

Jennifer S. Haley
353 Gulfport Ct.
Las Vegas, NV 89128
May 1, 1990

Mr. Kent Turner
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, NV 89005

Dear Kent,

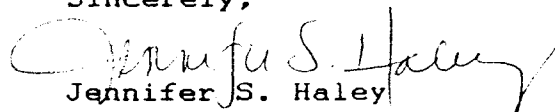
I completed a tortoise survey of the Zone of Influence adjacent to the proposed Government Wash Ramp project area on April 17, 1990. Methods used were as described in the Fish and Wildlife Service "Field Survey Protocol for Desert Tortoise" dated February 22, 1990. Transects were walked at approximately 10, 100, 200 and 400 yard intervals from, and parallel to, the edge of the project boundaries. All tortoise sign was searched for along these transects including live tortoises, shells, bones, scutes, scats, burrows, pellets, tracks, egg shell fragments, courtship rings, drinking sites, and mineral licks. All sign located was mapped on a USGS 7.5 minute map (Government Wash Quad.).

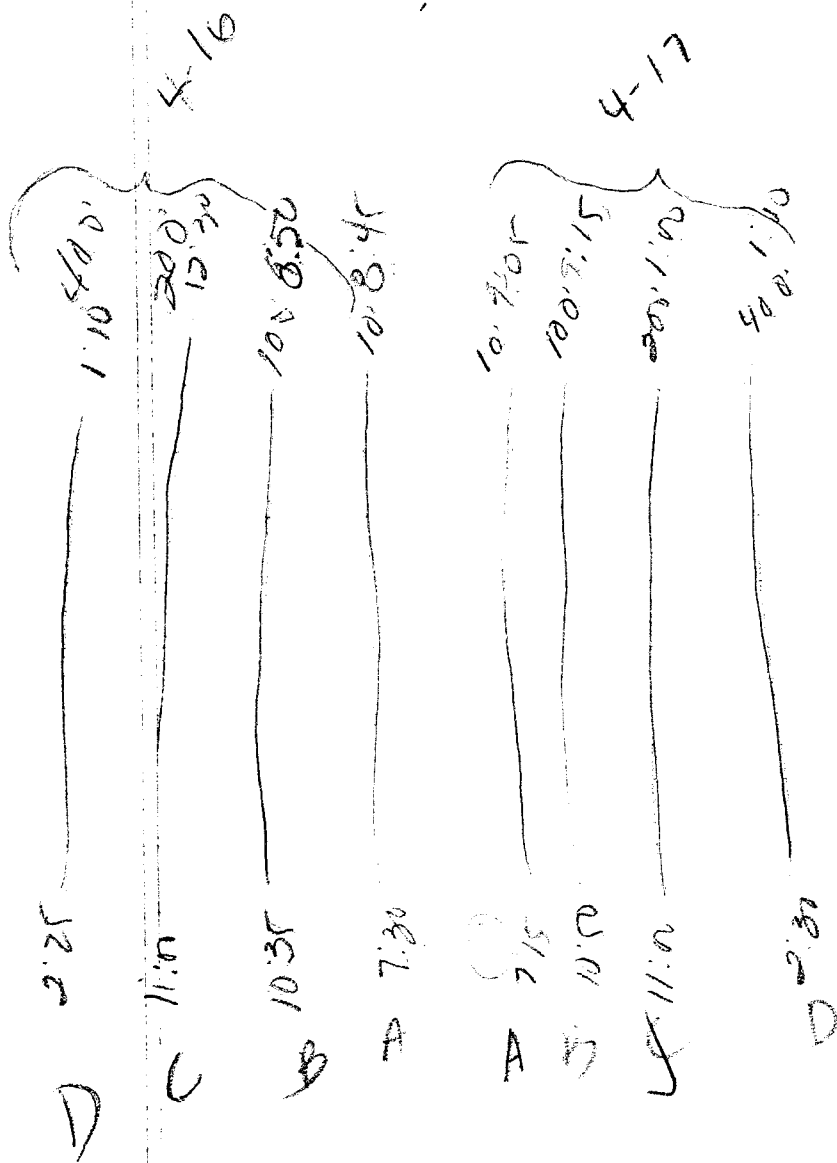
One tortoise was observed 200 yards from the west side of project boundary (see attached map). The tortoise was found outside of a caliche cave. He was engaged in head-bobbing facing the direction of the cave entrance. This behavior suggested that another tortoise may have been present inside the cave at the time of the survey. However, due to the depth of the cave, it was not possible to determine whether or not another animal was using this cover site. In the same vicinity two burrows were located and two relatively shallow caliche cover sites were observed (see attached data sheets). No other sign was noted along any of the other transects.

It is my opinion that the Zone of Influence has a very low tortoise density and that development activities for this project will have minimal impact on existing tortoise populations within this zone. However, since one tortoise was located during the survey, I recommend that the U.S. Fish and Wildlife Service be contacted to initiate Section 7 Consultation.

If I can be of any further assistance, please let me know.

Sincerely,


Jennifer S. Haley



Chromatograms in water / protein / tammarisk

Lepidum

Traces

Tamarisk the Lepum

Chromatograms in water

April 7

LAPD

TKDW

HKR

Dalton

LRPA

KLIN

COHE

Lepidum

Chromatograms

^{at 600 m}
Tortoise C-2
Male

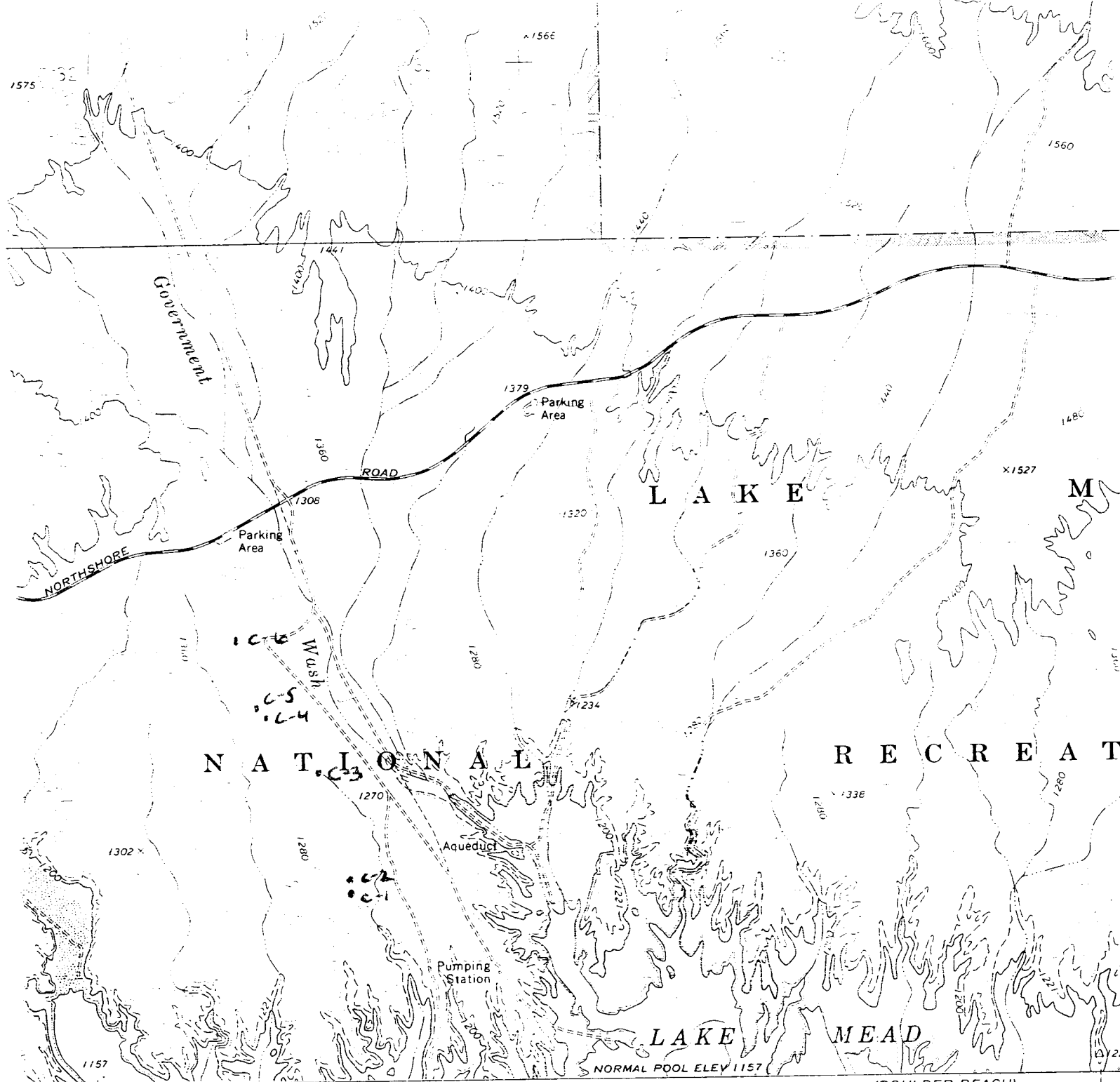
Lat. cave $\approx 28''$ wide $\approx 12''$ high
Soil cover ≈ 1 ft.

C-3 Burrow
 $\approx 12''$ wide Ht. $9''$
 $\approx 6''$ soil cover
in the side of a wash

C-4 Burrow $\approx 18''$ wide
soil $18''$ at mouth
Ht. $10''$

C-5 Lat. cave cover site (no one home)
 ≈ 25 m up wash from C-3
2 entrances - $20''$ wide $\times 9''$ high
 $25''$ wide $\times 6''$ high
soil cover ≈ 3 ft.

C-6? lat. cave cover site
 $12' \times 10''$
cave $20''$ one entrance



Geological Survey

1:250,000
1:250,000

datum
system, east zone
d ticks,

finished

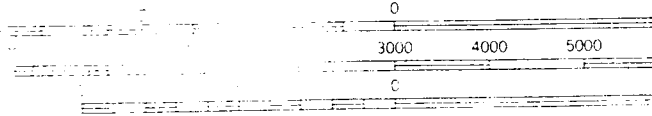
UTM GRID AND 1970 MAGNETIC NORTH-
DECLINATION AT CENTER OF SHEET

1"=17'
23 MILS

15"
267 MILS

(BOULDER BEACH)
3056 III SE

SCALE 1:24,000



CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225. OF
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE

Don't want T.S. man. Give
Don't want Launch Ramp project

P-000

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: Gov't Wash, Lawrence

Transect No.: A-1001 (Wyd 2000)
or proposed

Site Name: _____

Transect Location: _____

Topo. Quad Name: Gov't Wash

T 21S, R 64E, Sec. unassigned

Topo. Quad Scale: 7.5 minutes

$\frac{1}{4}$ Sec. _____, $\frac{1}{2}$ $\frac{1}{4}$ Sec. _____

State: NV

UTM Zone: _____

County: Clark

Northing: _____

Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: desert land adjacent to

Aspect: S

Slope (%) - maximum: _____
minimum: _____

Elevation (ft.) - maximum: 1320'
minimum: 1200'

Soils: desert pavement gravel

Vegetation - perennials: Cholepsis linearis
annuals: Tamaraix sp

Habitat Condition Class - Project area: _____

Adjacent area: 4

Adjacent Land Use: NRA

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: 4-16-90

Transect Width: 30 feet

Length: 1.5 miles

Survey Participant(s):

J. Holey

Wind Speed (class): 5-10

Cloud Cover (class): 2

Humidity (%): 0-10%

Rainfall (in.): none

Time (start): 7:30 am

Time (finish): 8:40 am

Air Temperature (°C):

1.5 m above ground: 65°F

1 cm above ground: _____

surface: _____

Air Temperature (°C):

1.5 m above ground: 70°F

1 cm above ground: _____

surface: _____

No sign

B-100-

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: Gunit Warm Launch Ramp Transect No.: B-100-15410 last of box 2
Site Name: same Transect Location:
Topo. Quad Name: _____ T _____, R _____, Sec. _____
Topo. Quad Scale: _____ $\frac{1}{4}$ Sec. _____, $\frac{1}{2}$ $\frac{1}{2}$ Sec. _____
State: _____ UTM Zone: _____
County: _____ Northing: _____
Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: dissected alluvial fan
Aspect: S
Slope (%) - maximum: _____ Elevation (ft.) - maximum: 1320'
minimum: _____ minimum: 1270'
Soils: light gray sand, clay, silt
Vegetation - perennials: Larrea divaricata Ferula dumosa
annuals: Carnegiea sp. Platystemon
Habitat Condition Class - Project area: _____
Adjacent area: 5
Adjacent Land Use: NRA

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: 4-16-96 Transect Width: 30 feet
Length: ~1.5 miles
Survey Participant(s): 14011
Wind Speed (class): 5-10
Cloud Cover (class): 7
Humidity (%): 0-100
Rainfall (in.): 1.00
Time (start): 8:00 Time (finish): 10:35
Air Temperature (°C):
1.5 m above ground: _____
1 cm above ground: 70°
surface: _____
Air Temperature (°C):
1.5 m above ground: _____
1 cm above ground: 75
surface: _____

No sign

C-2010

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: 6504 W. 22

Transect No.: C-2010 (2004)

Site Name: _____

Transect Location: _____

Topo. Quad Name: _____

T _____, R _____, Sec. _____

Topo. Quad Scale: _____

$\frac{1}{4}$ Sec. _____, $\frac{1}{2}$ $\frac{1}{2}$ Sec. _____

State: _____

UTM Zone: _____

County: _____

Northing: _____

Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: _____

Aspect: _____

Slope (%) - maximum: _____ Elevation (ft.) - maximum: _____

minimum: _____ minimum: _____

Soils: _____

Vegetation - perennials: _____

annuals: _____

Habitat Condition Class - Project area: _____

Adjacent area: _____

Adjacent Land Use: _____

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: _____

Transect Width: 30 feet

Length: _____

Survey Participant(s): _____

Wind Speed (class): _____

Cloud Cover (class): _____

Humidity (%): _____

Rainfall (in.): _____

Time (start): 11:00

Time (finish): 12:30

Air Temperature (°C): _____

Air Temperature (°C): _____

1.5 m above ground: 70°F

1.5 m above ground: 77°F

1 cm above ground: _____

1 cm above ground: _____

surface: _____

surface: _____

260 5130

D-1001

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: 6004 1100 1h Transect No.: D-1001 (400 yds)

Site Name: _____ Transect Location: _____
Topo. Quad Name: _____ T _____, R _____, Sec. _____
Topo. Quad Scale: _____ $\frac{1}{4}$ Sec. _____, $\frac{1}{2}$ $\frac{1}{2}$ Sec. _____
State: _____ UTM Zone: _____
County: _____ Northing: _____
Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: _____

Aspect: _____

Slope (%) - maximum: _____ Elevation (ft.) - maximum: _____
minimum: _____ minimum: _____

Soils: _____

Vegetation - perennials: _____
annuals: _____

Habitat Condition Class - Project area: _____
Adjacent area: _____

Adjacent Land Use: _____

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: _____ Transect Width: 30 feet
Length: _____

Survey Participant(s): _____
_____ Wind Speed (class): _____
_____ Cloud Cover (class): _____
_____ Humidity (%): _____
_____ Rainfall (in.): _____

Time (start): 1:10 pm Time (finish): 2:25 pm

Air Temperature (°C): _____
1.5 m above ground: 72° 1.5 m above ground: 72°
1 cm above ground: _____ 1 cm above ground: _____
surface: _____ surface: _____

110 sign

A - West

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: 6004 West Transect No.: A - West (100 yds west of project)
Launch ramp
Site Name: _____ Transect Location: _____
Topo. Quad Name: 6004 West T 21S, R 64E, Sec. unimproved
Topo. Quad Scale: 7.5 min $\frac{1}{4}$ Sec. _____, $\frac{1}{4}$ $\frac{1}{4}$ Sec. _____
State: NV UTM Zone: _____
County: Clark Northing: _____
Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: dissected alluvial fan

Aspect: S

Slope (%) - maximum: _____ Elevation (ft.) - maximum: 1300'
minimum: _____ minimum: 1200'

Soils: desert pavement, Silt & Sand, alluvial

Vegetation - perennials: Larrea divaricata Flourensia dumosa
annuals: Camarassoma brevipes Plantago vulgaris

Habitat Condition Class - Project area: _____
Adjacent area: 4-5

Adjacent Land Use: NRA

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: 4-17-90 Transect Width: 30 feet
Length: ~1.5 miles

Survey Participant(s): J. Harty

Wind Speed (class): _____
Cloud Cover (class): _____
Humidity (%): _____
Rainfall (in.): _____

Time (start): 7:15 am Time (finish): 9:05 am

Air Temperature ('C):
1.5 m above ground: 68°
1 cm above ground: _____
surface: _____
Air Temperature ('C):
1.5 m above ground: 73°
1 cm above ground: _____
surface: _____

No sign

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: Box 1 West of Highway 150 Transect No.: B - West 150 ft
west of project
Site Name: _____ Transect Location: _____
Topo. Quad Name: _____ T _____, R _____, Sec. _____
Topo. Quad Scale: _____ $\frac{1}{4}$ Sec. _____, $\frac{1}{4}$ $\frac{1}{4}$ Sec. _____
State: _____ UTM Zone: _____
County: _____ Northing: _____
Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: _____
Aspect: _____
Slope (%) - maximum: _____ Elevation (ft.) - maximum: _____
minimum: _____ minimum: _____
Soils: _____
Vegetation - perennials: _____
annuals: _____
Habitat Condition Class - Project area: _____
Adjacent area: _____
Adjacent Land Use: _____

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: _____ Transect Width: 30 feet
Length: _____
Survey Participant(s): _____
Wind Speed (class): _____
Cloud Cover (class): _____
Humidity (%): _____
Rainfall (in.): _____
Time (start): 9:15 am Time (finish): 10:00
Air Temperature ('C): _____
1.5 m above ground: _____
1 cm above ground: 73
surface: _____
Air Temperature ('C): _____
1.5 m above ground: _____
1 cm above ground: 78
surface: _____

No sign

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: Gov't Wash Lagoon Transect No: C-West 200yds - west of proposed project
Site Name: Brump Transect Location: T 21 S, R 64 E, Sec. unsurveyed
Topo. Quad Name: Gov't Wash $\frac{1}{4}$ Sec. , $\frac{1}{2}$ $\frac{1}{2}$ Sec.
Topo. Quad Scale: 7.5 minute UTM Zone:
State: NU Northing:
County: Clark Easting:

Section II: GENERAL SITE DESCRIPTION

Land Form: dissorted alluvial fans
Aspect: S
Slope (%) - maximum: Elevation (ft.) - maximum: ~1320'
minimum: minimum: ~1200'
Soils: desert pavement, silt & sand, desert
Vegetation - perennials: Larrea divaricata, Frazarrea dumosa
annuals: Cercis sp, Plantago latifolia
Habitat Condition Class - Project area:
Adjacent area: 4-5
Adjacent Land Use: National Recreation Area

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: 4-17-90 Transect Width: 30 feet
Length: ~1.5 miles
Survey Participant(s): Jennifer Haley Wind Speed (class): 5-10 mph
Cloud Cover (class): 2
Humidity (%): 6-10%
Rainfall (in.): none
Time (start): 11:00 am Time (finish): 1:00 pm
Air Temperature ('C): Air Temperature ('C):
1.5 m above ground: 80°F 1.5 m above ground: 85°F
1 cm above ground: 1 cm above ground:
surface: surface:

C. 100. 24

Project Name: Govt Wash ramp

Page 2

Transect No.: C (200' E West of
Date: 4-17-90 Proposed
Project

Sign Type: live tortoise, carcass, bone, burrow, pallet, scat (determine class), egg shell fragments, tracks (include location, width, sex), drinking sites, courtship rings, indication of a fight, Neotoma middens, etc. Indicate which individual sign have been combined for one adjusted sign.

1. C1 - turtle
2. C2 - tortoise
3. C3 - butterfly
4. C4 - butterfly
5. C5 - Caliche cave (cover site)
6. C6 - Caliche cover site
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

Sign No.	Location	Sex	Est. Size	Live Activity	Tortoise Condition	URDS	Carcass Aging Class
----------	----------	-----	-----------	---------------	--------------------	------	---------------------

No.	Location	Sex	Age	Measurements	Remarks
C1	burrow openings	m	11" mch	head bobbin	good no

C. W. 30

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Project Name: Gov't Wash ramp Transect No.: 2 (200 yds west of)
Date: 4-17-90 ^{-west} prepared by proj 17

Section VI: BURROW AND PALLET INFORMATION

Sign No.	Location	Condition	Length	Width	Height	Soil Cover at Entry	Other Sign
C1	along wash	possible occupancy	?	14"	8"	8"	no sign
C3	" "	"	?	12"	9"	6"	"
C4	" "	"	?	18"	10"	13"	"
C5	Caliche cave	un-occupied	2'	23"	7"	3'	"
C6	" "	"	18"	12"	10"	20"	"
C2	Caliche cave	occupied	?	28"	12"	1'	tortoise

Section VI: Neotoma MIDDENS INFORMATION

Sign No.	Contents of Midden (number of tortoise bones, size of bones, eggshells, etc.)

Section VII: SURVEY SUMMARY

Total Numbers of Tortoise Sign Observed

Live Tortoises	Carcasses	Burrows	Pallets	Scat	Egg Shell Fragments
1		4	2		
Tracks	Drinking Sites	Courtship Rings	Other	Neotoma Middens	Total Adjusted Sign

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Page 4

Project Name: _____ Transect No.: _____
Date: _____

Section VII: COMMENTS - about the transect in general or specifics about
individual tortoises or sign

DESERT TORTOISE SURVEY FORM
FOR DISTRIBUTION/ABUNDANCE AND PRECONSTRUCTION SURVEYS

Section I: PROJECT AND TRANSECT LOCATION

Project Name: Spz West / ranch Transect No.: D-West (400 yds)
ranch west of project
Site Name: _____ Transect Location: _____
Topo. Quad Name: _____ T _____, R _____, Sec. _____
Topo. Quad Scale: _____ $\frac{1}{4}$ Sec. _____, $\frac{1}{4}$ $\frac{1}{4}$ Sec. _____
State: _____ UTM Zone: _____
County: _____ Northing: _____
Easting: _____

Section II: GENERAL SITE DESCRIPTION

Land Form: _____
Aspect: _____
Slope (%) - maximum: _____ Elevation (ft.) - maximum: _____
minimum: _____ minimum: _____
Soils: _____
Vegetation - perennials: _____
annuals: _____
Habitat Condition Class - Project area: _____
Adjacent area: _____
Adjacent Land Use: _____

Section III: SPECIFIC TRANSECT INFORMATION

Survey Date: _____ Transect Width: 30 feet
Length: _____
Survey Participant(s): _____
_____ Wind Speed (class): _____
_____ Cloud Cover (class): _____
_____ Humidity (%): _____
_____ Rainfall (in.): _____
Time (start): 1:00 pm Time (finish): 7:30 pm
Air Temperature ('C): _____
1.5 m above ground: 85' Air Temperature ('C): _____
1 cm above ground: _____ 1.5 m above ground: 87'
surface: _____ surface: _____

No Spz