

**BIOTIC ASSESSMENT
FOR A PROPOSED DEVELOPMENT PROJECT
(APN 510-01-06 & 07) IN RIDGECREST, CALIFORNIA**

Prepared for:

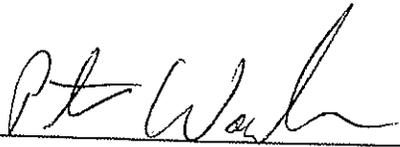
**Taft Corporation
4625 Cocina Ln.
Palmdale, CA 93551**

Prepared By:

**Kiva Biological Consulting
P.O. Box 1210
Inyokern, CA 93527**

February 16, 2007

Peter Woodman



Date Feb. 16, 2007

The findings of this report are valid through February 16, 2008.

INTRODUCTION

This report provides an update to the results of an assessment of the federal and state listed (threatened) desert tortoise (*Gopherus agassizii*) and a Cumulative Human Impact Evaluation (CHIE) for the state listed (threatened) Mohave ground squirrel (*Spermophilus mohavensis*) on approximately 40.6 acres in Kern County, California (Figure 1). Taft Corporation has proposed to construct single-family homes on the site. This purpose of this biotic survey was threefold: to determine the presence/ absence of desert tortoises and potential impacts to their habitat, amount of existing human impacts to the habitat on the proposed project site for Mohave ground squirrel, and the presence or absence of other sensitive species.

Studies have shown that tortoise habitat is shrinking in California and Nevada and tortoise densities are declining. On August 4, 1989 in response to the declines in tortoise densities, the U.S. Fish and Wildlife Service (USFWS) determined the desert tortoise to be endangered under an emergency rule (as authorized under the Endangered Species Act of 1979, as amended). USFWS published a proposed rule in the Federal Register on October 13, 1989 that would provide long-term endangered status. On April 2, 1990 the desert tortoise was permanently listed as a Federally Threatened species. On June 22, 1989 the California Fish and Game Commission voted to list the desert tortoise as threatened under the California Endangered Species Act of 1970. The tortoise is also listed as a U. S. Bureau of Land Management (BLM) sensitive species. The USFWS and California Department of Fish and Game (CDFG) requires that a survey be conducted to determine the presence or absence of desert tortoises prior to habitat alteration.

The project site lies within the known range of Mohave ground squirrels (MGS), a State-listed threatened species (California Department of Fish and Game 1997). This species has a relatively limited range, occurring in southwestern Inyo, eastern Kern, northwestern San Bernardino, and northeastern Los Angeles counties (Gustafson 1993). If ground squirrel burrows occur on the site, then the project proponent has the option of assuming the existence of Mohave ground squirrels on the site or electing to trap for Mohave ground squirrels to determine its presence or absence on the site next spring. A CHIE was performed on the site in the event the client concedes presence of Mohave ground squirrels. The CHIE is used to assess the kinds and amounts of human impacts on historic and current Mohave ground squirrel habitat that are present on the site. This evaluation provides the necessary information for California Department of Fish and Game (CDFG) to determine mitigation for potential loss of Mohave ground squirrel habitat.

The site is also within the known range of two (CDFG 1998) sensitive species of birds that may be residents: Burrowing Owl (*Athene cunicularia*) and LeConte's Thrasher (*Toxostoma lecontei*).

PROJECT DESCRIPTION

Taft Corporation has proposed to develop Assessors Map No 510-01-06 and 07. The site is in the east 1/2 of the northwest 1/4 of Section 16 in Township 27 South, Range 40 East (Figure 1). Taft Corporation has proposed to construct single-family homes on the property. The property is approximately 40.6 acres.

METHODS

There are two species of concern in Ridgecrest: the desert tortoise and the Mohave ground squirrel. The desert tortoise can be identified either by finding live tortoises and/or diagnostic tortoise sign (i.e. burrows, scat, carcasses, and/or tracks). Most recommendations in USFWS protocols for desert tortoise surveys (1992) were followed for both surveys. Transects, spaced at 10 meter intervals, were walked throughout the approximately 40.6 acre site. Both surveys were conducted

outside of the USFWS window of March 1 to June 1. Much sign (scats and burrows) was produced throughout the spring, summer, and fall activity periods in both 2005 and 2006. Anytime after June 2005 or 2006 would be appropriate to conduct surveys as amount of tortoise sign would be high. There has been very little rain since October 2006 thus tortoise sign probably deteriorated very little between October 2006 and the surveys conducted in February 2007. Transects were walked in the adjacent Zone of Influence at distances of 100, 300, 600, 1200, and 2400 feet from and parallel to the east and south edges of the site during both surveys. Transects were walked in the Zone of Influence at distances of 100 and 300 feet from and parallel to the north and west of the project site. Transects were not walked beyond 300 feet due to the presence of existing developments (homes).

Active ground squirrel burrows and scat were also searched for during the protocol tortoise survey. A burrow was considered active only if it was in good condition (i.e., it was not collapsed). The CHIE was conducted by Woodman following standard CDFG protocol as described at the 24 September 1992 CHIE Workshop in Barstow, California. Woodman was an instructor at both the 1991 and 1992 CDFG workshops on CHIE methodology. The CHIE assesses the kinds and amounts of human impacts on historic and current Mohave ground squirrel habitat present on the site. These impacts include off highway vehicle (OHV) use, roads through area, horse and foot traffic, dog activity, urbanization, garbage dumping, mining activity, utilities, grazing, and shrub disturbance. Impacts were mapped and photographs were taken of the project site. After the survey, the CHIE form was completed. A value from 0 (no impact) to 4 (heavy impact) was assigned for each of the ten impact categories, and then a Cumulative Impact Rating (CIR) was calculated. The CIR is calculated by adding the five highest disturbance factors and multiplying by 2. Hence, the CIR value is a number between 0 and 40, with 0 representing no disturbance and 40 representing the highest possible disturbance. The CIR value and other data included in this report provide information for CDFG to determine if it is necessary to compensate for Mohave ground squirrel habitat that will be lost as a result of the proposed project.

During the tortoise survey and the CHIE, a plant list was compiled and other vertebrate species were noted (Appendices 1 and 2). Peter Woodman, Liz Smith, and Erich Green conducted the first field survey on November 23, 2005. Peter Woodman conducted the second field survey February 11, 2007.

ENVIRONMENTAL SETTING

The site is at an elevation of 2,280 feet. The habitat was creosote bush scrub. The dominant perennial species were *Larrea tridentata* (creosote), *Ambrosia dumosa* (white bursage), *Senna armata* (desert senna), and *Hymenoclea salsola* (cheesebush). Common annuals included *Erodium cicutarium* (filaree), *Schismus barbatus* (split grass), and *Amsinkia tessellata* (fiddleneck). Soils were primarily sandy loam with some pebbles and cobble. Drainage is through several small washlets and by sheet flooding. The slope is approximately three to five percent and the aspect is to the north.

EXISTING IMPACTS

The proposed project site is located near the south-central border of the City of Ridgecrest. Homes, on what appear to be one to five acre lots, are 1,200 feet to the west and 660 feet north of the property (Figure 2). Much of the land to the east of the site is currently in the permitting process for subdivision and development. The US Bureau of Land Management manages lands 660 feet south of the site.

Norma and Sierra View Streets border the east and west sides of the site, respectively. Both of the roads are dirt two-tracks, nether of which have been graded. Usage on each appears to be primarily

from off-road vehicles (ORV's). Springer, Kendall, and Downs are all graded dirt roads that are to the north, south, and west of the site. Springer and Kendall are 600 feet and Downs is 1200 feet from the site. Downs provides access to approximately 40 homes located between Downs and China Lake Blvd., approximately 0.5 miles west. Kendall is used as a route from China Lake Blvd. to College Heights Blvd-one mile east. Downs is the most heavily traveled route and it is used by fewer than 100 vehicles per day. Walkers, horses, and ORV's use all of the roads.

The site itself has been lightly impacted by a variety of human uses (Figures 2 thru 6). Several off-road vehicle (ORV) trails and many tracks were on the site. The area south of the site is used by ORV's, primarily as an access route to the Rademacher Hills, approximately two miles south. There were two old dumps and a moderate amount of scattered trash. Both scat and diggings from domestic dogs were common throughout the site. Both tracks and dropping of horses were on the site.

RESULTS AND DISCUSSION

No live desert tortoises or desert tortoise sign were observed on the property during either survey (Appendix 2). The proposed project site is not within Critical Habitat for the desert tortoise nor in a Desert Wildlife Management Area. The region is designated as Category 3 habitat for the desert tortoise by the Bureau of Land Management (1988). This means that desert tortoises may or may not be present, that conflicts are variable in extent and intensity, and there is no special management emphasis. The site is surrounded by existing developments so development off the parcel would be inbuilding and would not be expanding the limits of the developed city. However, given the long-term impacts to the area I do not believe this region currently supports a viable desert tortoise population.

No Mohave ground squirrels were observed during the surveys. MGS have been found in the vicinity of the project site. In the early 1990's MGS were trapped approximately 1.5 miles southeast of the site, at Cerro Coso Community College by Dr. Pat Brown-Berry. The current status of the population is unknown because no trapping has been conducted since that time. The CHIE ranking for the site was the same for both surveys, 28 of a maximum of 40 (Appendix 3). A ranking of 28 indicates that the site is moderately impacted by human use. Most of the shrubs were still intact and soils have been moderately disturbed. The primary human impacts were from adjacent urbanization, roads, off-road vehicle use, and dogs.

A CDFG trapping program was not conducted during this survey, thus the status of Mohave ground squirrels is unknown. A CDFG-protocol trapping program would determine the presence/absence of MGS. The trapping program is conducted during the spring activity period for three trapping periods, each period being of five-days duration.

When assessing the site for permitting several factors should be taken into consideration: the project proposed would be within the limits of the City of Ridgecrest; although the site is near lands managed by the Bureau of Land Management homes are 1,200 feet from the western border and 600 feet to the north of the site; the land has been impacted for many years by a variety of human impacts; the entire area is in the process of being subdivided and developed due to the potential influx of jobs due to the latest Base Realignment and Closing (BRAC); and the property is no longer and will not be part of a larger, functional ecosystem.

No other sensitive vertebrate species or their sign were observed on or near the project site. However, the site is within the range of two other species of special concern, Burrowing Owl and LeConte's Thrasher. No sign of Burrowing Owls was found. Owls were not seen or heard nor was their diagnostic sign (pellets, tracks, or feathers at a burrow). No burrows large enough to accommodate an owl were found. By walking transects spaced at 10 meter intervals, one would

expect owls to flush if they were present on site. LeConte's Thrashers were also not seen or heard, even though I was on the job site for several hours.

No additional sensitive species were reported on the California Natural Diversity Data Base records search.

This report is valid until February 16, 2008.

RECOMMENDATIONS

1. Because neither desert tortoises nor sign of desert tortoises were found on the property, no additional recommendations are made to mitigate for desert tortoise.
2. Although a trapping program was not conducted to verify presence /absence of Mohave ground squirrels the CHIE rating was moderate, 28 out of 40 points. Because of the location of the proposed development and its lack of potential as long-term habitat, no recommendations to mitigate for Mohave ground squirrels are made.
3. Common ravens and coyotes are known predators of the desert tortoises. Both species are attracted to areas with litter and discarded food items. Littering is illegal and cannot be tolerated.

LITERATURE CITED

- California Department of Fish and Game, Natural Heritage Division. 2000. List of Special Animals. Sacramento, California.
- Hickman, J. C. (ed.). 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley, California.
- United States Dept. of the Interior, Bureau of Land Management. 1988. Desert tortoise habitat management on the public lands, a rangewide plan. Washington, D.C. 23 pp.

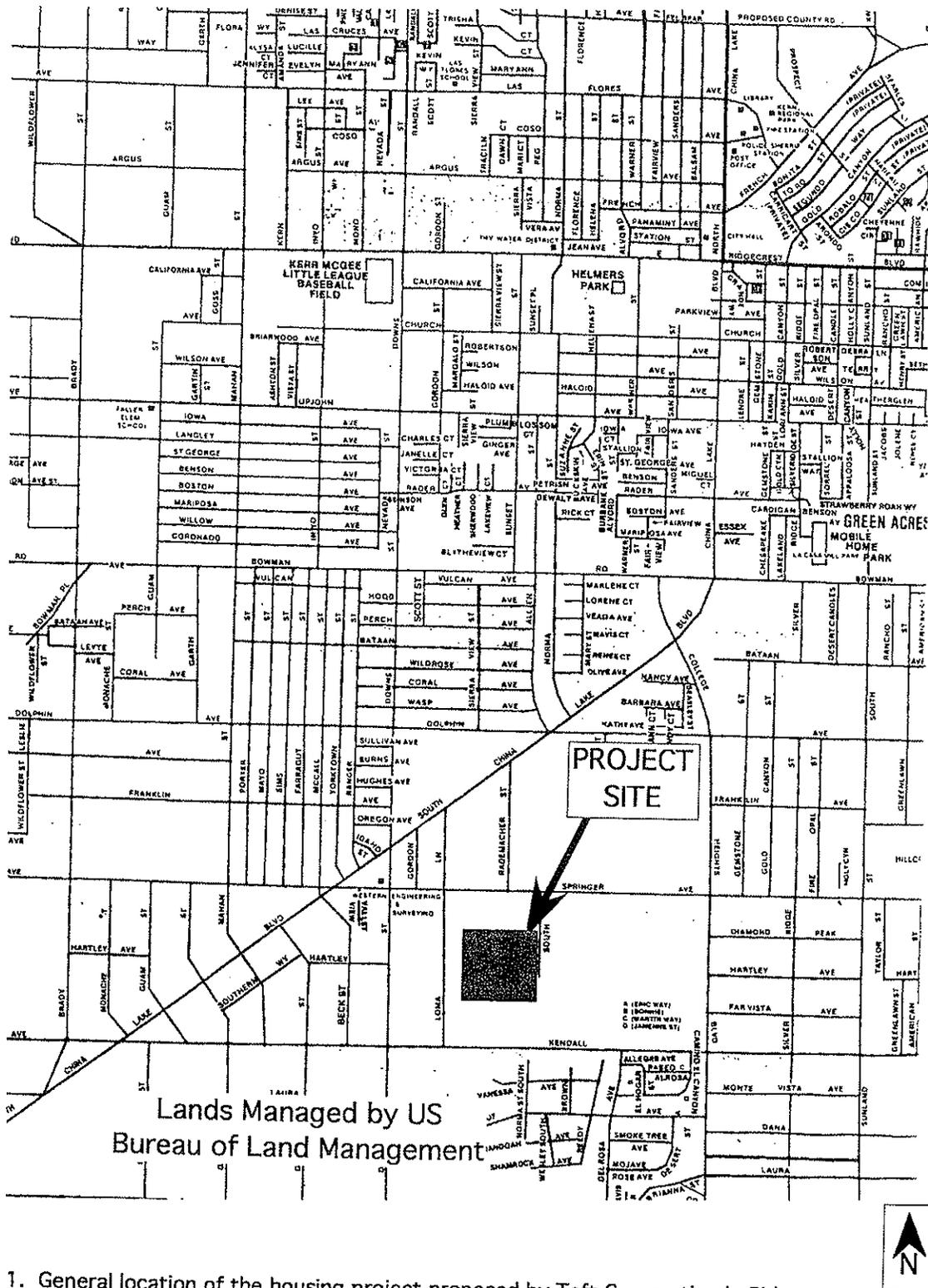


Figure 1. General location of the housing project proposed by Taft Corporation in Ridgecrest, Kern Co., California.

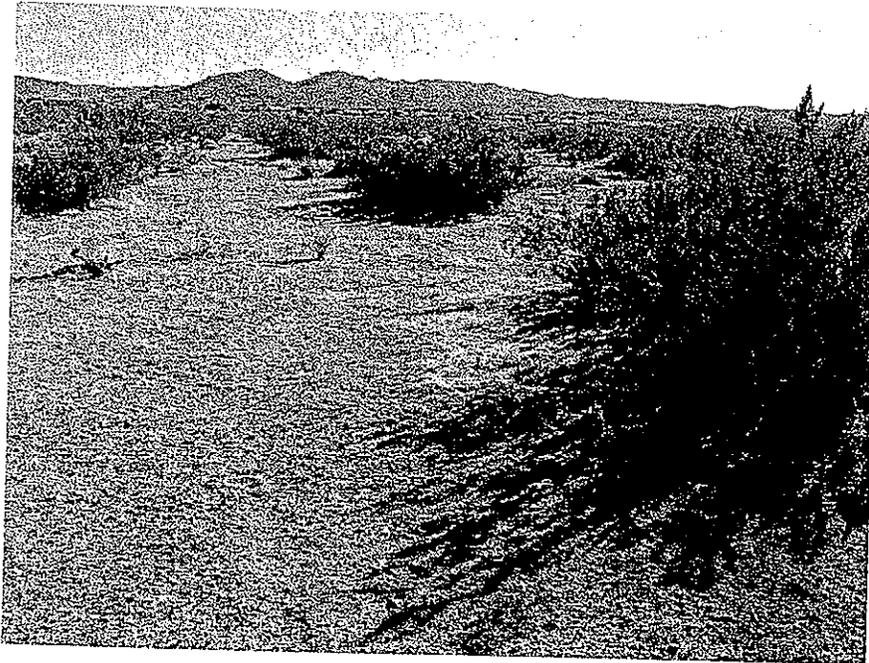


Figure 3. View of habitat in the eastern portion of the site looking at homes to the southeast near the college in Ridgecrest, Kern County, California. Looking from northwest to southeast.

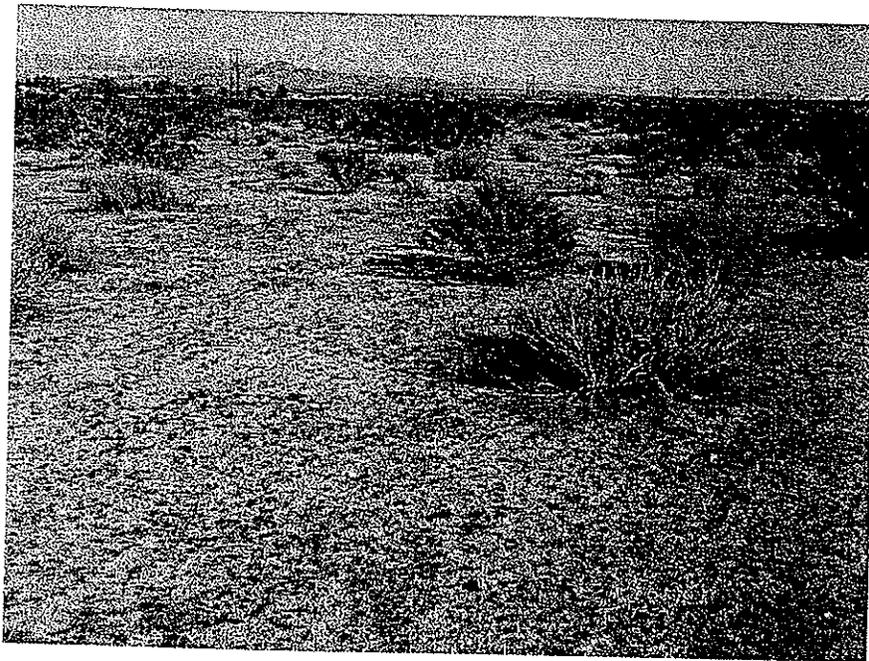


Figure 4. View of habitat in the central portion of the site looking towards homes and powerlines northeast of the site, in Ridgecrest, Kern County, California. Looking from southwest to northeast.

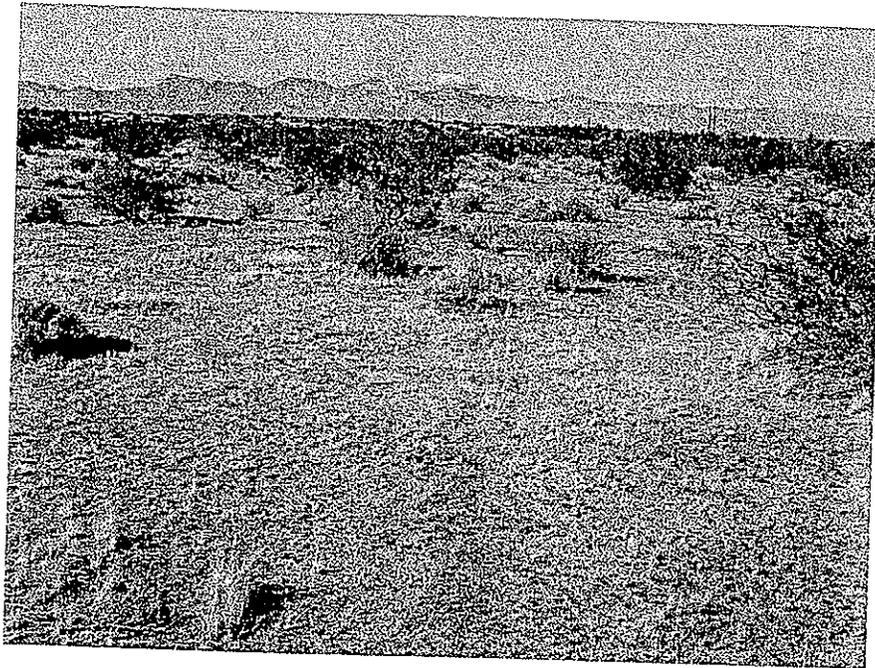


Figure 5. View from eastern portion of the site looking towards homes to northwest in Ridgecrest, Kern County, California. Looking from southeast to northwest.

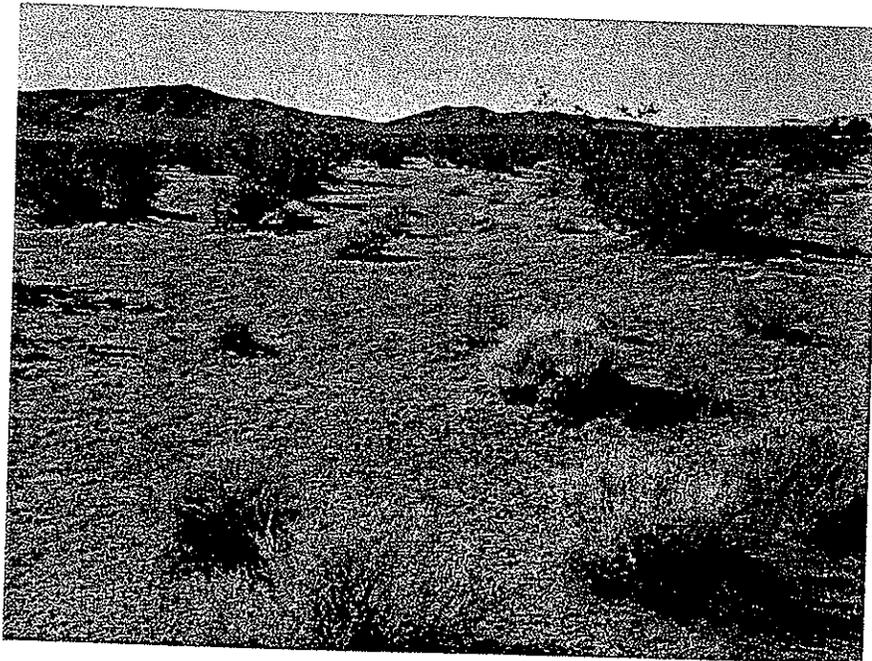


Figure 6. View from the eastern portion of the project site looking at brush piles and homes to the north in Ridgecrest, Kern County, California. Looking from south to north.

APPENDIX 1

LIST OF PLANT SPECIES
OBSERVED ON A PROPOSED DEVELOPMENT
SITE IN RIDGECREST, CALIFORNIA

PLANT SPECIES LIST

Taft Corporation: Housing Development (APN No. 510-01-06&07)
T27S, R40E, Section 11, Kern Co., CA

Compiled by P. Woodman, November 23, 2005 & February 11, 2007

ASTERACEAE Acamptopappus sphaerocephalus Ambrosia dumosa Hymenoclea salsola	Composite Family Goldenhead White bursage Cheesebush	Low, rounded shrub, occasional on site Perennial subshrub, common on site Colonizing perennial, a few on site
BORAGINACEAE Amsinkia tessellata Chorizanthe brevicornu Plagiobothrys arizonicus	Borage Family Fiddleneck Spiny-herb Popcorn flower	Weedy annual, common on site Native annual, rare on site Native annual, common on site
BRASSICACEAE Guillenia lasiophylla Lepidium lasiophyllum	Mustard Family	Erect native annual, occasional under shrubs Annual, uncommon under shrubs
CACTACEAE Cylindropuntia echinocarpa Opuntia basilaris	Cactus Family Silver cholla Beavertail	Erect succulent, a few on site Decumbent succulent, a few on site
CHENOPODIACEA Grayia spinosa	Goosefoot Family Spiny hop-sage	Perennial shrub, one on the site
EUPHOBIAEAE Eremocarpus setigerus	Spurge Family Turkey mullien	Weedy annual, occasional on site
FABACEAE Psoralea fremontii Senna armata	Pea Family Indigo bush Desert senna	Native shrub, a few on site Perennial shrub, common on site
GERANIACEAE Erodium cicutarium	Geranium Family Storksbill, Filaree	Weedy annual, abundant on the site
HYDROPHYLLACEAE Phacelia cf. tanacetifolia	Waterleaf Family Lacy phacelia	Erect annual, common under creosote
LAMIACEAE Salvia carduacea	Mint Family Thistle-sage	Erect, native annual, a few on the site
ONAGRACEAE Camissonia boothii var. decorticans	Primrose Family Bottle washer	Annual, occasional on site
POACEAE Bromus tectorum Schismus barbatus	Grass Family Cheatgrass Split grass	Weedy exotic, annual, uncommon under shrubs Low exotic annual, abundant throughout the site
POLYGONACEAE Eriogonum inflatum	Buckwheat Family Desert trumpet	Herbaceous perennial, uncommon on site
SOLANACEAE Lycium andersonii	Nightshade Family Anderson's thornbush	Native shrub, a few on the site
ZYGOPHYLLACEAE Larrea tridentata	Caltrop Family Creosote	Native shrub, a few on site

APPENDIX 2

LIST OF VERTEBRATE SPECIES
OBSERVED ON A PROPOSED DEVELOPMENT
SITE IN RIDGECREST, CALIFORNIA

VERTEBRATE SPECIES LIST

Taft Corporation: Housing Development (APN No. 510-01-06&07)

T27S, R40E, Section 10, Kern Co., CA

Compiled by P. Woodman, November 23, 2005 & February 11, 2007

CLASS REPTILIA

FAMILY: IGUANADAEE

Uta stansburiana Side-blotched lizard

CLASS AVES

FAMILY: COLUMBIDAE

Zenaida macroura Mourning dove

FAMILY: ALAUDIDAE

Eremophila alpestris Horned lark

FAMILY: FRINGILLIDAE

Carpodacus mexicanus House finch

CLASS MAMMALIA

FAMILY LEPORIDAE

Lepus californicus Black-tailed hare
Sylvilagus auduboni Desert cottontail

FAMILY: GEOMYIDAE

Thomomys bottae Botta pocket gopher

FAMILY: CANIDAE

Canis familiaris Domestic dog (scat, diggings, and tracks)
Canis latrans Coyote (scat)

APPENDIX 3

DESERT TORTOISE SURVEY FORM

FOR THE U. S.

FISH AND WILDLIFE SERVICE

January 1992

(place a 4 X 6 photograph showing the area where the transect was conducted)

This form should be completed for those transects that contain one or more desert tortoise sign. After the project site and Zone of Influence have been surveyed for tortoise sign, the results from the transect forms should be compiled on a summary form.

If no tortoise sign occurs on the project site or Zone of Influence, the summary form should be completed. Please fill in all sections on the top 2/3 of the page of the summary form.

H/O/Y
 Date Feb 11 2007
 Transect No. _____
 State CA
 County Kern
 City Ridgecrest
 Recorder Pete Woodman
 Address PDB1210 Tayo Kern CA
 Project Name T&T Corp.
 Type of Project Housing Subdivision
 Quad Name Ridgecrest
 Scale 15'
 Site Name _____
 T 27S R 40E sec 16
 1/4 sec NW 1/4 sec E
 UTM Zone 11
 Northing _____
 Easting _____
 Parcel No. 510-01-06907

DESERT TORTOISE HANDBOOK 1992:
 FORM FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS

Project Site Zone of Influence _____ ft from Project Site
 Transect Length: 30 ft Width: 30 ft Other _____ ft Time _____
 Weather: Airtemp at: 5 cm 21 °C Surface 24 °C Cloud cover 5 %
 Rainfall 0 in Wind speed 0-5 Rainfall in last 30 days 0 in
 Land Form (e.g., mesa, bajada, wash) bajada
 Slope: high 3 low 3 Aspect N Elevation 2280 ft
 Soils _____
 Vegetation: dominant perennials Larrea tridentata, Ambrosia dumosa, Sonora arnata
 dominant annuals Schismus sp., Erodium cicutarium, Amisinkia tessellata
 Adjacent Land Use: up to 1 mi Housing; rural, BLM lands via 1/2 mile south-
 Soils same
 Vegetation same

TOTAL NUMBER OF

Corrected Sign	Live Tortoises Adult/Juv.		Shelter Sites Pallet/Burrow/Den Active/Inactive		Scats ²	Shell Remains ³		
	A=	J=	A=	J=		Unk=	A=	J=
Tracks								
Eggshell Fragments								
Drinking Sites								
Courtship Rings								
Other								
						Neotoma w/sign		Middens w/o sign

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/Rifle Shells	Blading	Ravens	Other
Yes	Yes	Yes	Yes	No	-	-	-	-

APPENDIX 4

CUMULATIVE HUMAN IMPACT EVALUATION
FOR MOHAVE GROUND SQUIRREL
ON PROPOSED DEVELOPMENT
SITE IN RIDGECREST, CALIFORNIA

CUMULATIVE HUMAN IMPACT EVALUATION FORM

PART I

PROJECT ID# Taft Corp DATE: Feb 11, 2007
 EVALUATION CONDUCTED BY: Peter Woodman
 PHONE NUMBER: (760) 377 3466 TRAINED BY: Debbie Clark
 LOCATION: T 27 (S)N; R 40 (W)W; E 1/2 of NW 1/4 SEC 16 SITE: _____
 QUAD MAP/SERIES: Ridgecrest 7.5" 15" ✓
 ACREAGE OF PROJECT: 40.6 TOTAL ACREAGE SURVEYED: 40.6
 CIR OF PROJECT AREA: 28 CIR OF TOTAL ACREAGE: 28

Acreeage of agriculture field (if present on parcel):
 =====
 PART II

LAND USE IMPACTS (0 = none, 4 = heavily impacted):

	COMMENTS	RATING
1.	OHV use _____	: 3
2.	Roads through area _____	: 2
3.	Horse or foot traffic _____	: 3
4.	Dog activity _____	: 3
5.	Urbanization _____	: 3
6.	Garbage Dumping _____	: 2
7.	Mining activity _____	: 0
8.	Utilities _____	: 1
9.	Grazing _____	: 0
10.	Shrub disturbance _____	: 2

Add the five highest rated disturbances and multiply by 2. Enter in Part I.

COMMENTS:

PART III

GENERAL HABITAT DESCRIPTION

1. Shrub coverage estimate:
 - A. acres of dense shrub coverage: 5
average height of creosote: 3.5 ft., other shrubs: 1.5 ft.
 - B. acres of moderate shrub coverage: 30
average height of creosote: 3 ft., other shrubs: 1.5 ft.
 - C. acres of sparse shrub coverage: 5
average height of creosote: 3 ft., other shrubs: 1.5 ft.
2. Shrub species diversity: > or = 6 /; 3-5 _____; 1-2 _____.
3. Presence of annuals: A _____; B /; C _____.
4. Presence of perennial grasses: A _____; B /; C _____.
5. Presence of desert pavement: (estimate % coverage) none.
6. Soils description: sandy loam, some gravel & cobble & pebbles
7. Percent rocks and boulders present: (describe) none
8. Presence of washes: washlets Periodic flooding: sheet
9. Slope/Aspect: @ 3% North
10. Elevation: 2280

PART IV

OTHER FACTORS OF CONSIDERATION

1. Type and name of grazing allotment: none
perennial - ephemeral -
Scat Class (1 - 5): -
2. Proximity to known MGS populations: (be specific; list Data Base records) 1 mile - Colio Coso Community College
3. Landowner: Taft Corp.
4. Type of County Zoning: _____ Proposed Changes to Zoning? -