 9W, S1 by Dr. Ronald J. Kass, botanist during May 7th. A right-of-way (ROW) of approximately 2640 feet wide (0.25 miles on each side of the route centerline) was inventoried.

Inventory methods consisted of driving along the corridors where possible and walking through the project area looking for plant occurrence and/or potential habitat. When potential habitat was located, linear transects were walked until the field personnel were convinced that no target taxa occurred in that particular area. If target taxa were located, field personnel recorded data on a population-habitat data sheet and USGS 7.5 quad, took a photograph of plant and its habitat, and recorded a GPS position. All taxonomy follows Welsh et al. (1993).

3.0 RESULTS

3.1 *Astragalus lentiginosus* var. *pohlii*

Pohl's milkvetch is currently listed as a species of special concern by the BLM. This herbaceous, perennial milkvetch has large, pale flowers 20-23 mm (0.7 in.) and short, speckled, stipitate pods (Welsh et al. 1993). It grows on exposed clays and fine sands in sagebrush, salt desert shrub, and greasewood communities at approximately at 1330 to 1650 m (4362-5412 ft). It is endemic to Rush and Skull Valleys of Tooele County, Utah. Pohl's milkvetch **was not located along the revised portion of the LTC**. In 1998, the Pohl's milkvetch was located on the road to Hickman Knolls (Kass 1998).

3.2 *Cymopterus acaulis* var. *parvus*

Spring parsley **was not located in the project area**. It is found on sandy areas and sand dunes in salt desert shrub, sagebrush and pinyon-juniper communities. The 1998 and 1999 inventory did not locate any suitable habitat in the project area nor were there any previous locations documented in the herbarium search of the project area.

3.3 *Atriplex lentiformis*

The herbarium search indicated no previous locations in the project area. This species is listed as occurring in Washington County, Ut. and adjacent Mojave Desert regions (Welsh et al. 1993). It appears to be a warm desert species and the likelihood of finding it in the project area would be exceptional.

4.0 LITERATURE CITED

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