



October 21, 2008

U.S. Environmental Protection Agency, Region IX
Air Program Division
Attention: Mr. Gerardo Rios
75 Hawthorne
San Francisco, CA 94105

Re: San Gabriel Generating Station
Delhi Sands Flower-loving Fly Survey Report

DOCKET
07-AFC-2

DATE OCT 21 2008

RECD. OCT 22 2008

Dear Mr. Rios:

Enclosed is the report summarizing the second year of focused surveys for the federally endangered Delhi Sands Flower-loving Fly in support of the proposed San Gabriel Generating Station Project in Rancho Cucamonga, California.

We have transmitted a copy of this report to Mr. Eric Porter at the United States Fish and Wildlife Service in Carlsbad, California.

Yours very truly,

URS CORPORATION

Anne Connell
Deputy Project Manager

Enclosure

cc:

Eric Porter – USFWS
Nancy Ferguson – USFWS
Dick Anderson – California Energy Commission
Robert Lawhn – Reliant Energy
Bill Baker – Reliant Energy
David Kisner – URS Corporation

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SAN GABRIEL GENERATING STATION PROJECT SITE

Focused Survey for the Delhi Sands Flower-loving Fly

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TE-006559-4

September 30, 2008

SAN GABRIEL GENERATING STATION

Focused Survey for the Delhi Sands Flower-loving Fly

September 30, 2008

Introduction

This report presents the results of a focused survey for the Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*; DSFLF) on an approximately 15-acre site located in the City of Rancho Cucamonga, San Bernardino County. Approximately 11.2 acres of the 15-acre site will be used as a temporary construction laydown and parking area for a proposed power development project. The County of San Bernardino and the U.S. Fish and Wildlife Service require that focused surveys be conducted to determine whether this proposed development would impact this federally endangered insect. The 2008 survey is the second year of focused surveys of this site and resulted in negative findings. The first year survey, which was conducted 2007, also resulted in negative findings. The protocol requires two years of surveys to be completed.

Site Description

The approximately 15-acre site is located near the City of Rancho Cucamonga, on a portion of the northern half of Section 17, Township 1 South, Range 6 West: San Bernardino Base and Meridian; USGS 7.5' Guasti, California quadrangle (See Maps 1 & 2). The total site is approximately 15 acres in size and is rectangular in outline. It is relatively flat and varies from approximately 1,110 feet above sea level in the southern area to 1,125 feet above sea level in the northern area.

Adjacent to the site to the east is a railroad spur line, across from which has been developed as part of a power plant. The field is covered by a mixture of native and non-native vegetation. Bordering the site to the north is an embankment, with a Burlington Northern Santa Fe Railroad (Metrolink) east-west mainline upon it. West, between the site and Day Creek, is habitat similar to the proposed laydown area. Immediately south of the site is an open field which is covered with a mixture of native and non-native vegetation.

According to a soil map (U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of San Bernardino County Southwestern Part, California, 1980 and The Web Soil Survey, United States Department of Agriculture, Natural Resources Conservation Service) all of the site is covered with Tujunga loamy sand (TuB). Based upon my field examination, I concurred with the soil map. The majority of the site and most of the areas surrounding the site consisted of large expanses of exposed soil.

Plant species found on the site include: *Ambrosia acanthicarpa* (annual bur-sage); *Hirschfeldia incana* (short pod mustard); *Eriogonum fasciculatum* (California

buckwheat); *Croton californicus* (California croton); *Lotus scoparius* (deerweed); *Amsinckia menziesii* (rancher's fiddleneck); *Marrubium vulgare* (white horehound); *Vitis vinifera* (wine grape); *Avena fatua* (wild oat); *Bromus* sp. (brome) and a number of other unidentified grasses. There were small stands of pepper trees (*Schinus* sp.) in the northern area and willow (*Salix* sp.) trees in the eastern half of the site. *Arundo donax* (Giant Reed) was also found in the eastern area of the site. *Lepidospartum squamatum* (scale broom) was also found in several areas of the site.

The site has been highly disturbed. There were numerous sand roads made by off road vehicles throughout the site. At one time the site was apparently part of a vineyard.

The site is within the Ontario Recovery Unit for the Delhi Sands Flower-loving Fly (USFWS, 1997).

Delhi Sands Flower-loving Fly Background Information

The DSFLF (*Rhaphiomidas terminatus abdominalis*) (family Mydidae) was listed as an endangered species under the Endangered Species Act, as amended on September 23, 1993. The California Natural Diversity Data Base lists the DSFLF rank as being: G1T1S1 - Federally listed as being extremely endangered (G1); found only in California (T1); and as being extremely endangered in California (S1).

The DSFLF is considered to be endangered primarily because of the loss of its habitat, mainly due to the habitat's conversion to agricultural, residential, and industrial uses. Its historic range has been reduced by over approximately 97% (USFWS, 1993). The fly is known only to inhabit areas where Delhi series soils are located. These soils consist of fine, sandy material, often forming wholly or partially consolidated dunes, located in an irregular 40 square mile area in southwestern San Bernardino and northwestern Riverside Counties (Soil Conservation Service, 1980).

Fine unconsolidated soils are required for oviposition. The female fly inserts the end of her abdomen deep into the soil to lay her eggs (Rogers and Mattoni, 1993). The life history of the larval stages are unknown; however, it is presumed that the larvae develop underground (Greg Ballmer, D. Hawks, pers. comm.). The Delhi Sands Flower-loving Fly's adult flight period lasts approximately eleven weeks from early July through mid-September. The adult is approximately 1 inch long, tan to orange-brown in color, with dark brown bands and spots upon its abdomen. Its wings are hyaline. It has large green eyes and a long slender proboscis, with which it has been seen to use to feed upon nectar from California buckwheat and telegraph weed. The adults frequent open areas, usually near unconsolidated soil. The adult males patrol open areas looking for females to mate with. The females are more sedentary and perch upon plants or sit upon the ground for long periods. Adults are most often observed from 9 or 10 AM until 3 or 4 PM.

The DSFLF is frequently associated with certain plants: California buckwheat, California croton, annual bursage and telegraph weed, sometimes called "indicator plants". Other native plant species also occur in DSFLF habitat: California evening primrose (*Oenothera californica*), deerweed, lessingia (*Lessingia glandulifera*), rancher's fiddleneck, sapphire woolly-star (*Eriastrum saphirinum*), and Thurber's buckwheat (*Eriogonum thurberi*).

Delhi Sands Flower-loving Fly Recovery Plan

In 1997 the U.S. Fish and Wildlife Service issued the final recovery plan for the DSFLF (USFWS, 1997). The plan establishes three recovery units: the Colton, Jurupa, and Ontario Recovery Units. The Colton Recovery Unit contains the most known habitat, followed by the Jurupa Recovery Unit. Of the three recovery units, the Ontario Recovery Unit contains the least suitable habitat. Most of the Ontario Recovery Unit's habitat has been degraded by long-term agricultural use and much of the remainder of "suitable" habitat is highly fragmented and is in very close proximity to residential, commercial, or industrial development. While the fly is known to occur in the Ontario Recovery Unit, the possibility of using the Ontario Recovery Unit to protect the DSFLF is limited because of its prior history and fragmented nature.

Methods

The Carlsbad Field Office of the USFWS was notified of Powell Environmental Consultant's intent to perform the survey the site in June 2008. This focused survey was initiated on July 2, 2008 and continued with biweekly site surveys until September 19, 2008. All field surveys and activities associated with this study were conducted in accordance with the Interim General Guidelines for the Delhi Sands Flower-loving Fly and conditions set forth in the surveyors 10(a)(1)(A) permits. Surveys were conducted by entomologists Dale Powell Ph.D. and Jun Rong Powell (both authorized under permit TE-006559-4). Survey dates and times, ambient air temperatures, wind speed, general weather conditions, insect families/species detected, and other pertinent field data were recorded on field survey forms and are included in Table 1 and in the Appendices.

Results and Discussion

No DSFLFs were observed on the site during the focused survey. Other species of insect fauna which are relatively closely related to the fly and are associated with Delhi Sands were observed on the site. *Nemomydas pantherinus*, another member of the same family to which the DSFLF belongs (Mydidae) was observed several times on the site. Members of the closely related families Apioceridae and Asilidae were noted as well.

These insects are frequently associated with the Delhi Sands Flower-loving Fly and can be considered indicators that the site may have potential as suitable fly habitat even though the site has been altered by various disturbances.

The potential for observing the Delhi Sands Flower-loving Fly on the site during favorable weather periods is moderate. A combination of factors contribute to this conclusion, namely: historic land usage by agriculture; the invasion of non-native flora and fauna; the extensive fragmentation of potential fly habitat in the area; and the distance from other DSFLF populations.

Table 1. Weather conditions for the San Gabriel Generating Station Project Site.

Date	Time	Weather	Temp (°F)	Wind (mph) aver*/max
7/2/08 ²	12:10-14:10	Clear	95-97°	1/2
7/7/08 ²	10:00-12:00	Clear	80-88°	1/2
7/9/08 ¹	10:15-12:10	Clear	77-85°	1-3//2-4
7/11/08 ²	12:10-14:10	90% Clouds	86-87°	1-2/2-4
7/15/08 ³	12:30-13:20	Clear	89-90°	3/6
7/17/08 ³	12:25-13:10	Clear	94°	3-5/5-8
7/22/08 ³	11:30-12:15	Clear	86-88°	2/4
7/25/08 ³	12:35 -13:20	Clear	94-96°	6-7/9-11
7/29/08 ³	11:50 -12:50	Clear	84-88°	4/8
7/31/08 ³	13:35-14:30	Clear	92-94°	4/6
8/5/08 ¹	10:55-12:20	Clear	89-94°	3-4/5-6
8/7/08 ³	13:40-14:30	10 % Clouds	100°	4-5/6-7
8/12/08 ³	10:40-11:40	Clear	80-89°	3-4/5-6
8/14/08 ³	12:00-12:50	Clear	96-99°	3/5-6
8/20/08 ³	11:50-13:05	Clear	85-88°	2-3/4-6
8/22/08 ³	12:10-12:55	Clear	86°	4/6
8/26/08 ²	10:00-12:00	Clear	85-93°	1-2/2-4
8/28/08 ²	12:10-14:10	Clear	87-94°	1-2/2-4
9/3/08 ³	12:10-13:00	Clear	96-97°	3/5
9/8/08 ²	10:00-12:00	Clear	79-86°	1-2/2-4
9/10/08 ²	12:10-14:10	Clear	84-89°	2-3/4-5
9/12/08 ³	11:25-12:15	Overcast	70-71°	2-3/4-5
9/17/08 ³	12:15-13:10	5% Clouds	83-84°	1/3
9/19/08 ³	10:20-11:20	Clear	86-91°	2/4

¹Dale Powell²Jun Powell³Dale & Jun Powell

* Over a 20 second period

REFERENCES

- Emmel, T.C. and J.F. Emmel. 1973. The Butterflies of Southern California. Natural History Museum of Los Angeles. Science Series 26: 1-148.
- Hickman, J.C. (editor). 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, California. 1400 pp.
- Rogers, R. and M. Mattoni. 1993. Observations on the natural history and conservation biology of the giant flower loving flies, *Rhaphiomidas* (Diptera: Apioceridae). Dipterological Research 4(1-2): 21-34.
- Scott, S. (editor). 1999. Field Guide to the Birds of North America. Third Edition. National Geographic Society, Washington D.C. 480 pp.
- U.S. Department of Agriculture, Soil Conservation Service, 1971. Soil Survey of Western Riverside Area, California. U.S. Gov. Printing Office, Washington D.C. 188 pp.
- U.S. Department of Agriculture, Soil Conservation Service, 1980. Soil Survey of San Bernardino County Southwestern Part, California. U.S. Gov. Printing Office, Washington D.C.
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS), 2008. Web Soil Survey, San Bernardino County Southwestern Part, California. <http://www.websoilsurvey.nrcs.usda.org>. January 3. Accessed September 2008.
- U.S. Fish and Wildlife Service. 1997. Final Recovery Plan for the Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*). U.S. Fish and Wildlife Service, Portland, OR. 51 pp.

APPENDIX

SUBCONTRACTOR CONCURRENCE

I, Dale A. Powell, having performed focused surveys for the Delhi Sands Flower-loving Fly for the San Gabriel Generating Project Site, Rancho Cucamonga, have entirely read and reviewed the final report for the project and concur with the statements and conclusions made.

Dale A. Powell

SIGNATURE

10/9/08

DATE

I, Jun Rong Powell, having performed focused surveys for the Delhi Sands Flower-loving Fly for the San Gabriel Generating Project Site, Rancho Cucamonga, have entirely read and reviewed the final report for the project and concur with the statements and conclusions made.

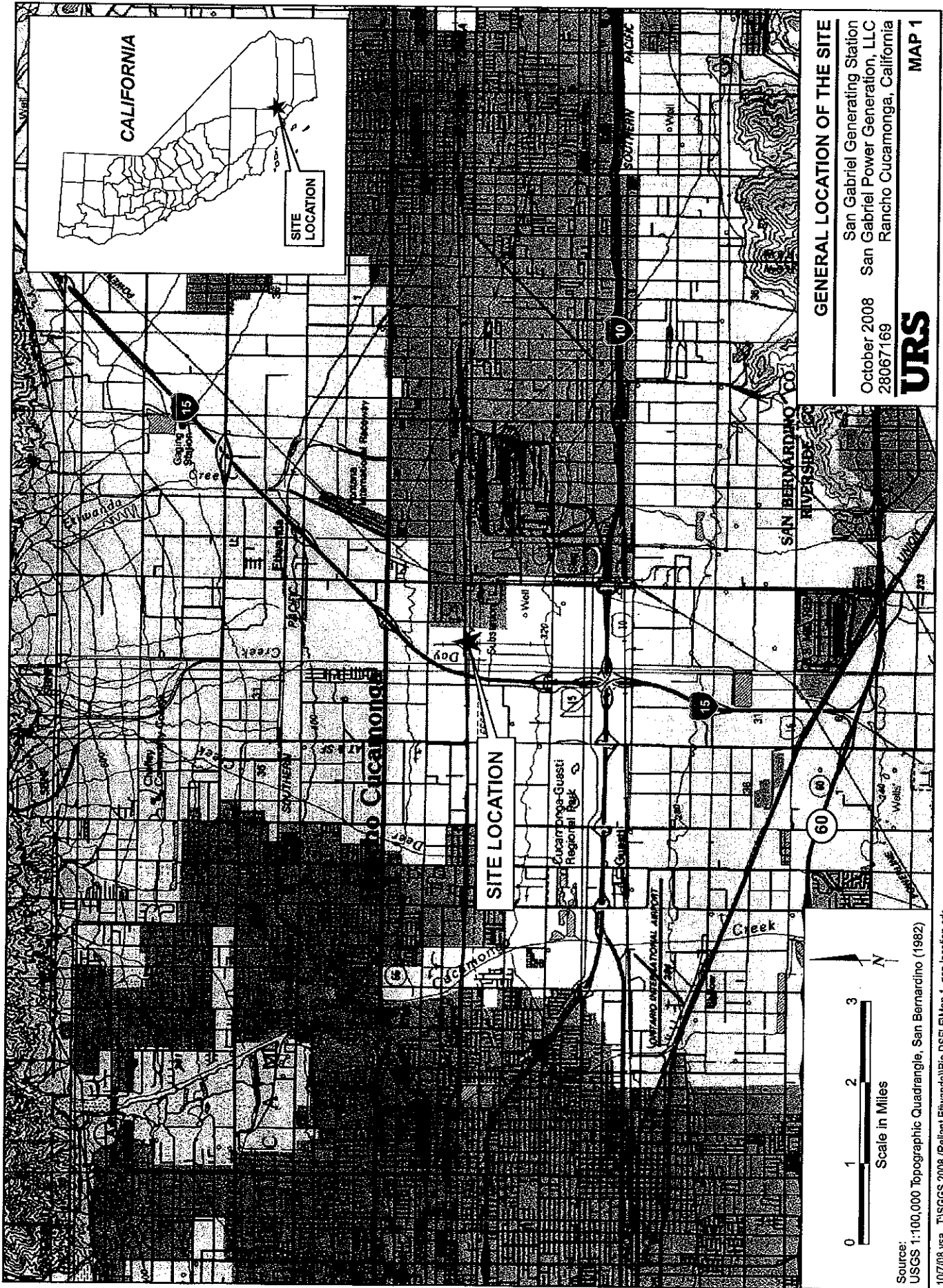
Jun Rong Powell

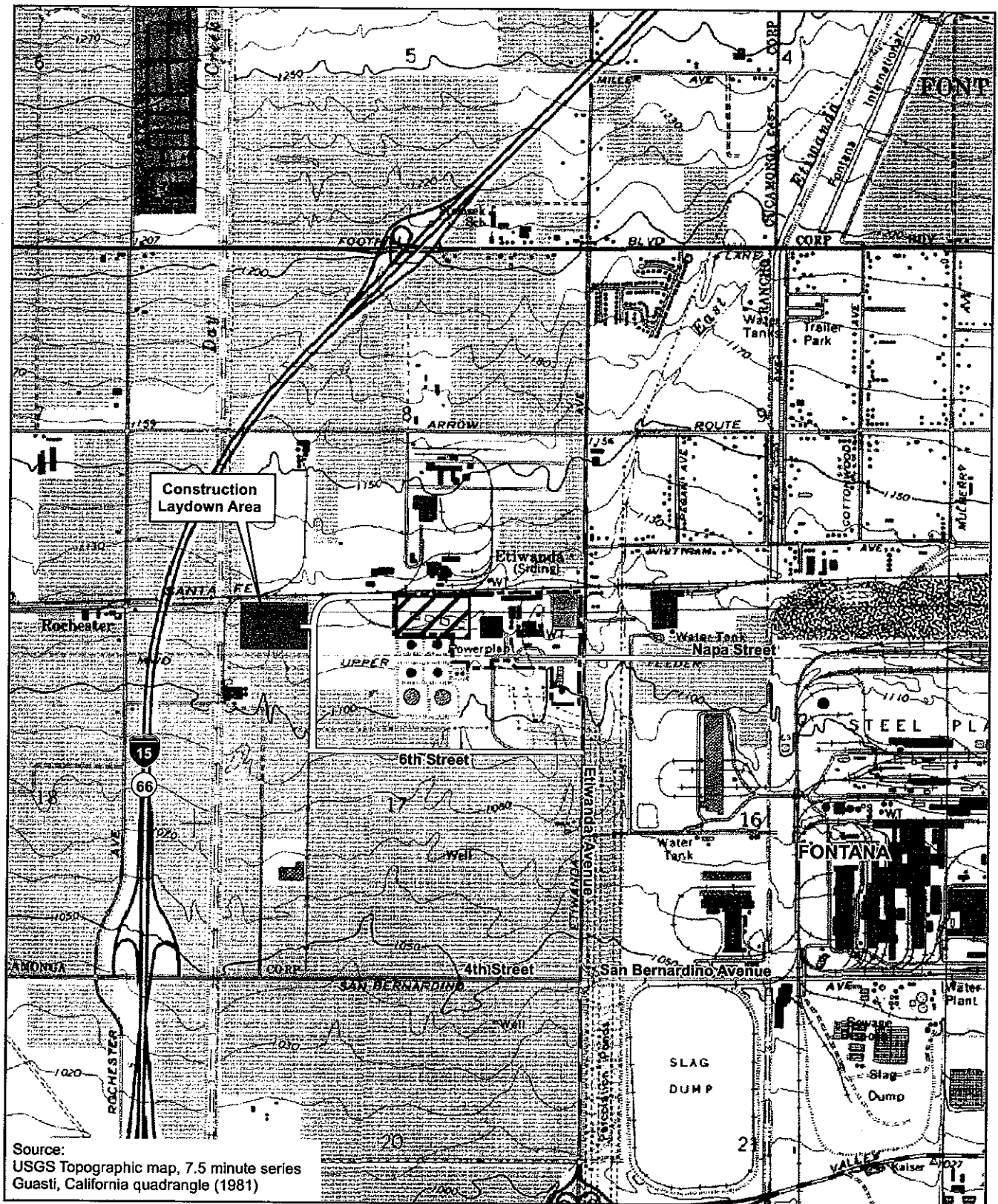
SIGNATURE

10/9/08

DATE

APPENDIX





0 2000 4000
Scale in Feet
1:24,000



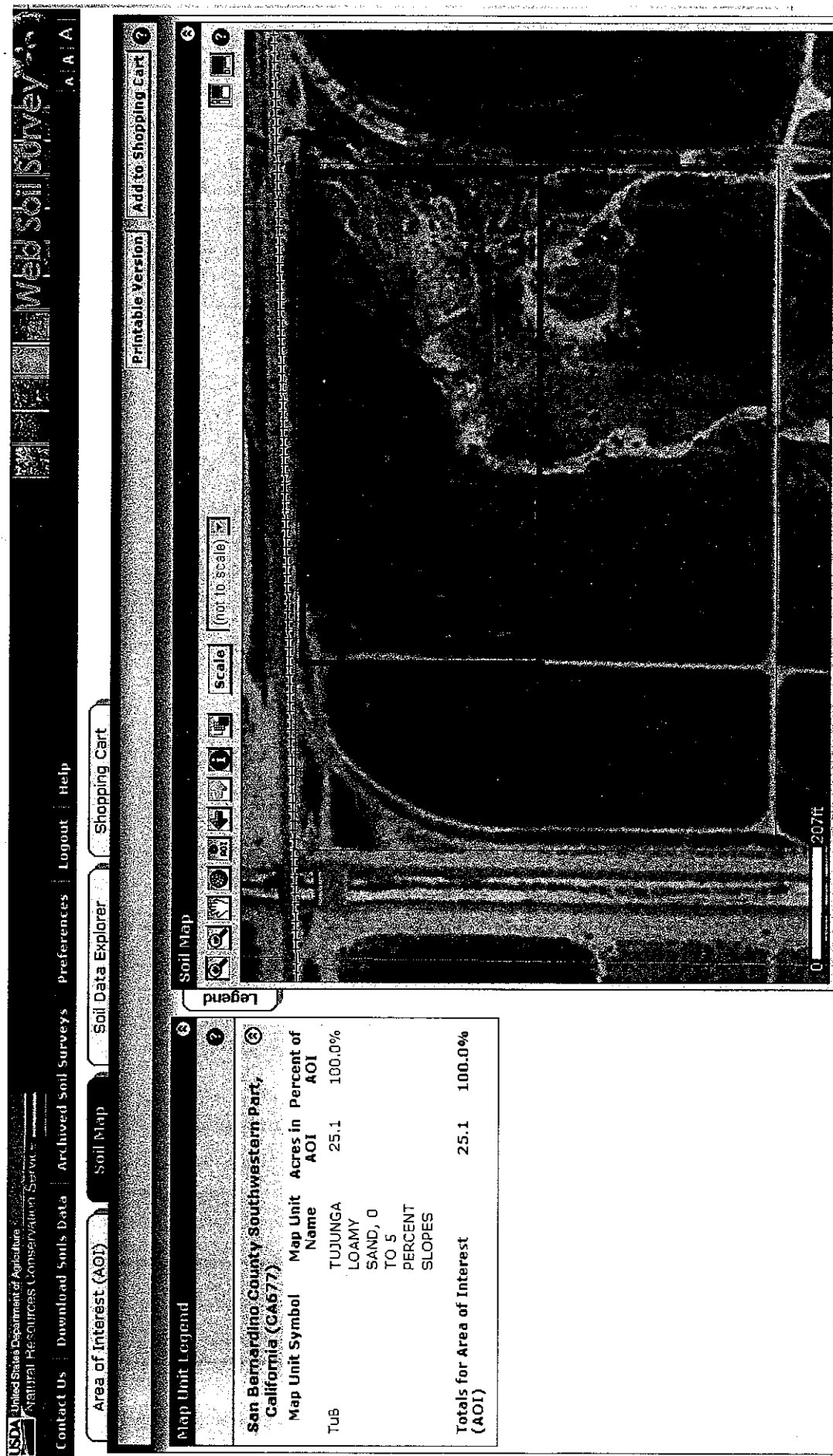
SITE LOCATION MAP

San Gabriel Generating Station
October 2008 San Gabriel Power Generation, LLC
28067169 Rancho Cucamonga, California

URS

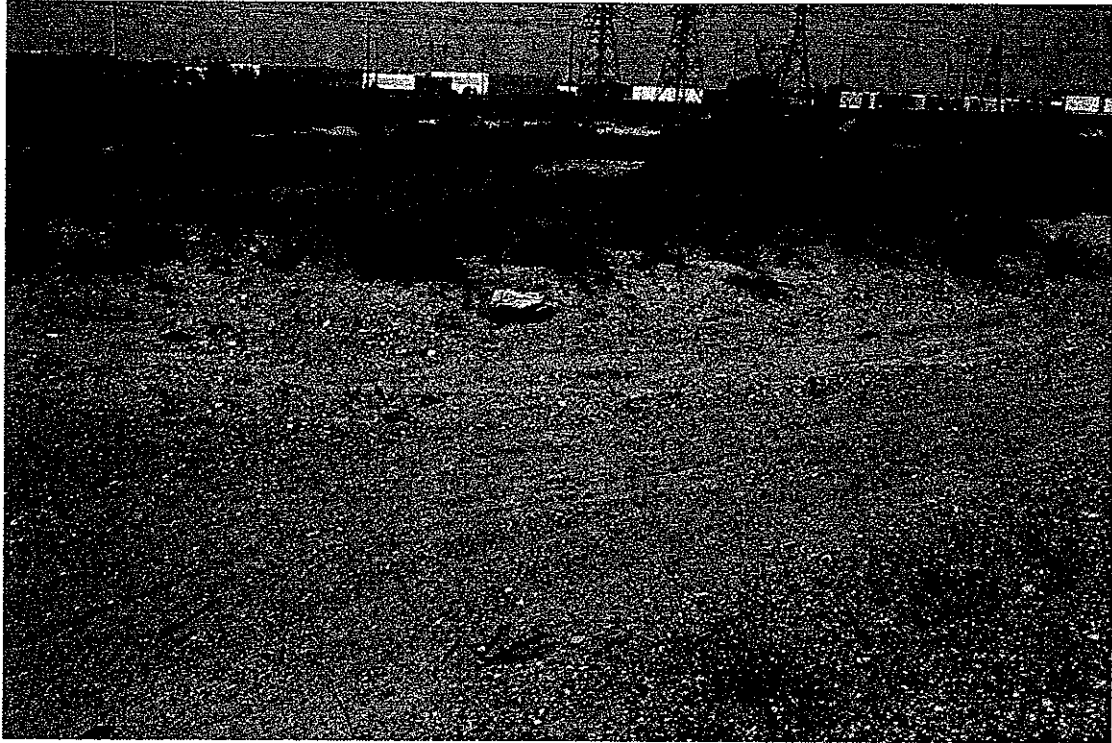
MAP 2

MAP 3. Soil Map of the Site (the 15-acre site is outlined in red).



Note: The area of interest (AOI), shown in light blue (25 acres), is entirely within the Tujunga map unit. The 15-acre project site is located entirely within the AOI depicted on the map.

Picture 1. Overview of the site facing southwest, from the northeastern area.



Picture 2. Overview of the site facing southeast, from the northwestern corner.



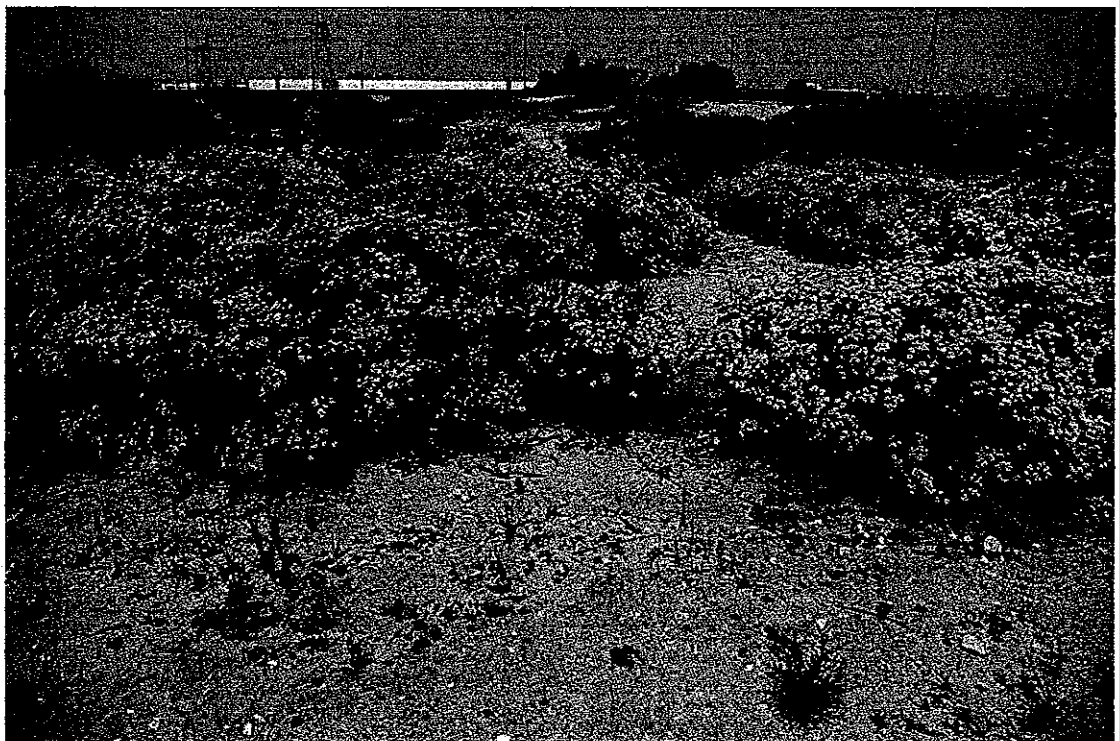
Note: Red Line represents approximate site boundary.

Photographs Taken: July 9, 2008

Picture 3. Overview of the site facing east, from the central northwestern area.



Picture 4. Overview of the site facing northwest, from the central-eastern area.



Note: Red Line represents approximate site boundary.

Photographs Taken: July 9, 2008

FIELD NOTES

Delhi Sands Flower-loving Fly -- 2008 Dale & Jun Rong Powell

Site: San Gabriel Generating Station

SRP

SRP

DP

SRP

DP

Date		9:00	10:00	11:00	NOON	1:00	2:00	3:00
7/2/08	Temp				95°	97°	97°	
	Week				1/2	1/2	1/2	
	Weath				C1	C1	C1	
7/7	Temp		80°	83°	88°			
	Week		1/2	1/2	1/2			
	Weath		C1	C1	C1			
7/9	Temp		77°	82°	85°			
	Week		1/2	3/4	1/3			
	Weath		C1	C1	C1			
7/11	Temp				86°	87°	87°	
	Week				1/2	2/4	2/4	
	Weath				90% cloudy	90% cloudy	90% cloudy	
7/15	Temp				87°	90°		
	Week				3/6	3/6		
	Weath				C1	C1		
7/17	Temp				94°	94°		
	Week				3/5	5/5		
	Weath				C1	C1		
7/22	Temp			86°	88°			
	Week			2/4	2/4			
	Weath			C1	C1			
7/25	Temp				94°	96°		
	Week				6/9	7/11		
	Weath				C1	C1		
7/29	Temp				84°	88°		
	Week				4/8	4/8		
	Weath				C1	C1		
7/31	Temp					92°	94°	
	Week					4/6	4/6	
	Weath					C1	C1	
8/5	Temp			89°	94°			
	Week			3/5	4/6			
	Weath			C1	C1			
8/7	Temp					100°	100°	
	Week					4/6	5/7	
	Weath					100% C1	100% C1	
8/12	Temp			80°	89°			
	Week			4/6	3/5			
	Weath			C1	C1			
8/14	Temp				96°	99°		
	Week				3/5	3/6		
	Weath				C1	C1		

Wind: First number is average (20 seconds) / second number is maximum.

C1 = C122V

Delhi Sands Flower-loving Fly – 2008 Dale & Jun Rong Powell

Site: San Gabriel Generating Station

JRP

JRP

JRP

JRP

Date		9:00	10:00	11:00	NOON	1:00	2:00	3:00
8/20/08	Temp				85°	88°		
Week	Wind				2/4	3/6		
	Weath				CI	CI		
8/22/08	Temp				86°	85°		
Week	Wind				4/6	4/6		
	Weath				CI	CI		
8/26	Temp		85°	90°	93°			
Week	Wind		1/2	2/4	2/4			
	Weath		CI	CI	CI			
8/28	Temp				87°	90°	94°	
Week	Wind				1/2	2/4	2/4	
	Weath				CI	CI	CI	
8/30	Temp				96°	97°		
Week	Wind				3/5	3/5		
	Weath				CI	CI		
9/1/8	Temp		79°	83°	86°			
Week	Wind		1/2	1/2	2/4			
	Weath		CI	CI	CI			
9/1/10	Temp				84°	86°	89°	
Week	Wind				2/4	2/4	3/5	
	Weath				CI	CI	CI	
9/12	Temp			71°	76°			
Week	Wind			3/5	2/4			
	Weath			Overcast	Overcast			
9/17	Temp			83°	87°			
Week	Wind			1/3	1/3			
	Weath			Cloudy	5% Rain			
9/19	Temp			86°	91°			
Week	Wind			2/4	2/4			
	Weath			CI	CI			
	Temp							
Week	Wind							
	Weath							
	Temp							
Week	Wind							
	Weath							
	Temp							
Week	Wind							
	Weath							
	Temp							
Week	Wind							
	Weath							

Wind: First number is average (20 seconds) / second number is maximum.

CI = Clear

Delhi Sands Flower-loving Fly 2008 Dale and Jan Rong-Powell

JRP JRP DP JRP

[illegible]

Delhi Sands Flower-loving Fly, 2008 Dale and Jun Rong Powell

JRP JRP DP JRP

[illegible]

Delhi Sands Flower-loving Fly - 2008

Dale and Jun Rong Powell

[illegible]

Delhi Sands Flower-losing Fly - 2008

Dale and Jun Rong Powell

[illegible]