Biological Resources Completion Report for the IMPM Program: Topock Compressor Station Expanded Groundwater Extraction and Treatment System

Needles, California

Prepared for

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

on behalf of

Pacific Gas and Electric Company

June 2006

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, California 94612

Contents

Table

Figures

Acronyms and Abbreviations

BLM	United States Bureau of Land Management
BOR	United States Bureau of Reclamation
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
CWA	Clean Water Act
DTSC	California Department of Toxic Substances Control
FESA	Federal Endangered Species Act
GANDA	Garcia and Associates
IM	Interim Measures
IMPM	Interim Measure Performance Monitoring
msl	mean sea level
MW	monitoring well
No.	number
PG&E	Pacific Gas and Electric Company
SAA	Streambed Alteration Agreement
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service

1.0 Introduction

Pacific Gas and Electric Company (PG&E) is conducting investigative and remedial activities at the Topock Compressor Station under the oversight of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). The Interim Measures Performance Monitoring (IMPM) Program included the installation of several groundwater monitoring wells. These activities were described in the November 30, 2005 *Well Installation Work Plan for Interim Measures Performance Monitoring Program, PG&E Topock Compressor Station, Needles, CA* (CH2M HILL 2005a).

The IMPM Program was approved by DTSC in a letter dated January 6, 2006, pursuant to a prior Notice of Exemption issued under the California Environmental Quality Act (CEQA) (DTSC 2006). The project was located on lands managed by the United States Bureau of Land Management (BLM) and United States Fish and Wildlife Service (USFWS). BLM approved these activities in letters dated January 27, 2006 and February 21, 2006 (BLM 2006a; BLM 2006b).

The purpose of this document is to fulfill the BLM requirement of providing, within 30 days of completion of construction activities, a brief report documenting the effectiveness and practicality of the minimization measures and making recommendations for modifying the measures to enhance species protection. This report also provides information on awareness training, pre-activity surveys, compliance monitoring, and land use. Construction of the subject activities was completed May 19, 2006. This completion report has been prepared for submittal to the BLM and USFWS by June 19, 2006.

1.1 Regional Environmental Setting

The Topock Compressor Station is located near Needles, California. Agriculture and public lands along the surrounding landscape dominate the area. Public lands in the area are owned and managed by a number of federal and regional agencies including the BLM, USFWS, United States Bureau of Reclamation (BOR), and San Bernardino County.

Dominant features of the area include the lower Colorado River, Chemehuevi Mountains, and Interstate 40 (I-40) that links Barstow, California and Topock, Arizona. Topography in the area is abrupt, rising from around 450 feet above mean sea level (msl) at the Colorado River to over 1,200 feet above msl within one mile to the south and southwest. Slopes encountered west of the river reflect a series of ancient river terraces. The regional vicinity of the Topock Compressor Station is shown on Figure 1.

1.2 Project Location

The project elements addressed in this report are located west of the lower Colorado River, north of the Chemehuevi Mountains, east of the Topock Compressor Station, and south of Bat Cave Wash. The project is located on lands managed by the BLM and USFWS.

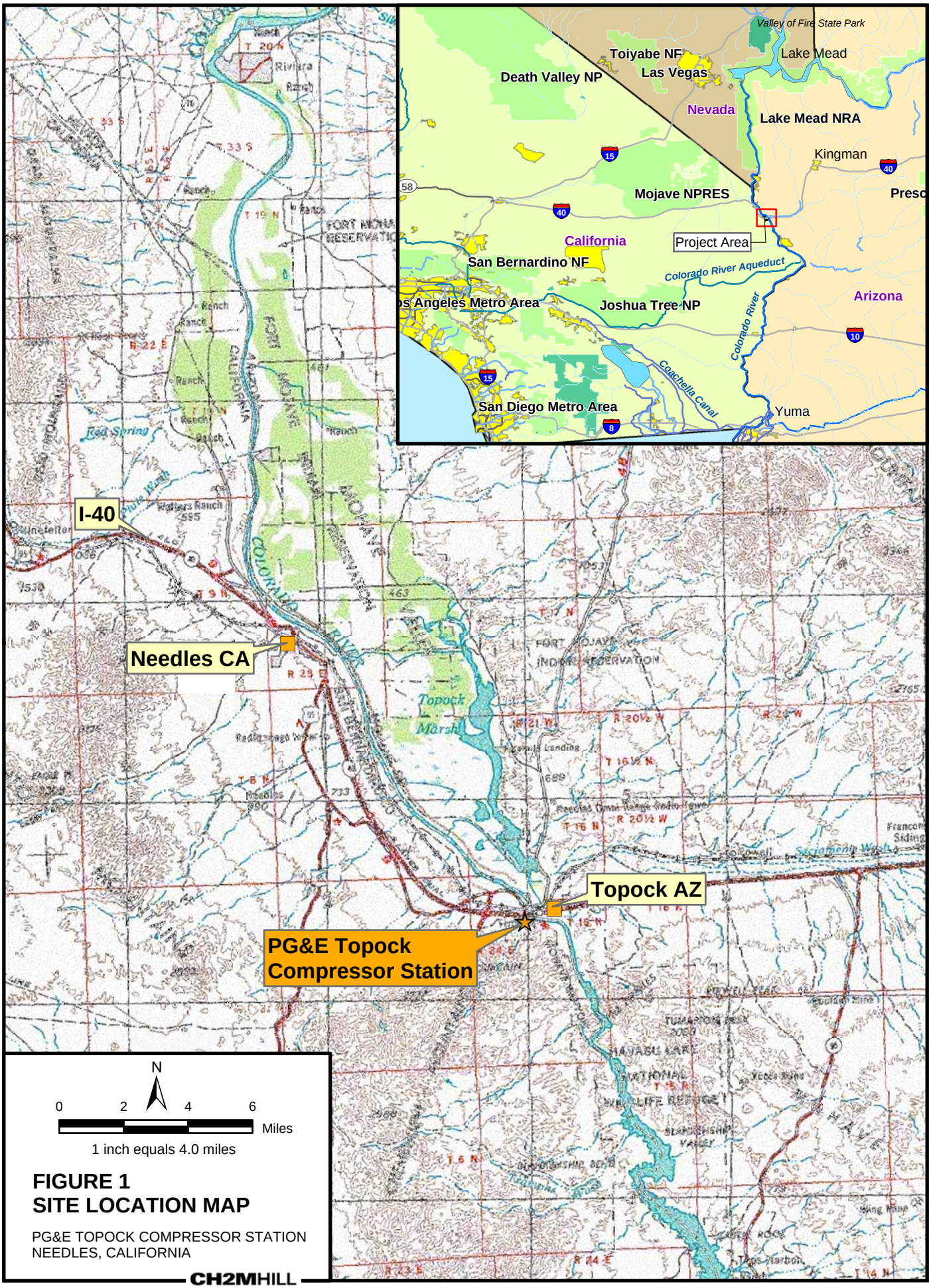

FIGURE 1
SITE LOCATION MAP

PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\IM3_CORRECTIVE_MEASURES_LOCATIONMAP.MXD
IM3_CORRECTIVE_MEASURES_LOCATIONMAP.PDF 8/8/2005 11:26:59

2.0 Project Description

The project consisted of several groundwater well installations. The project is described in the following section. The project site location and associated facilities are depicted in Figure 2.

2.1 IMPM Groundwater Wells

The drilling equipment access routes on the floodplain were based on the approved access routes described in the Technical Memorandum addressing access routes for site monitoring activities (CH2M HILL 2005b). The Technical Memorandum summarized sampling access routes and proposed mitigation measures for the floodplain that were reviewed and field surveyed with representatives of BLM and the Havasu National Wildlife Refuge (HNWR). Additionally, the IMPM staging areas at MW-35 and MW-20 Bench were previously approved for other various project related actions.

Site preparation took place prior to commencement of drilling activity and well installation tasks. Site preparation included identifying and avoiding biologically and/or culturally sensitive areas and site hazards, to the extent possible. After the drill rig mobilized into place, short-term staging areas were established. Plastic sheeting was placed onto the ground surface and under the drill rig to keep the drilling materials and equipment clean and to minimize impacts to the ground surface. Materials temporarily stored at the well sites included drilling equipment and well construction materials (e.g., casing, sand, bentonite, and grout).

Drilling was accomplished using a rotosonic drilling technique, which involved advancing a rotating and vibrating drill head or core barrel through the subsurface. This method produces a continuous core from the land surface to target drilling depths, generates minimal drilling wastes, and typically can drill through gravel, cobble, and softer bedrock formations. The continuous core obtained from sonic drilling facilitated the core logging, sampling, and core preservation requirements for the IM Phase 2 drilling program.

The monitoring wells within the floodplain area required the use of a track-mounted all-terrain rotosonic drill rig. This type of drilling equipment was previously used to install monitoring wells on the floodplain in April and May 2004 and January to March 2005. To support the all-terrain drilling rig, a tracked forklift and one or more all-terrain vehicles were used to transport crew, equipment, and materials from staging areas near the roadways to the drill sites on the floodplain. The forklift was also used to transport cuttings and excess core generated from drilling the soil borings to lined, steel roll-off soil bins that were temporarily stored, with permission of the BLM, at a staging area located at the MW-35 area adjacent to National Trails Highway and on the MW-20 bench. Additional project details may be found in the *Well Installation Work Plan for Interim Measures Performance Monitoring Program, PG&E Topock Compressor Station, Needles, CA* (CH2M HILL 2005a).

FIGURE 2
TOPOCK IMPM PROJECT MAP
BIOLOGICAL RESOURCES COMPLETION REPORT
FOR THE IMPM PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES CALIFORNIA

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\IMPM_WELL_CROSS_SECTIONS_JUNE06.MXD IMPM_WELL_CROSS_SECTION_JUNE06.PDF 6/13/2006 10:25:53
ES062006014BAO_Figure2_06/19/06_ez

3.0 Regulations and Stipulations

3.1 Federal Regulations and Standards

The following are the various federal regulations and policies, provided here for general information purposes.

- Federal Endangered Species Act, including the coordination requirement of Section 7 (16 U.S. Code [USC] §§1531 *et seq.*; 50 Code of Federal Regulations [CFR] Part 402). Section 9 of FESA prohibits the "take" of species federally listed as threatened or endangered.
- Migratory Bird Treaty Act (16 USC 703-712; 50 CFR 10). The federal Migratory Bird Treaty Act prohibits the "take" of migratory birds, unless permitted.

3.2 State Regulations and Standards

The following are the various state regulations and policies, provided here for general information purposes.

- California Endangered Species Act (California Fish and Game Code §§2050 *et seq.*). Section 2050 of the California Fish and Game Code prohibits any activities that would jeopardize or "take" a species listed as threatened or endangered within the state. CDFG Code §86.
- CDFG Code 1600 – Streambed Alteration Agreement (California Fish and Game Code §1600). Section 1600 of the Fish and Game Code regulates the alteration of the bed, bank, or channel of a stream, river, or lake, including dry washes.
- California Fully-protected Wildlife Species Provisions (California Fish and Game Code §§3511, 4700, 5050, and 5515). These provisions prohibit the taking of fully-protected birds, mammals, amphibians, and fish.

4.0 Awareness Training

As per the BLM stipulations, awareness training was provided to personnel before commencing construction activities. The awareness training focused on the southwestern willow flycatcher (*Empidonax traillii extimus*) and desert tortoise (*Gopherus agassizii*) for activities in the floodplain and upland project areas, respectively. Garcia and Associates (GANDA) biologists provided training to all onsite personnel prior to initiating work activities. The core group of onsite workers was trained at the project kick-off meeting and new personnel were identified at safety meetings each morning before work and provided training. Training included a discussion of species description, habitat, natural history, threats, legal protection under the Endangered Species Act(s), potential penalties, current survey findings, management, and protection measures.

5.0 Pre-Activity Surveys

Prior to construction activity, sites were surveyed by GANDA for sensitive biological resources. No desert tortoises, southwestern willow flycatchers, or nesting bird species were observed during the pre-activity surveys. In accordance with the BLM stipulations, sensitive vegetation was avoided. Flora and fauna observed during the pre-activity surveys and construction monitoring are listed below in Table 1.

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

Common Name	Scientific Name
Plants	
Arrowweed	*Pluchea sericea*
Allscale saltbush	*Atriplex polycarpa*
Beavertail cactus	*Opuntia basilaris*
Brittlebush	*Encelia farinosa*
Brome	*Bromus* sp.
Burrobush	*Ambrosia dumosa*
Catclaw	*Acacia greggii*
Cheesebush	*Hymenoclea salsola*
Creosote bush	*Larrea tridentata*
Dalea	*Dalea mollisma*
Desert trumpet	*Eriogonum inflatum*
Fishhook cactus	*Mammillaria dioica*
Honey mesquite	*Prosopis glandulosa*
Jumping cholla	*Opuntia bigelovii*
Ocotillo	*Fonquieria splendens*
Palo verde	*Cercidium microphyllum*
Russian thistle	*Salsola tragus*
Saltcedar	*Tamarix ramosissima*
Screwbean mesquite	*Prosopis pubescens*
Spiny rigid herb	*Chorizanthe rigida*
Sweetbush	*Bebbia juncea*
Reptiles	
Sagebrush lizard	*Sceloporus graciosus*

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

Common Name	Scientific Name
Side-blotched lizard	*Uta stansburiana*
Desert iguana	*Dipsosaurus dorsalis*
Western diamondback rattlesnake	*Crotalus atrox*
Birds	
Abert's towhee	*Pipilo abrti*
American coot	*Fulica Americana*
American kestrel	*Falco sparverius*
American white pelican	*Pelecanus erthrorynchos*
Anna's hummingbird	*Calypte anna*
Ash throated flycatcher	*Myiodynastes luteiventris*
Belted kingfisher	*Ceryle alcyon*
Black-chinned hummingbird	*Archilochus alexandri*
Black-tailed gnatcatcher	*Polioptila melanura*
Black phoebe	*Sayornis nigricans*
Blue-gray gnatcatcher	*Polioptila caerula*
Brewers blackbird	*Euphagus cyanocephalus*
Common raven	*Corvus corax*
Coopers hawk	*Accipiter cooperi*
Double crested cormorant	*Phalacrocorax auritus*
Gambel quail	*Callipepla gambelii*
Golden crowned sparrow	*Zonotrichia atricapilla*
Great-blue heron	*Ardea herodias*
Great egret	*Ardea alba*
Great-tailed grackle	*Quiscalus mexicanus*
Greater roadrunner	*Geococcyx californianus*
Ladder-backed woodpecker	*Picoides scalaris*
Lark sparrow	*Chondestes grammacus*
Lesser nighthawk	*Chordeiles acutipennis*
Lesser goldfinch	*Carduelis psaltria*
Mourning dove	*Zenaida macroura*
Orange crowned warbler	*Vermivora celata*

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

Common Name	Scientific Name
Osprey	*Pandion haliateus*
Phainopepla	*Phainopepla nitens*
Prairie falcon	*Falco mexicanus*
Red-tailed hawk	*Buteo jamaicensis*
Ring-necked duck	*Aythya collaris*
Rock dove	*Columba livia*
Rock wren	*Salpinctes obsletus*
Rough winged swallow	*Stelgidopteryx serripennis*
Ruby crowned kinglet	*Regulus calendula*
Sage thrasher	*Oreoscotes montanus*
Sharp shinned hawk	*Accipiter striatus*
Tree swallow	*Tachycineta bicolor*
Turkey vulture	*Cathartes aura*
Verdin	*Auriparus flaviceps*
Western wood pewee	*Contopus sordidulus*
Wilson's warbler	*Wisonia pusilla*
White-crowned sparrow	*Zonotrichia leucophrys*
Yellow rumped warbler	*Dendroica magnolia*
Mammals	
Antelope ground squirrel	*Ammospermophilus leucurus*
Beaver	*Castor canadensis*
Black-tailed hare	*Lepus californicus*
Bobcat tracks/scat	*Lynx rufus*
Cottontail rabbit	*Sylvilagus audubonii*
Coyote	*Canis latrans*
Desert woodrat	*Neotoma lepida*
Raccoon tracks	*Procyon lotor*

6.0 Compliance Monitoring

GANDA biologists were onsite full-time during all drilling related activity to ensure compliance with the BLM stipulations. The compliance monitoring was conducted during drilling activities, from February 06, 2006 through May 04, 2006. The IMPM groundwater well installations were completed in compliance with the BLM stipulations on May 19, 2006.

7.0 Land Use

Various activities unrelated to the remediation project have resulted in previous and ongoing use of the general area where the well installations occurred. The area is traversed by a major railway line, Interstate 40, several gas pipelines, historic U.S. Route 66, and the National Old Trails Highway. During design of the IMPM program, much care was taken to avoid impacts to sensitive biological resources. The project staging areas were located in previously disturbed areas. Additionally, the existing access route for groundwater well sampling within the floodplain was used to travel to the IMPM well sites.

To assess land use associated with the IMPM program, measurements were taken at each well site. The access routes and staging areas at MW-35 and MW-20 bench were not included in the land use calculation because these areas had been previously used and will continue to be used by project personnel for other investigative and remedial activities associated with the Topock Compressor Station. The total amount of land use resulting from the IMPM well installations was less than one acre. Seven of the eight IMPM sites were previously disturbed and/or denuded of vegetation. The land use calculation includes all sites regardless of previous condition. The sites were not cleared of vegetation. A small amount of vegetation including tamarisk and arrow weed was crushed by the equipment to access and drill the sites. Sensitive vegetation was avoided. Therefore, habitat disturbance at these sites was minor.

8.0 Conclusion

The IMPM Program was approved by the county, state and federal regulatory agencies. In conformance with BLM's stipulations, personnel were provided with awareness training and pre-activity surveys were conducted of all areas subject to well installation. Under the terms of the BLM approval, construction work was conducted in areas where significant biological resources were not present. In addition, appropriate markers were placed to delineate work boundaries and construction activities were continuously monitored by qualified biologists to ensure the protection of biological resources.

The minimization measures were effective and met the requirements of the BLM. There are no recommendations for modifying the measures to enhance species protection. In compliance with these measures, there was no "take" of any listed species.

9.0 References

California Department of Toxic Substances Control (DTSC). 2006. Letter from Norman Shopay/DTSC to Yvonne Meeks/PG&E. Subject: Conditional Approval of the Draft Well Installation Work Plan for Interim Measures Performance Monitoring Program, Dated November 30, 2005, PG&E Topock Compressor Station, Needles, CA. Jan. 6.

CH2M HILL. 2005a. *Well Installation Work Plan for Interim Measures Performance Monitoring Program, PG&E Topock Compressor Station, Needles, CA*. Nov. 30.

_____. 2005b. *Site Access and Sampling Procedures for Groundwater Monitoring Wells Located Near Potential Southwestern Willow Flycatcher Habitat, Rev. 2*. September.

U.S. Bureau of Land Management (BLM). 2006a. Letter from Timothy Z. Smith /BLM to Yvonne Meeks/PG&E. Subject: Bureau of Land Management (BLM) authorization to proceed with the well installation of the Site A, Site B, and Site C well locations, consistent with provisions of PG&E work plans previously submitted. Jan 27.

_____. 2006b. Letter from Timothy Z. Smith /BLM to Yvonne Meeks/PG&E. Subject: Bureau of Land Management (BLM) authorization to proceed with the well installation of the well locations 1, 2, 3, 4, and 5, including 5,000 gallon water tanks at well locations 1, 2, and 4 which will be consistent with provisions of PG&E work plans previously submitted. Feb 21.