Pacific Gas and Electric Company

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April 23, 2008

Ms. Cathy Wolfe-White
U.S. Department of the Interior
Bureau of Land Management
2610 Sweetwater Avenue
Lake Havasu City, Arizona 86406

Mr. John Earle
Refuge Manager
Havasu National Wildlife Refuge
P.O. Box 3009
317 Mesquite Avenue
Needles, California 92363

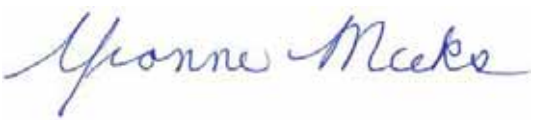
Subject: Biological Resources Completion Report for the Upland In-situ Pilot Test and Associated Activities: PG&E Topock Compressor Station, Needles, California

Dear Ms. Wolff-White & Mr. Earle:

This letter transmits the Biological Resources Completion Report for the Upland In-situ Pilot Test and Associated Activities: Topock Compressor Station. The document is submitted in conformance with the January 2007 *Programmatic Biological Assessment for the Pacific Gas and Electric Topock Compressor Station Remedial and Investigative Actions* (PBA) and Condition #30 of the Havasu National Wildlife Refuge's approval letter for the Upland In-situ Pilot Test and associated activities, dated March 14, 2007.

PG&E appreciates your consideration of the attached report. Please contact me at (805) 234-2257 with any questions or concerns.

Sincerely,



Yvonne Meeks
Topock Project Manager

cc: Jim Priest/BLM
Carrie Marr/USFWS
Kris Doebbler/DOI
Aaron Yue/DTSC

Biological Resources Completion Report for the Upland In Situ Pilot Test, and Associated Activities Topock Compressor Station Needles, California

Prepared for

United States Bureau of Land Management
United States Fish and Wildlife Service

On behalf of

Pacific Gas and Electric Company

April 2008

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, California 94612

Biological Resources Completion Report for the Upland In Situ Pilot Test, and Associated Activities Topock Compressor Station Needles, California

Gary Santolo
Senior Biologist

Jennifer Low
CH2M HILL Project Manager

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Acronyms and Abbreviations

BLM	United States Bureau of Land Management
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
DTSC	California Department of Toxic Substances Control
ESA	Endangered Species Act
FCR	Field Contact Representative
GPS	global positioning system
HNWR	Havasu National Wildlife Refuge
I-40	Interstate 40
ISPT	in situ pilot test
MW	monitoring well
PBA	Programmatic Biological Assessment for the Pacific Gas and Electric Topock Compressor Station Remedial and Investigative Actions
PG&E	Pacific Gas and Electric Company
USC	United States Code
USFWS	United States Fish and Wildlife Service

1.0 Introduction

Pacific Gas and Electric Company (PG&E) is addressing chromium in groundwater at the Topock Compressor Station located in eastern San Bernardino County, California, about 15 miles southeast of Needles, California (Figure 1).

Investigative and remedial activities at the Topock Compressor Station are being performed under the Resource Conservation and Recovery Act Corrective Action process as well as the Comprehensive Environmental Response, Compensation and Liability Act, under agreements between PG&E and the California Department of Toxic Substances Control (DTSC), and the Department of the Interior, respectively. Under the terms of these agreements, PG&E is conducting the Resource Conservation and Recovery Act Facility Investigation/ Remedial Investigation to identify and evaluate the nature and extent of hazardous waste and constituent releases at the compressor station.

This biological completion report documents field activities associated with the construction of an upland reductive zone in situ pilot test (ISPT) and associated activities. The field activities addressed in this report were primarily conducted south of Interstate-40 (I-40), just north of the PG&E Topock Compressor Station property on land referred to as the "MW-24 bench," a previously-graded flat-lying area of approximately 0.25 acre, managed by United States Fish and Wildlife Service (USFWS). The USFWS Havasu National Wildlife Refuge (HNWR) approved the activities addressed in this report in a letter dated March 14, 2007 (USFWS 2007a; Earle 2007). The activities were also approved by DTSC (DTSC 2007a, 2007b, 2007c).

1.1 Regional Environmental Setting

The Topock Compressor Station is located in a sparsely populated, rural area. The surrounding land use is publicly owned (mostly by the federal government) and has important spiritual meaning to local Indian tribes. Public lands in the area are owned and/or managed by a number of federal and regional agencies including the Bureau of Land Management (BLM), USFWS, Bureau of Reclamation, and San Bernardino County.

Dominant features of the area include the Colorado River to the east; the Chemehuevi Mountains to the south; the Burlington Northern Santa Fe railroad tracks and bridge; and I-40 that links Barstow, California, and Topock, Arizona. Topography in the area is abrupt, rising from around 450 feet above mean sea level at the Colorado River to over 1,200 feet above mean sea level within 1 mile to the south and southwest.

The area is characterized by arid conditions and high temperatures. The surrounding land consists of a series of terraces divided by desert washes. The landscape within the project area is considerably eroded and can most suitably be described as badlands. The lands are made of small to moderately sized terraces with very steep slopes. Terraces occurring in the project area are homogeneous, composed of rocky soils with very sparse vegetation. Structurally diverse vegetation in the project area is primarily limited to the Colorado River floodplain and the ephemeral washes.

1.2 Report Objectives and Organization

This biological completion report documents field activities associated with the construction of an upland ISPT and associated activities performed between April 2, 2007 and February 23, 2008.

A *Programmatic Biological Assessment for the Pacific Gas and Electric Topock Compressor Station Remedial and Investigative Actions* (PBA) was prepared to determine any potential effect on species protected under the federal Endangered Species Act (ESA) resulting from remedial and investigative activities at the Topock Compressor Station (CH2M HILL 2007a). The USFWS concurred with the determinations provided in the PBA as documented in a letter dated February 8, 2007 (USFWS 2007b). The field activities addressed in this report are included in the PBA, and therefore the PBA serves as supporting documentation under the ESA for the evaluation of project effects to listed species and resulting determinations.

This report has been prepared in compliance with Condition 30 of the USFWS letter (USFWS 2007a) and the General Project Management Measure 23 of the PBA (CH2M HILL 2007a) that requires that within 60 days of completion of construction activities, a brief report shall be prepared for the BLM and the HNWR documenting the effectiveness of the mitigation measures; making recommendations for modifying the measures to enhance species protection; and provide information on survey and monitoring activities, observed listed species, and the actual acreage disturbed by the project.

To comply with these requirements, this report contains the following information:

- Description of the project activities is provided in Section 2.0.
- Documentation of awareness training is provided in Section 3.0, including information on monitoring activities.
- Pre- and post-activity surveys are documented in Section 4.0, including the observed listed species.
- Project location and existing disturbed areas are discussed in Section 5.0.
- Conclusions are contained in Section 6.0, including a discussion of the effectiveness of the mitigation measures and recommendations for modifying the measures to enhance species protection.

2.0 Project Description

The project activities addressed in this report consisted of the construction of upland ISPT facilities and associated activities performed in the area between April 2, 2007 and February 23, 2008. This section describes project activities. The project site location and associated facilities are depicted in Figure 2.

2.1 Upland ISPT Construction

PG&E is implementing an upland reductive zone ISPT to address chromium concentrations in groundwater. The upland ISPT will provide site-specific data regarding the effectiveness of in situ treatment of chromium in groundwater in the upland portions of the project site. The upland ISPT consists of the recirculating the reagent mixture between two recirculation wells (PTR-1 and PTR-2) and monitoring the results in surrounding groundwater monitoring wells (PT-7 Shallow/Middle/Deep [S/M/D] through PT-9S/M/D, MW-11, MW-24A/B and MW-38S/D).

Drilling and installation of the recirculation and monitoring wells for the upland ISPT were performed between April 23 and July 18, 2007. Sonic and mud rotary drilling techniques were used to install the wells. The recirculation system was constructed between August 6 and 17, 2007 and January 7 and 18, 2008 and consisted of the installation of underground piping between the recirculation wells and the 3,000 gallon aboveground storage tank, a control panel, and the reagent fill line. Start-up and system completion activities were conducted between January 21 and February 1, 2008 which consisted of completing the electrical programming systems.

System testing and construction demobilization, including removal of construction materials, was completed between February 1 and February 23, 2008. Construction was considered complete on February 23, 2008.

Aquifer tests (extraction tests and injection tests at both PTR-1 and PTR-2 as well as a recirculation test using both wells simultaneously) were conducted from February 4 to February 15 and February 25 to March 1, 2008. These tests further developed the pumping intervals of PTR-1 and PTR-2 to optimize well performance, test well capacities for pumping and injection of groundwater, and characterize the hydraulic performance of the recirculation system wells and observe the groundwater flow under operating conditions.

The upland ISPT system began full operation on March 5, 2008. The system doses 100 gallons of reagent per well per day and runs 24 hours a day. Weekly, bi-weekly, and monthly groundwater sampling events are scheduled to occur throughout the upland ISPT area for 6 to 9 months. Routine weekly operation and maintenance activities will be performed throughout the upland ISPT area.

2.2 Additional Field Activities

In addition to the upland ISPT construction activities, additional field activities were performed in the same location on the MW-24 bench during the same construction period. Approvals for the implementation of these other associated activities were combined with the upland ISPT construction for expediency and field activities were sequenced to minimize the number of equipment mobilizations to the area, limit schedule delays associated with data collection, and obtain high-quality data from the testing activities. The additional field activities included decommissioning existing well PGE-6; retrofitting existing well PGE-7; and aquifer testing at existing wells MW-48, PGE-7, and PGE-8. These additional field activities are described briefly below.

Decommissioning existing well PGE-6 on the MW-24 bench was performed in April and May 2007. The first phase of decommissioning work occurred during the week of April 2, 2007, and included removing the pump from the well, videotaping a well bore, placing a bentonite seal near the bottom of the well screen, perforating the well screen and casing, and pressure grouting. The second phase of decommissioning work occurred May 3 through 5, 2007, and included removing the 3-foot deep concrete block around the wellhead, placing cement in the perforated section of well casing, excavating a trench around the well using an air knife, cutting the well casing at approximately 5 feet below the ground surface, placing additional grout to fill the remaining portion of the well casing and complete the "mushroom cap" over the top of the cut off well casings, and filling the excavation with native soil removed from around the well. Additional information on the PGE-6 decommissioning is provided in the Well PGE-6 Decommissioning Summary Technical Memorandum (CH2M HILL 2007b).

Logging, inspecting, and retrofitting existing well PGE-7 on the MW-24 bench was performed between April and October 2007. Logging and inspection activities conducted at PGE-7 on April 3, 2007 included geophysical logging, electromagnetic flow meter logging, and video logging. Retrofitting activities conducted at PGE-7 included installation of a straddle packer assembly on August 4, 2007. After determining that alternative retrofitting was necessary to meet the project objectives, construction of a sleeve within PGE-7 was performed in two phases. The initial construction of the sleeve was conducted from September 24 through 28, 2007 and consisted of installation of a steel casing within the existing well, installation of rubber shale packers, and placement of sand and bentonite grout in the annual space. The second phase was conducted October 15 and 16 and consisted of installation of additional bentonite grout in the annular space between the casing and the open borehole wall. Additional information on the PGE-7 logging, inspection, and retrofitting is provided in the *Summary Report for Hydraulic Testing in Bedrock Wells* (CH2M HILL 2007c).

Hydraulic testing was performed at three existing bedrock wells: PGE-7 located on the MW-24 bench; MW-48 located on HNWR property east of the MW-24 bench; and PGE-8 located within the Topock Compressor Station facility. Hydraulic testing by a slug test was conducted in well PGE-7 on November 14, 2007, and at MW-48 on November 12, 2007. Hydraulic testing at PGE-8 on the Topock Compressor Station facility consisted of a short-term step-rate extraction test in August 2007, a constant-rate extraction test between August 8 through 11, 2007, and injection testing between October 17 through 19, 2007. Additional

information on the hydraulic testing activities is provided in the *Summary Report for Hydraulic Testing in Bedrock Wells* (CH2M HILL 2007c).

Road maintenance was conducted in the form of minor grading. No vegetation was removed along the pre-existing equipment access route or within the MW-24 bench.

3.0 Awareness Training

In accordance with the stipulations described in the PBA and the HNWR approval letter (USFWS 2007a), awareness training was provided to personnel before commencing construction activities. The awareness training focused on desert tortoise for activities on the upland areas. PG&E and CH2M HILL biologists provided training to onsite personnel prior to initiating work activities. The core groups were trained at the project initiation meeting on April 2, 2007, and new personnel were identified at safety meetings each morning before work. Training included a description of species, habitat, natural history, threats, legal protection under the ESA, potential penalties, current survey findings, management, and protection measures. Applicable protection measures identified in the USFWS approval letter were reviewed with staff.

During project activities, a designated PG&E, CH2M HILL, or ARCADIS field contact representative (FCR) provided compliance monitoring. In accordance with Condition 20 of the HNWR approval letter (USFWS 2007a), the FCR was responsible for overseeing compliance with the minimization measures. Also as part of Condition 20, the FCR was onsite during construction activities and had a copy of special conditions when work was being conducted on the site.

4.0 Project Location and Existing Disturbance

Various past activities have resulted in land disturbance of the general area where project activities occurred. The general area is traversed by a major highway, a railway, several gas pipelines, gas pipeline access roads, and existing work areas for previously-installed water wells.

The project area, staging areas, and access routes were located in the previously disturbed areas at the MW-24 bench and the Topock Compressor Station. Because the project area, staging areas, and access routes have been used extensively for past activities, these areas are denuded of vegetation prior to the initiation of this project.

Previously disturbed areas for ISPT construction and associated activities on the MW-24 bench[1] are identified on Figure 2. Project activities were confined to this previously disturbed area. Access to the MW-24 bench is along a pre-existing gas pipeline access dirt road from the Topock Compressor Station.

All vegetation adjacent to pre-existing disturbed areas were avoided during project activities. Therefore post-construction disturbed areas were the same as the pre-construction disturbed areas. No additional areas were disturbed by the activity and no habitat loss occurred.

Pre- and post-construction photographs are in Appendix A.

[1] In addition to the ISPT construction and associated activities on the MW-24 bench, hydraulic testing was also performed at two other existing bedrock wells. Hydraulic testing at existing well MW-48 on the HNWR consisted of a slug test performed concurrent with a groundwater sampling event at that well. Hydraulic testing at existing well PGE-8 consisted of extraction and injection testing; PGE-8 is located on Topock Compressor Station property, not on HNWR property.

5.0 Pre- and Post-Activity Surveys

Prior to commencing construction activity, work sites and surrounding areas were surveyed for sensitive biological resources on April 2, 2007. No listed species or nesting birds were observed during the pre-activity survey. In addition, the MW-24 bench was extensively photographed to document pre-existing conditions. Photographs of pre- and post-construction conditions are provided in Appendix A.

Following construction, a post-activity survey was conducted on February 28, 2008 to document field conditions. Disturbed areas were mapped using a Trimble GeoXT global positioning system (GPS) with sub-meter accuracy. The project activity area was also photographed to document field conditions.

No vegetation was cleared as a result of mobilization, ISPT construction, well decommissioning/retrofitting, hydraulic testing, or demobilization.

Flora and fauna observed during the pre- and post-activity survey are listed in Table 1.

TABLE 1
List of Observed Plants and Wildlife Incidental to Pre- and Post-activity Surveys

Common Name	Scientific Name
Plants	
Rip-gut brome	*Bromus diandrus*
Creosote bush	*Larrea tridentate*
Desert trumpet	*Eriogonum inflatum*
Russian thistle	*Salsola tragus*
Storks bill	*Erodium circutarium*
Reptiles	
Side-blotched lizard	*Uta stansburiana*
Birds	
Common raven	*Corvus corax*
Turkey vulture	*Cathartes aura*

6.0 Conclusion

Construction of the ISPT and supporting activities was approved by the state and federal regulatory agencies. In conformance with USFWS stipulations, personnel were provided with awareness training, and pre-activity surveys were conducted of all areas subject to construction use. Because the construction area was previously disturbed and devoid of vegetation, a biological monitor other than the FCR was not required during installation activities.

The minimization measures were effective and met the requirements of the USFWS. There are no recommendations for modifying the measures to enhance species protection. The project was conducted under a "may affect, but not likely to adversely affect" determination for the southwestern willow flycatcher, Mojave Desert tortoise, Yuma clapper rail, razorback sucker, and bonytail chub, and a "no effect" determination for the Colorado pikeminnow. In compliance with these determinations, there was no "take" of these species.

7.0 References

CH2M HILL. 2007a. *Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Remedial and Investigative Actions.* January.

CH2M HILL. 2007b. Technical Memorandum. Well PGE-6 Decommissioning Summary. July 3.

CH2M HILL. 2007c. *Summary Report for Hydraulic Testing in Bedrock Wells, PG&E Topock Compressor Station, Needles, California.* January.

DTSC 2007a. Letter to PG&E. Conditional Approval of Well PGE-6 Decommissioning Workplan, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California. March 28.

DTSC 2007b. Letter to PG&E. Conditional Approval of Work Plan for Hydraulic Testing in Bedrock Wells, Pacific Gas, and Electric Company (PG&E), Topock Compressor Station, Needles, California. April 2.

DTSC 2007c. Letter to PG&E. Conditional Approval of the In Situ Hexavalent Chromium Reduction Pilot Test Work Plan – Upland Plume Treatment, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California. April 4.

Earle. 2007. Email from Mr. John Earle, HNWR, to Ms. Julie Eakins, CH2M HILL, clarifying USFWS March 14, 2007 authorization letter. March 23.

USFWS. 2007a. Letter to Ms. Yvonne Meeks, PG&E, authorizing request as outlined in the In Situ Hexavalent Chromium Reduction Pilot Test Work Plan – Upland Plume Treatment. March 14.

USFWS. 2007b. Letter to Field Manager, Lake Havasu Field Office, Bureau of Land Management. Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Remedial Investigative Actions, January 2007. February 8.

Figures

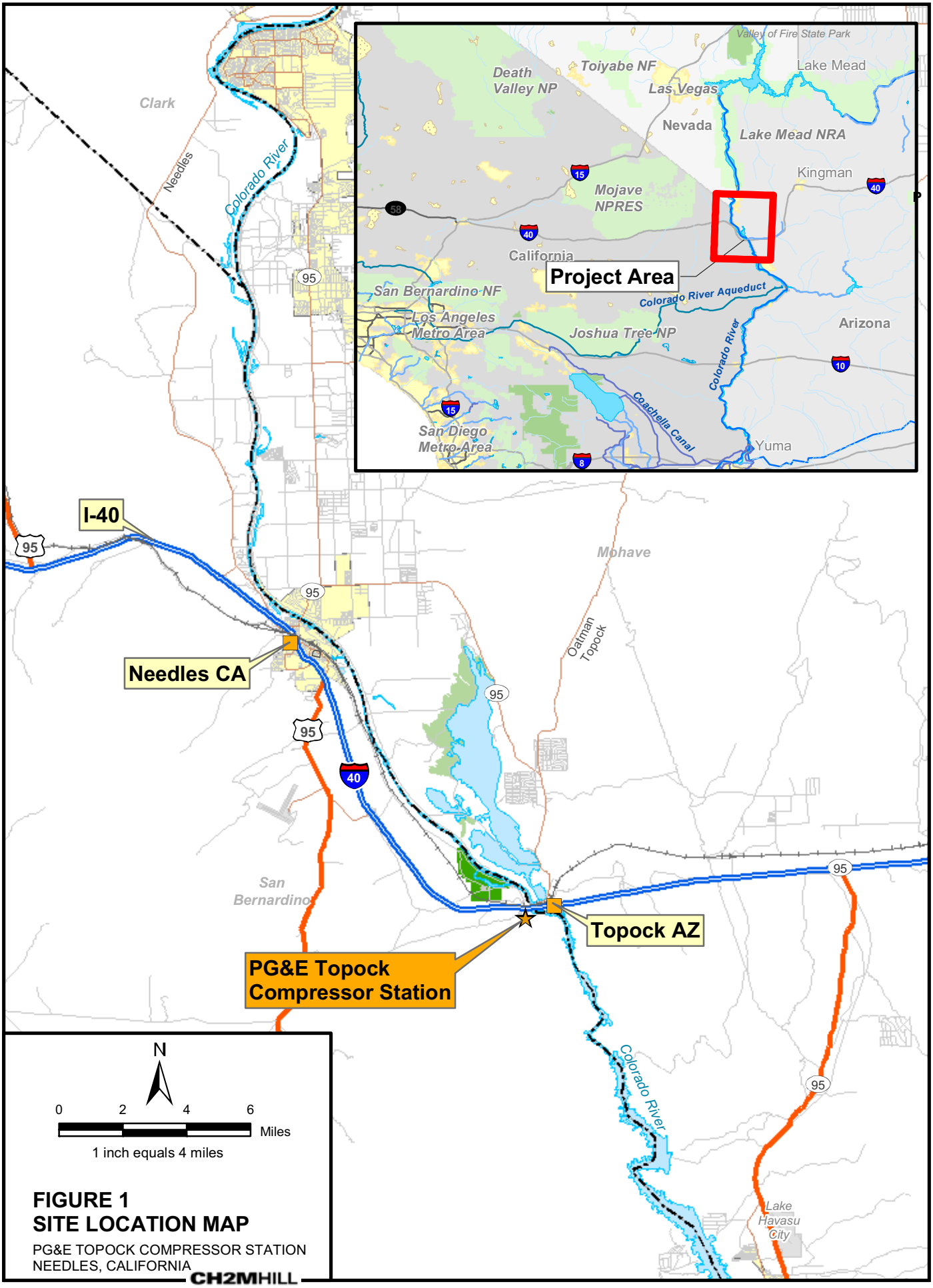

FIGURE 1
SITE LOCATION MAP

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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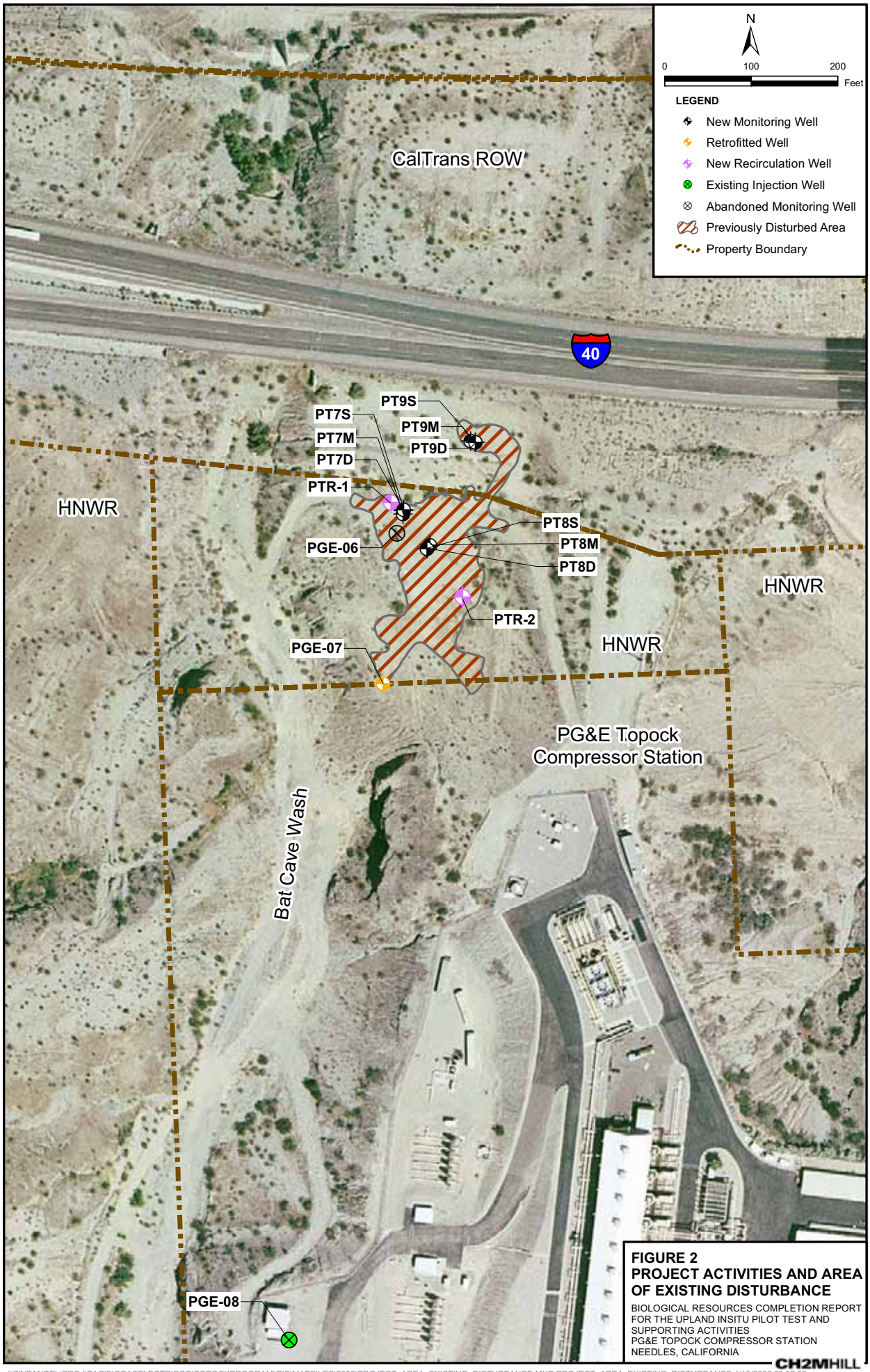

FIGURE 2
PROJECT ACTIVITIES AND AREA OF EXISTING DISTURBANCE

BIOLOGICAL RESOURCES COMPLETION REPORT
FOR THE UPLAND INSITU PILOT TEST AND
SUPPORTING ACTIVITIES
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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Appendix A
Photograph Documentation

Photograph 1. Pre-construction.

Photograph 2: Post-Construction.

Photograph 3: Pre-construction.

Photograph 4: Post-construction.

Photograph 5: Pre-construction.

Photograph 6: Post-construction.

Photograph 7: Pre-construction.

Photograph 8: Post-construction.

Photograph 9: Pre-construction.

Photograph 10: Post-construction.

Photograph 11: Pre-construction.

Photograph 12: Post-construction.

Photograph 13: During construction.

Appendix B
Awareness Training Sign-Off Sheets

UPLANDS IN-SITU PROJECT AND WELL TESTING & ABANDONMENT

PROJECT INITIATION MEETING APRIL 2, 2007

NAME	ORGANIZATION	PHONE	e-mail
CURT RUSSELL	PG&E	760-326-5582	gcr4@pge.com
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Barry Collom	CH2M	541-740-3250	bcollom@ch2m.com
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JOHN BURBANO	WELENCO INC.	661-303-9105	
CHRIS GREEN	CH2MHill	916-801-3762	cgreen@ch2m.com
[B]ILL GARRIDO	PIVOX CORP.	415 710 1024	bgarrido@pivox.com
Ray Quintero	WDC exploration & Wells	909-917-9211	rayquintero@wdcexploration.co[m]
Bill Stuckey	WDC Exploration & Wells	909-721-6531	billstuckey@wdcexploration.com
Jessica Ely	ARCADIS	510-409-3190	Jessica.Ely@arcadis-us.com
Leo Leonhart	Hargis + Assoc./Ft. Mojave	520-881-7300	[signature]
[J]im Priest	BLM	928-505-1246	[signature]
Justin Maples	BLY	(602) 818-7540	[signature]
[E]ric Kohagen	BLY	602 657 2099	[signature]

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
8/01/07	Daniel Laurie	Cascade Drilling	562 500 3586	[signature]
8-1-07	Ken Vose	CH2M Hill OMT	326-3328	[signature]
8-1-07	John Deetz	E2 Engineering	326-3328	[signature]
8-6-07	Daniel Montz	Pirox	909-631-0707	[signature]
8-6-09	Francisco Ruiz	Pirox	7607256873	[signature]
8-6-07	Jason Holbert	CH2M Hill OMT	326-3328	[signature]
8-6-07	Jonathan Baxter	ARCADIS	414-477-9243	[signature]
8-6-07	Jessica Ely	Arcadis	510-409-3190	[signature]
8/8/07	DAVID FARSA	BTS	510 885 4455	[signature]
08/08/07	ARLIN BREWSTER	NORTHSTAR	949-274-1719	[signature]
8/8/07	AURORA HINCKLEY	E2	480-377-6247	[signature]

Biological & Cultural Resources Awareness Training Attendance Sheet

Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
7/12/07	Cody Sharbrough	Blaine Tech	(209) 968-1616	[signature]
7/18/07	John Hogh	Arcadis	(508) 526-1185	[signature]

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
6/7/07	Daniel Gardner	WDC	760 280-8807	
6-7-07	Mario Adame	WDC	714 458-0725	
6-7-07	Joe Valenzuela	WDC	909 917-9258	
6-7-07				
6-14-07	Neil Dawe	WDC	909 917-9294	
6-19-07	Jim Ward	WPC	505-991-3576	
6-20-07	GEORGE RINGS	CH2M HILL	480-377-6202	

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

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Date	Name (print)	Company/Affiliation	Telephone	Signature
5-3-07	Chad Cox	BlainTech		
5-3-07	Chandler Tingley	Cascade Drilling		
5-3-7	Caleb Trusty	Cascade Drilling		
5-3-7	Rob Tippett	NorthStar	949-580-2800	
5-4-07	Tim Bruce	Cascade		
5-4-07	Gerry Woods II	CDI		
5-4-07	Greg Schroth	CDI		
5-8-07	Dan Crain	Arcadis		
5-15-07	Jeff Steinman	Ganda	415 250 2692	
30MAY07	Bruce Evans	Arcadis	262-424-8375	

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
5/2/07	Rob Gilman	GANDA	415-999-5706	[signature]
5.2.07	JACKIE FINCK	GANDA	415.310.2405	[signature]
5.2-07	Chloe Scott	GANDA	415-717-7785	[signature]

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
CHRIS SMITH	4-23-07	PGE	918-645-8794	
[redacted] 4/23/2008	CURT RUSSELL	PG&E	760-791-5884	
4.23.07	SAM RIVERA	W.D.C	909-772-6471	
4/23/07	Ray Quintero	WDC exploration & wells	909-917-9211	
4-23-07	RICHARD L WEST	WDC	(907-399-0903	
4-23-07	JESSICA ELY	Arcadis	510-409-8190	
4-23-07	BRETT BARDSLEY	ARCADIS	(206)679-6524	
04-23.07	Gever Sakuma	W.D.C.	(562) 318-7881	
4.23.07	FELIX VASQUEZ	PG&E	(760)326-5522	
4.27.07	DENNIS FINK	CH2M HILL	510-520-6017	

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
4-18-2007	William P[illegible]	RAS, Inc.	303-526-4452	[illegible]
4/18/07	Edward Facinsky	RAS	303-526-4452	[illegible]

Biological & Cultural Resources Awareness Training Attendance Sheet

Pacific Gas and Electric Topock IM-3 Project 2007

Your signature constitutes an agreement to abide by the biological and cultural resources avoidance and minimazation measures presented in this training.

Date	Name (print)	Company/Affiliation	Telephone	Signature
4/2/07	Aurora Hinckley	E2	510-326-0190	[signature]
4/3/07	DAN IHDE	WELENCO	661-301-4101	[signature]
04-03-07	MIGUEL GOMEZ	WELENCO	(661-834-0100	[signature]

Biological & Cultural Resources Awareness Training Attendance Sheet
Pacific Gas and Electric Topock IM-3 Project 2007

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Date	Name (print)	Company/Affiliation	Telephone	Signature
4-2-07	Chris Smith	PG&E	9186458294	
4/2/07	Isaac Wood	CH2M Hill	8058959380	
4-2-07	Barry Collom	CH2M Hill	541-740-3257	
4-2-07	[illegible]	PG&E	925-301-6554	
4-2-07	Ralph DelaParra	NorthStar	(949) 202-0968	
4-2-07	Lisa Swick	CRIT	(928) 669-1272	
4-2-07	ERIK STORMS	FLUTe	(505) 310-0171	
4-2-07	KEN MAY	BOART LONGYEAR	(623) 486-1881	
4-2-07	JOHN BURBANO	WELENCO	(661) 303-9105	
4-2-07	CHRIS GREEN	CH2M Hill	916-801-3762	
4-2-07	BILL GARRIDO	PIVOX CORP.	415 710 1024	
4-2-07	Ray Quintero	WDC exploration & wells	909-917-9211	
4-2-2007	Bill Stuckey	WDC Exploration & Wells	909-721-6531	
4-2-2007	Jessica Ely	ARCADIS	510-409-3190	
4-2-07	Leo Leonhart	Hargis / Ft. Mojave	520-881-7300	
4-2-07	Sam Priest	BLM	928-505-1246	
4-2-07	Justin L. Maples	BLY	(602)-818-7140	
4/2/07	Eric Kohagen	BLY	602-687-2899	

Biological & Cultural Resources Awareness Training Attendance Sheet
PG&E Topock Groundwater Extraction & Remediation Project 2008

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Date	Name (print)	Company/Affiliation	Telephone	Signature
2-4-08	TED NICKELS	CASCAD	5?964-1423	[illegible]
2-4-08	Eli Ludwig	CH2M HILL	510 517 7102	[illegible]
2-4-08	Don Lowrie	CASCADE	562 500 3520	[illegible]
2-4-08	Armando Aguilar	MPE	661-393-1151	[illegible]
2-4-08	Gregory Snelson	MPE	661-393-1151	[illegible]
2-4-08	Jack Bosham	MPE	661-393-1151	[illegible]
2-4-08	Ron Samoian	Cascade Drilling	562 764-1423	[illegible]
2-7-08	Muddy Waters	M Wac / CDE	562-688-1243	[illegible]
2-11-08	Jacob Treat	CDE	562-688-1243	[illegible]
2-11-08	DAVID Lockman Avez	MPE	602-717-7157	[illegible]
2-11-08	Laura Elliott	CH2M Hill	503 729 9659	[illegible]

Biological & Cultural Resources Awareness Training Attendance Sheet
PG&E Topock Groundwater Extraction & Remediation Project 2008

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Date	Name (print)	Company/Affiliation	Telephone	Signature
1-23-08	GARY CLIFT	ARCADIS	510-619-6075	
1-23-08	BRANDY HERNANDEZ	OSS	760-819-5555	
1-23-08	MIKE RIOS	OSS	760-318-5625	
1-23-08	VICTOR DAGGS	OSS	985-595-4127	
1-23-08	DAVE KISTNER	O.S.S.	(928)768-2781	
1-23-08	BRETT HANEY	O.S.S.	928-542-0770	
1-23-08	JOON KIM	ARCADIS	510 219 4259	
1-23-08	Mike Misakian	ARCADIS	510 918 3133	
1-23-08	JOE AIDE	OMI	760 328 3328	
1-23-08	MARK BLONDO	OMI	760 326-3585	
1-23-08	ERIC YOCOM	OMI	760 [illegible]-3510	
1-23-08	JOHN DEETZ	E2	928-768-7374	

Biological & Cultural Resources Awareness Training Attendance Sheet

Pacific Gas and Electric Topock IM-3 Project 2008

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Date	Name (print)	Company/Affiliation	Telephone	Signature
1/15/08	Wayman Ba[illegible]	PG+E	973-3893	[signature]
1-15-08	RICK BEZANSON	PG&E	760 326 5510	[signature]
1-15-08	Dan [illegible]	PG&E	760-326-5571	[signature]
1-15-08	RICK PARNELL	PG+E	760-326-5535	[signature]
1/15/08	RAYMOND SMITH	PG&E	760 326 [illegible]	[signature]
1-15-08	Brian Ringgenberg	PG&E	760-326-5504	[signature]
1-15-08	GREG DAVIS	PG+E	760-326-5531	[signature]
1-15-08	KARL FOIL	PG&E	760-326-55[illegible]	[signature]
1-15-08	KENNETH [illegible]	PG&E	760-326-5535	[signature]
1-15-08	Bernard Bri[illegible]	PG+E	928 542 0671	[signature]
1-15-08	JOSEPH [illegible]	PG&E	760-267-1399	[signature]
1-15-08	GREG SHETTKO	P.G.+E	760-326-5528	[signature]
1-15-08	RICH McCurdy	PG+E	[illegible]	[signature]
1-15-08	Brad [illegible]	PG+E	760 326-5535	[signature]
1-15-08	Chris Smith	PG&E	760 [illegible]	[signature]
1-15-08	Tom Fisher	PG&E	760 [illegible]	[signature]
1-15-08	FELIX VASQUEZ	PG&E	760-326-55[illegible]	[signature]
1-15-08	MARTY FEIGEN	PG&E	760 326 5524	[signature]
1-15-08	DAN LYTLE	PG&E	760 326-5541	[signature]

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Date	Name (print)	Company/Affiliation	Telephone	Signature
1-9-08	CHRIS SMITH	PG&E	760-258-7899	[signature]
1-9-08	Barry Collom	CH2M Hill	541-740-3250	[signature]
1-9-08	Ron Phelps	CH2M Hill OMI	928-330-8579	[signature]
1/9/08	Jay Williams	OSS Intl	760-413-1345	[signature]
1-9-08	Ken Vose	CH2M HILL OMI	760-326-3328	[signature]
1-9-08	CHRIS KNIGHT	CH2M Hill OMI	928-854-7839	[signature]
1-9-08	GARY SIBBLE	E2	760 326 3328	[signature]
1-9-08	Rebecca Williams	PSI	954-295-8532	Rebecca Williams
1/9/08	Brian Correa	PSI	916-439-6436	[signature]
1/9/08	Don Alexander	PSI	(925) 575-4514	[signature]
1/14/08	DAVID MAGALLANES	Blaine Tech Services	(310) 261-6017	[signature]
1-14-08	Chad Case	Blaine Tech Services	(310) 465-6930	