STOEL RIVES LLP
ATTORNEYS AT LAW

500 Capitol Mall, Suite 1600
Sacramento California 95814
main 916.447.0700
fax 916.447.4781
www.stoel.com

MELISSA A. FOSTER
Direct (916) 319-4673
mafoster@stoel.com

June 8, 2011

VIA HAND DELIVERY

Eric Solorio, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Pio Pico Energy Center Project (11-AFC-1)
Application for Certification Refinement

Dear Mr. Solorio:

On behalf of Applicant Pio Pico Energy Center, LLC, please find enclosed for docketing the Application for Certification Refinement ("AFC Refinement") for the Pio Pico Energy Center Project. Pursuant to your discussion with Maggie Fitzgerald of URS Corporation, we are providing the Docket Unit with the original AFC Refinement and twelve (12) paper copies, along with twelve (12) disks containing the AFC Refinement. In addition, due to the voluminous nature of the AFC Refinement and the limits on incoming electronic transmissions to various email servers, we are personally delivering a paper copy and disk to those individuals listed on the Proof of Service who are located at the California Energy Commission to ensure receipt of the AFC Refinement. We will also mail a disk to the California Independent System Operator.

Should you have any questions related to this submittal, please do not hesitate to contact me.

Respectfully submitted,

Melissa A. Foster

MAF:kjh
Enclosure
cc: Proof of Service

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE *PIO PICO ENERGY CENTER, LLC*

Docket No. 11-AFC-1
PROOF OF SERVICE
(Revised 5/12/11)

APPLICANT

Gary Chandler, President
Pio Pico Energy Center
P.O. Box 95592
South Jordan, UT 84095
grchandler@apexpowergroup.com

David Jenkins, Project Manager
Pio Pico Energy Center, LLC
1293 E. Jessup Way
Mooresville, IN 46158
djenkins@apexpowergroup.com

APPLICANT'S CONSULTANTS

Maggie Fitzgerald, Project Manager
URS Corporation
2020 East 1st Street, Suite 400
Santa Ana, CA 92705
maggie_fitzgerald@urscorp.com

COUNSEL FOR APPLICANT

John A. McKinsey
Melissa A. Foster
Stoel Rives, LLP
500 Capitol Mall, Suite 1600
Sacramento, CA 95814
jamckinsey@stoel.com
mafoster@stoel.com

INTERESTED AGENCIES

California ISO
E-mail Preferred
e-recipient@caiso.com

ENERGY COMMISSION

CARLA PETERMAN
Commissioner and Presiding Member
cpeterma@energy.state.ca.us

Jim Bartridge
Adviser to Commissioner Peterman
jbartrid@energy.state.ca.us

KAREN DOUGLAS
Commissioner and Associate Member
kldougla@energy.state.ca.us

Galen Lemei
Adviser to Commissioner Douglas
glemei@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Eric Solorio
Siting Project Manager
esolorio@energy.state.ca.us

Kevin W. Bell
Staff Counsel
kwbell@energy.state.ca.us

Jennifer Jennings
Public Adviser
E-mail preferred
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Kimberly J. Hellwig, declare that on June 8, 2011, I served and filed copies of the attached:

Pio Pico Energy Center Project's Application for Certification Refinement, dated June 2011.

The original document filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/piopico/index.html].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

FOR SERVICE TO ALL OTHER PARTIES:

X sent cover letter electronically to all email addresses on the Proof of Service list;

_____ by personal delivery;

_____ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

_____ sending an original paper copy and one electronic copy, mailed or hand delivered and emailed respectively, to the address(es) below (***preferred method***).

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 11-AFC-1
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energystate.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Kimberly Hellwig

DECLARATION OF SERVICE

I, Carlos M. Recinos, declare that on June 8, 2011, I served and filed copies of the attached:

Pio Pico Energy Center Project's Application for Certification Refinement dated June 2011.

The original document filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/piopico/index.html].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

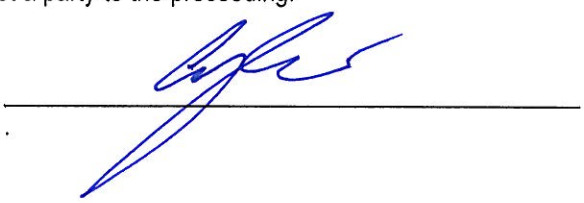
FOR SERVICE TO ALL PARTIES:

_____ sent cover letter electronically to all email addresses on the Proof of Service list;

_X_ by personal delivery to those individuals listed on the Proof of Service for the **Energy Commission and Dockets**;

_____ by delivering on this date to the **California Independent System Operator**, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



AFC Refinement

Pio Pico Energy Center

Submitted to the

California Energy Commission

June 2011

Submitted by

Pio Pico Energy Center, LLC

With support from

URS

2020 East First Street, Suite 400
Santa Ana, California 92705

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.1 INTRODUCTION

The Pio Pico Energy Center (PPEC) Application for Certification (AFC) was filed in February 2011, and was accepted as "data adequate" in April 2011. PPEC, LLC, or the "Applicant," is proposing a refinement to the previously submitted AFC for minor modifications to a previously proposed gas line route. The location and description of the project facility, remaining project components, and project characteristics have not changed, and are as described in the February 2011 AFC.

As described in the February 2011 AFC, the project-related gas line will be constructed, owned, and operated by San Diego Gas & Electric (SDG&E). On April 25, 2011, the Applicant received additional input from SDG&E representatives, who provided a revision to the Route A gas line alignment. SDG&E also confirmed that gas line Route B alignment will not change from the route described in the AFC. In regards to the original Route A (herein referred to as "Previous Route A"), SDG&E expressed concern with the undeveloped nature of the corridor south of the intersection of Otay Mesa Road and Alta Road. By contrast, the modified Route A alignment (herein referred to as "Modified Gas Line Route A") would be located in existing road rights of way.

The Modified Gas Line Route A is shorter than the Previous Route A, but largely follows the original route. Where it deviates, the modified route location is within paved road rights of way and. Implementation of the Modified Gas Line Route A would not result in changes to the overall impacts previously identified in the February 2011 AFC for the Previous Route A, and presents no laws, ordinances, regulations, and standards (LORS)-related compliance issues. The majority of the Modified Gas Line Route A maintains the same segments analyzed in the PPEC AFC, as shown on the revised Figure 3.3-3 (Potential Linears), which depicts the Modified Gas Line Route A location relative to the Previous Route A.[1] The Modified Gas Line Route A is approximately 7,775 feet long, whereas the Previous Route A was approximately 8,000 feet long, and Route B (still existing) is approximately 10,300 feet long, as presented and analyzed in the February 2011 AFC.

1.2 MODIFIED GAS LINE ROUTE A LOCATION AND DESCRIPTION

The Modified Gas Line Route A extends approximately 2,375 feet south along Alta Road, which is the same distance of the Previous Route A along Alta Road. The Modified Gas Line Route A then turns west on Otay Mesa Road for approximately 2,700 feet, and then turns south on Enrico Fermi Drive for approximately 2,700 feet to Airway Road, at which point it would connect to an existing SDG&E natural gas pipeline (refer to the revised Figure 3.3-3, Potential Linears). As shown on the revised Figure 3.3-3, the portions of the Modified Gas Line Route A along Alta Road and Otay Mesa Road were previously evaluated in the February 2011 AFC.

[1] As shown on the revised Figure 3.3-3, the portion of the original Route A that is no longer in consideration for the PPEC is the approximately 5,625 foot segment along Alta Road (south of Otay Mesa Road), which is unpaved, and contains several biological resources.

The new portion of the Modified Gas Line Route A would extend along Enrico Fermi Drive for approximately 2,700 feet (from Otay Mesa Road to Airway Road). Enrico Fermi Drive is currently a paved two-lane road with concrete curbs and is located in unincorporated San Diego County within the San Diego County East Otay Mesa Specific Plan Area. The gas line route would be adjacent to Technology Business Park, Light Industrial, and State Route Right-of-Way (for the future State Route 11) land use designations (County of San Diego 2010). Existing uses adjacent to the segment of Enrico Fermi Drive along the Modified Gas Line Route A consists of vacant and disturbed land and equipment storage.

1.3 PROJECT SCHEDULE

The Modified Gas Line Route A would be constructed in accordance to the schedule provided in the February 2011 AFC, where PPEC is expected to begin construction in 2013 following the California Energy Commission (CEC) approval of the AFC. As described in Section 3.9 of the February 2011 AFC, linear pipeline construction would occur during months 1 through 3 following the project notice to proceed.

1.4 PROJECT OWNERSHIP

As described in the February 2011 AFC, the project gas line would be constructed, owned, and operated by SDG&E.

1.5 SUMMARY OF ENVIRONMENTAL IMPACTS

The Modified Gas Line Route A is shorter than the original Route A, but largely follows the original route. The Modified Gas Line Route A would not result in changes to the overall project impacts previously identified in the February 2011 AFC for the Previous Route A, and presents no LORS-related compliance issues.

2.1 PROJECT OBJECTIVES/NEED

On April 25, 2011, the Applicant, PPEC, LLC, received additional input from San Diego Gas and Electric (SDG&E) representatives regarding a refined description of the previously proposed natural gas pipeline Route A (as described in the February 2011 AFC). This AFC Refinement describes and addresses the new Modified Gas Line Route A, which replaces the Previous Gas Line Route A, as described in the February 2011 AFC. This AFC Refinement is consistent with the Pio Pico Energy Center (PPEC) project objectives and needs described in Section 2 of the February 2011 AFC.

The PPEC project objectives and needs described in Section 2.0, Project Objectives/Needs of the AFC (February 2011) have not changed.

3.1 INTRODUCTION

The Pio Pico Energy Center (PPEC) Application for Certification (AFC) was filed in February 2011, and was accepted as "data adequate" in April 2011. PPEC, LLC is proposing a refinement to the previously submitted AFC for minor modifications to a previously proposed gas line route.

As described in the February 2011 AFC, the project-related gas line will be constructed, owned, and operated by San Diego Gas & Electric (SDG&E). On April 25, 2011, the Applicant received additional input from SDG&E representatives, who provided a revision to the Route A gas line alignment. SDG&E also confirmed that gas line Route B alignment will not change from the route described in the AFC. In regards to the original Route A (herein referred to as "Previous Route A"), SDG&E expressed concern with the undeveloped nature of the corridor south of the intersection of Otay Mesa Road and Alta Road. By contrast, the modified Route A alignment (herein referred to as "Modified Gas Line Route A") would be located in existing road rights of way.

The Modified Gas Line Route A is shorter than the original route, but largely follows the original route. Where it deviates, the modified route location is within paved road rights of way. Implementation of the Modified Gas Line Route A would not result in changes to the overall impacts previously identified in the February 2011 AFC associated with the Previous Route A, and presents no laws, ordinances, regulations, and standards (LORS)-related compliance issues. The majority of the Modified Gas Line Route A maintains the same segments analyzed in the PPEC AFC, as shown on revised Figure 3.3-3 (Potential Linears), which depicts the Modified Gas Line Route A location relative to the Previous Route A[1]. The Modified Gas Line Route A is approximately 7,775 feet long, whereas the Previous Route A was approximately 8,000 feet long, and Route B (still existing) is approximately 10,300 feet long, as presented and analyzed in the February 2011 AFC.

This Modified Gas Line Route A replaces the original natural gas pipeline Route A described in the February 2011 AFC.

Since the Modified Gas Line Route A would follow the same segments along Alta Road and Otay Mesa Road as analyzed in the February 2011 AFC for Route A and Route B, respectively, this section focuses on the additional portion of the gas line route not previously described or analyzed. This new portion of Route A would traverse Enrico Fermi Drive between Otay Mesa Road and Airway Road (approximately 2,700 feet). Again, the location and description of the balance of project components are as described in the AFC as filed in February of 2011.

[1] As shown on the revised Figure 3.3-3, the portion of the original Route A that is no longer in consideration for the PPEC is the approximately 5,625 foot segment along Alta Road (south of Otay Mesa Road), which is unpaved, and contains several biological resources.

3.2 MODIFIED GAS LINE ROUTE A DESCRIPTION

3.2.1 Location and Setting

The Modified Gas Line Route A extends approximately 2,375 feet south along Alta Road, which is the same distance of the original Route A along Alta Road. The Modified Gas Line Route A then turns west on Otay Mesa Road for approximately 2,700 feet, and then turns south on Enrico Fermi Drive for approximately 2,700 feet to Airway Road, at which point it would connect to an existing SDG&E natural gas pipeline (refer to the revised Figure 3.3-3, Potential Linears). As shown on the revised Figure 3.3-3, the portions of the Modified Gas Line Route A along Alta Road and Otay Mesa Road were previously evaluated in the February 2011 AFC for Route A (Previous) and Route B, respectively.

The new portion of the Modified Gas Line Route A would extend along Enrico Fermi Drive for approximately 2,700 feet (from Otay Mesa Road to Airway Road). Enrico Fermi Drive is currently a paved two-lane road with concrete curbs, and is located in unincorporated San Diego County within the San Diego County East Otay Mesa Specific Plan Area. The gas line route would be adjacent to Technology Business Park, Light Industrial, and State Route Right-of-Way (for the future State Route 11) land use designations (County of San Diego 2010). Existing uses adjacent to the segment of Enrico Fermi Drive along the Modified Gas Line Route A consists of vacant and disturbed land, and equipment storage.

3.2.2 Physical Setting

The topography along the Modified Gas Line Route A is presented on the revised Figure 3.3-5, Potential Linears on USGS Topographic Quadrangle. As described above, the Modified Gas Line Route A would be located along existing paved roads. The geological, seismic, and hydrological conditions described for the Project study area in the February 2011 AFC are applicable to the Modified Gas Line Route A.

3.3 CIVIL/STRUCTURAL FEATURES

As with the Previous Route A and Route B discussed in Section 3.3 of the February 2011 AFC, the gas pipeline would be constructed, owned, and operated by SDG&E. SDG&E will construct the gas pipeline (Modified Gas Line Route A) under a lane of the existing roadway or within the roadway shoulder. The final location of the pipeline with respect to the roadway will be determined during SDG&E's detailed engineering phase, and will be designed to maintain minimum required clearances from existing utility infrastructure.

As described in Section 3.8 the February 2011 AFC, piping will be installed underground from the connection at the SDG&E gas transmission line to the point where it enters the project site. At the project site boundary, the piping will be routed to the aboveground gas metering and regulation station. The gas piping system will be constructed of carbon steel materials suitable for the design pressures and temperatures in accordance with the American Petroleum Institute

(API), American Society for Testing and Materials (ASTM), and/or U.S. Department of Transportation (DOT) specifications for gas pipelines. Isolation and control valves will be provided as required by design, operational, and safety requirements.

3.4 CONSTRUCTION

SDG&E will construct the Modified Gas Line Route A using the construction practices (i.e., trenching, stringing, welding, installation, testing and commissioning, backfilling, plating, and cleanup methods and equipment described in Section 3.8 of the February 2011 AFC.

Measures to ensure safety during construction and maintenance of the pipeline include compliance with all applicable California Occupational Safety and Health Administration (Cal/OSHA), OSHA, and other regulations and standards as well as the contractor's specific safety plans for the project, which will address specific pipeline safety issues (Section 3.8.1.3 of the February 2011 AFC). This installation will also comply with all of the County of San Diego regulations, as required.

3.5 SCHEDULE AND WORKFORCE

Construction of the proposed Modified Gas Line Route A would occur according to the schedule and workforce described in Section 3.9 of the February 2011 AFC.

3.6 OPERATIONS AND MAINTENANCE

As described in Section 3.10.4 of the February 2011 AFC, SDG&E will construct, own, operate, and maintain the natural gas pipeline in accordance with applicable DOT regulations. The piping system will be inspected periodically as part of SDG&E's pipeline maintenance program.

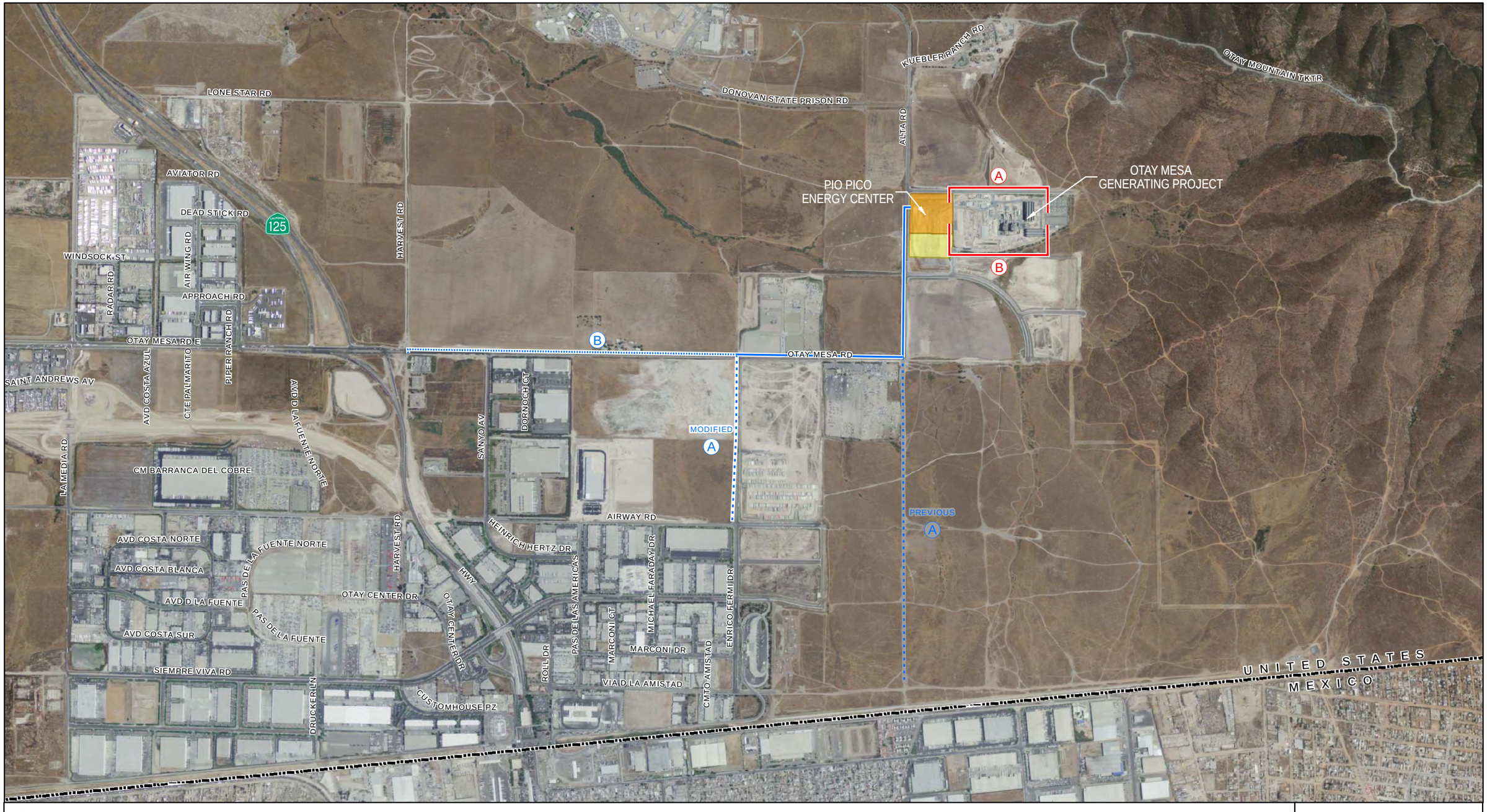
3.7 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

No applicable LORS in addition to those identified in the February 2011 AFC were identified for the Modified Gas Line Route A.

3.8 REFERENCES

County of San Diego. 2010. East Otay Mesa Business Park Specific Plan. As amended by SPA 10-001, September 15, 2010.

Pio Pico Energy Center, LLC. 2011. Pio Pico Energy Center Application for Certification (AFC). February 9, 2011.



LEGEND

- Project Site
- Laydown Area
- United States/Mexico Border
- 230 kV Transmission Line (Route A and Route B)
- Shared Portion of Route B and Modified Route A Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

N

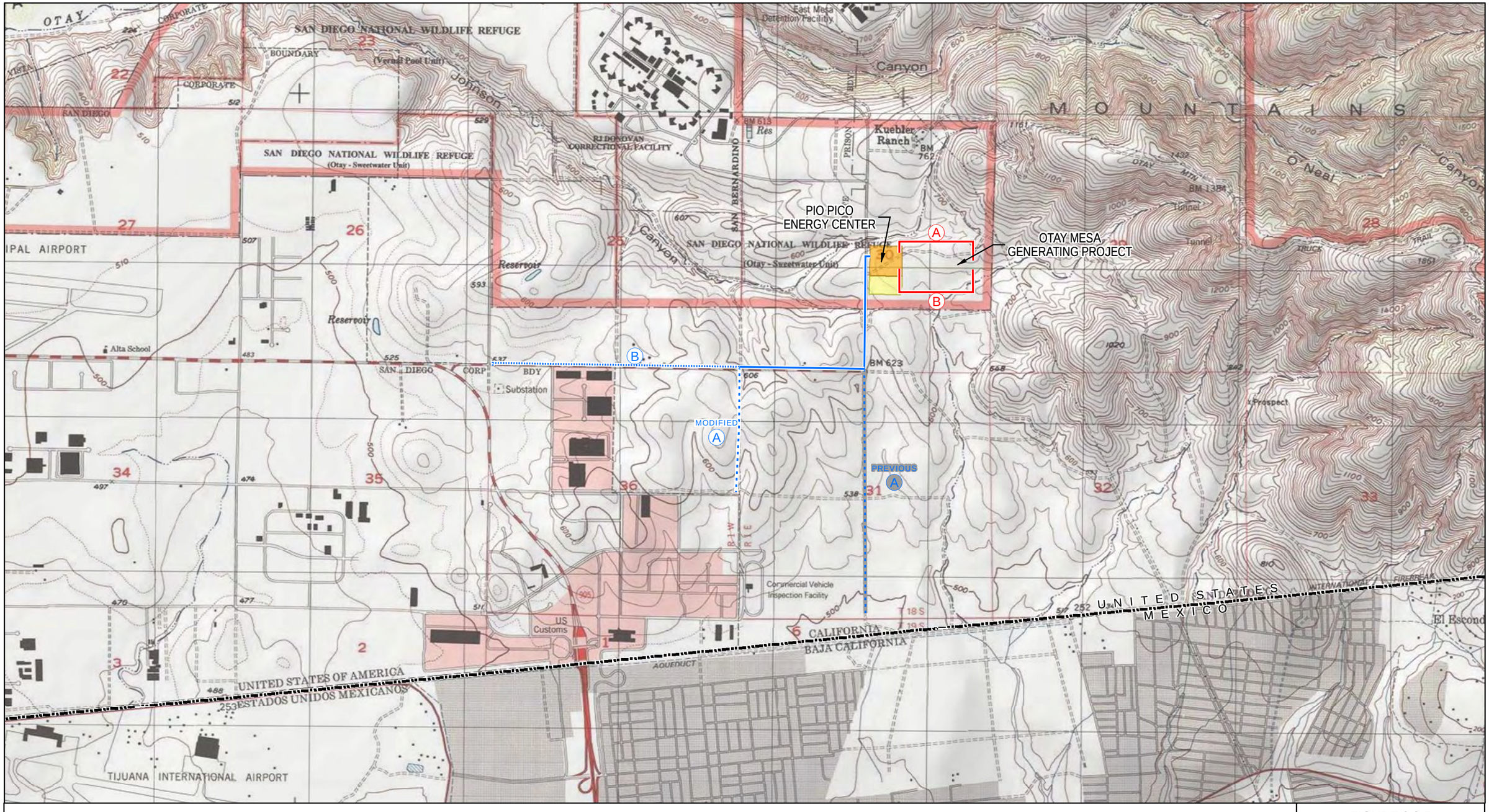
0 750 1,500 Feet

FIGURE 3.3-3 (REVISED)
POTENTIAL LINEARS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: NOVEMBER 2010

URS



LEGEND

- Project Site
- Laydown Area
- United States/Mexico Border
- 230 kV Transmission Line (Route A and Route B)
- Shared Portion of Route B and Modified Route A Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

N

0 1,000 2,000 Feet

1 inch = 2,000 feet

FIGURE 3.3-5
POTENTIAL LINEARS ON USGS TOPOGRAPHIC QUADRANGLE

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: NOVEMBER 2010

URS

As discussed in the February 2011 AFC, Title 14 of the California Code of Regulations Section 15126.6 requires an applicant to consider "the range of reasonable alternatives to the project, including the 'no project alternative,'…which will feasibly attain most of the basic objectives of the project, but will avoid or substantially lessen any of the significant effects of the project, and an evaluation of the comparative merits of the alternatives."

The refinement of the natural gas line route (Modified Gas Line Route A) analyzed in this AFC Refinement does not change the conclusions previously presented in Section 4.0 of the February 2011 AFC.

4.1 PROJECT OBJECTIVES AND SCOPE OF THE ALTERNATIVES ANALYSIS

The Modified Gas Line Route A does not change the Project Objectives and Scope of the Alternatives Analysis previously discussed in the February 2011 AFC.

4.2 NO PROJECT ALTERNATIVE

The Modified Gas Line Route A does not change the analysis of the No Project Alternative previously discussed in the February 2011 AFC.

4.3 GENERATION TECHNOLOGY ALTERNATIVES

The Modified Gas Line Route A does not change the analysis of generation technology alternatives previously discussed in the February 2011 AFC.

4.4 WATER/COOLING/WASTEWATER CYCLE ALTERNATIVES

The Modified Gas Line Route A does not change the analysis of water, cooling water, and wastewater cycle alternatives previously discussed in the February 2011 AFC.

4.5 SITE LOCATION AND LINEAR ROUTE ALTERNATIVES – SCREENING AND COMPARATIVE ANALYSIS

The Modified Gas Line Route A satisfies the linear natural gas line infrastructure criteria applied in the site screening methodology that was previously identified in the February 2011 AFC; namely that "linears associated with a project site alternative shall have few linear types, minimize linear distances, and have a favorable LORS setting, all to minimize environmental impacts, engineering and costs," and that the project uses a "natural gas main that has sufficient volume and pressure capacity." The Modified Gas Line Route A does not change the Site Location and Linear Route Alternatives Screening and Comparative Analysis previously discussed in the February 2011 AFC.

4.5.1 Alternative Site Locations

The Modified Gas Line Route A does not change the analysis of Alternative Site Locations previously discussed in the February 2011 AFC. The Modified Gas Line Route A is associated with the Preferred Site, and the following description of the Preferred Site natural gas pipeline (third bullet point in Section 4.5-1 of the February 2011 AFC) has been revised (changes shown underscored and in strike through) to address the Modified Gas Line Route A. The balance of the Preferred Site description and remaining linear infrastructure characteristics have not changed. The descriptions of Sites A through D (as presented in the February 2011 AFC) are not affected by the Modified Gas Line Route A.

Preferred Site (Natural Gas Pipeline Description)

Natural Gas pipeline – There are two possible routes for the gas supply pipeline. Both routes would connect to an existing SDG&E natural gas pipeline, but at different locations. The Modified Gas Line Route A ~~Route A would~~ extends approximately 2,375 feet ~~8,000 feet~~ south along Alta Road, which is the same distance as the original Route A along Alta Road. The Modified Gas Line Route A then turns west on Otay Mesa Road for approximately 2,700 feet, and then turns south on Enrico Fermi Drive for approximately 2,700 feet to Airway Road, ~~to near the U.S. Mexico border,~~ at which point it would connect to the existing SDG&E natural gas pipeline (refer to the revised Figure 3.3-3, Potential Linears). As shown on the revised Figure 3.3-3, the portions of the Modified Gas Line Route A along Route A (previous) and Route B, respectively. Route B would extend approximately 2,375 feet south along Alta Road, turn west on Otay Mesa Road, and continue approximately 7,920 feet to Harvest Road at which point it would connect to the existing SDG&E natural gas pipeline (Figure 3.3-3, Potential Linears) for a total of approximately 10,300 feet. The pipeline will be constructed, owned, and operated by SDG&E.

4.5.2 Comparative Summary of Alternative Sites' Ability to Meet Screening Criteria

The Modified Gas Line Route A does not change the Comparative Summary of Alternative Sites' Ability to Meet Screening Criteria previously discussed in the February 2011 AFC.

4.5.3 Environmental Impacts

The Modified Gas Line Route A does not change the Environmental Impacts analyzed for the alternative sites previously discussed in the February 2011 AFC.

4.5.4 Detailed Comparison of Two Feasible Alternatives

The Modified Gas Line Route A does not change the Detailed Comparison of Two Feasible Alternatives previously analyzed in the February 2011 AFC.

4.5.5 Environmental, Engineering, and Economic Merits Summary

The Modified Gas Line Route A does not change the Environmental, Engineering, and Economic Merits Summary previously addressed in the February 2011 AFC.

5.1 INTRODUCTION

This section presents a description of the affected environment, potential environmental consequences, cumulative impacts, mitigation measures, and applicable laws, ordinances, regulations, and standards (LORS), and permits associated with the natural gas route refinement for the Modified Gas Line Route A described in Section 3.0 of this AFC Refinement. Although the Modified Gas Line Route A shares a portion of the Previous Route A, this Refinement document only addresses the portion of the Modified Gas Line Route A not evaluated in the February 2011 AFC. The Modified Gas Line Route A is approximately 200 feet shorter in total length compared to the original Route A. Refer to Figure 3.3-3, Potential Linears (Revised), which shows the Modified Gas Line Route A location relative to the Previous Route A.

The resources analyzed in this section are as follows:

- Section 5.2: Air Quality
- Section 5.3: Geological Hazards and Resources
- Section 5.4: Soils
- Section 5.5: Water Resources
- Section 5.6: Biological Resources
- Section 5.7: Cultural Resources
- Section 5.8: Paleontological Resources
- Section 5.9: Land Use
- Section 5.10: Socioeconomics
- Section 5.11: Traffic and Transportation
- Section 5.12: Noise
- Section 5.13: Visual Resources
- Section 5.14: Waste Management
- Section 5.15: Hazardous Materials Handling
- Section 5.16: Public Health
- Section 5.17: Worker Safety

5.2 AIR QUALITY

This section presents a discussion of the potential impacts related to air quality from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.2.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.2.1 in the AFC (February 2011), and is subject to the same geographic, topographic, meteorological, climate, and air quality conditions. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.2.1 in the AFC (February 2011).

5.2.2 Environmental Consequences

Construction of the Modified Gas Line Route A would not involve activities or equipment resulting in emissions in excess of those analyzed in Section 5.2.4.1 of the AFC (February 2011). Therefore, construction impacts of the project would not result in additional impacts than the discussion presented in Section 5.2.4.4 of the AFC (February 2011).

Similarly, operation of the Modified Gas Line Route A would not involve activities or emissions in excess of those identified in Section 5.2.4.4 of the AFC (February 2011). As a result, impacts from operation of the project are unchanged from the discussion presented in Section 5.2.4.4 of the AFC (February 2011).

5.2.3 Cumulative Impacts

The modifications will not result in additional impacts to air quality as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to air quality resources beyond those addressed in Section 5.2.5 of the AFC (February 2011).

5.2.4 Conditions of Certification

The Modified Gas Line Route A poses the same effect to air quality as previously addressed in Section 5.2.7 of the AFC (February 2011). Therefore, the Conditions of Certification for the project, including the refinement discussed herein, are unchanged from the discussion presented in Section 5.2.7 of the AFC (February 2011).

5.2.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable air quality LORS described in Sections 5.2.3 and 5.2.6 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.2.8 of the AFC (February 2011).

5.2.6 References

No references in addition to those presented in Section 5.2.9 of the AFC (February 2011) were used for this AFC Refinement.

5.3 GEOLOGICAL HAZARDS AND RESOURCES

This section presents a discussion of the potential impacts related to geological hazards and resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.3.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.3.1 in the AFC (February 2011), and is subject to the same regional and local geology (refer to the revised Figure 5.3-1B) described in Sections 5.3.1.1 through 5.3.1.4 of the AFC (February 2011). The Modified Gas Line Route A would also be subject to the geological hazard characterizations pertaining to plate tectonic setting, seismicity and seismotectonic, Quaternary fault, seismic shaking, ground rupture, liquefaction, mass wasting and slope stability, subsidence and settlement, expansive soil, and geologic resource conditions addressed in Sections 5.3.1.5 through 5.3.1.14 of the AFC (February 2011). Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.3.1 in the AFC (February 2011).

5.3.2 Environmental Consequences

As described in Section 5.3.2 of the AFC (February 2011), the Modified Gas Line Route A will be designed and constructed to meet 2007 CBC industrial facility standards. As a result, impacts from construction and operation of the Modified Gas Line Route A are unchanged from the discussion presented in Section 5.3.2 of the AFC (February 2011).

5.3.3 Cumulative Impacts

The modifications will not result in additional impacts to geological hazards and resources as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to geological hazards and geologic resources beyond those addressed in Section 5.3.3 of the AFC (February 2011).

5.3.4 Conditions of Certification

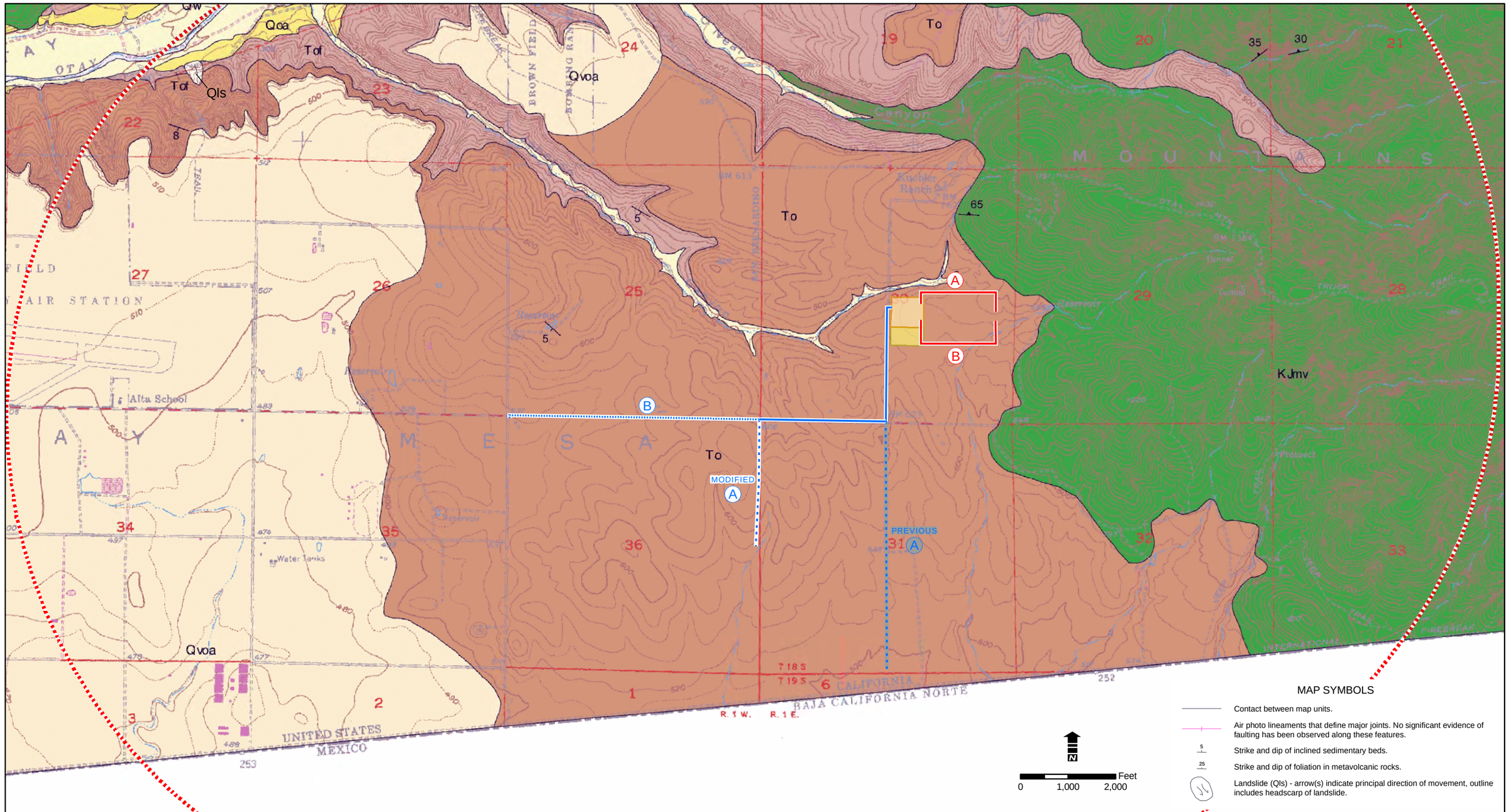
The Modified Gas Line Route A poses the same effect to geological hazards and resources as previously addressed in Section 5.3 of the AFC (February 2011). Therefore, the Conditions of Certification for the project, including the refinement discussed herein, are unchanged from the discussion presented in Section 5.3.4 of the AFC (February 2011).

5.3.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable geologic hazards and resources LORS described in Section 5.3.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.3.5.5 of the AFC (February 2011).

5.3.6 References

No references in addition to those presented in Section 5.3.6 of the AFC (February 2011) were used for this AFC Refinement.



Legend

- Project Site
- Laydown Area
- Area Within 2-Mile Perimeter of Study Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

Qw	Late Holocene active channel and wash deposits; unconsolidated sand, silt, gravel and clay. Deposits along smaller drainage channels are included in Qya.
Qya	Holocence alluvial deposits; unconsolidated to poorly consolidated silt, clay, sand and gravel. Includes modern active sedmients along small drainage channels.
Qls	Landslide deposits (Holocene and Late Pleistocene); landslide slump and rock fall deposits. On map, the deposit is depicted by landslide arrows
Qoa	Alluvial deposits (late to middle Pleistocene); moderately consolidated, poorly sorted flood plain deposits consisting of gravelly sandy silt and clay.
Qvoa	Alluvial deposits (middle to early Pleistocene); well consolidated, poorly sorted flood plain deposits consisting of gravel, sand, silt and clay.
To	Otay Formation (Oligocene to Miocene); poorly indurated massive lightcolored sandstone, siltstone and claystone, interbedded with bentonite lenses.
Tof	Otay Formation-fanglomerate facies (Oligocene to Miocene); poorly cemented bouldery conglomerate and coarse-grained sandstone. Interfingered with overlying To.
KJmv	Metavolcanic rocks (Jurassic and Cretaceous); mildly metamorphosed volcanic, volcaniclastic and sedimentary rocks. Volcanic rocks range from basalt to rhyolite, but are predominantly andesite and dacite. In general, metavolcaniclastic rocks are most abundant.

FIGURE 5.3-1B (REVISED)
GEOLOGY

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874638
DATE: DECEMBER 2010

URS

Source: Geologic Map of the Otay Mesa 7.5' Quadrangle San Diego County, California: A Digital Database, 2002

5.4 SOILS

This section presents a discussion of the potential impacts related to soils from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.4.1 Affected Environment

The Modified Gas Line Route A crosses the Diablo clay soil types DaC (Diablo clay, 2 to 9 percent slopes) and DaD (Diablo clay, 9 to 15 percent slopes) previously described in Section 5.4.1.2 of the AFC (February 2011). Refer to the revised Figure 5.4-1, Soils, which identifies the soil types along the Modified Gas Line Route A. The Modified Gas Line Route A is located in similar soils conditions as previously addressed in the AFC (February 2011); therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.4.1 in the AFC (February 2011).

5.4.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A would not involve activities or conditions in excess of those identified in Section 5.4.2 of the AFC (February 2011), and would involve less excavation of the ScA (Salinas clay, 0 to 2 percent slopes) soil type. As a result, impacts from the project are unchanged from the discussion presented in Section 5.4.2 of the AFC (February 2011).

5.4.3 Cumulative Impacts

The gas line route modification will not result in additional impacts to soils as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to soil resources beyond those addressed in Section 5.4.3 of the AFC (February 2011).

5.4.4 Conditions of Certification

The Modified Gas Line Route A poses the same effect to soils as previously addressed in Section 5.4.2 of the AFC (February 2011). Therefore, the Conditions of Certification for the project, including the refinement discussed herein, are unchanged from the discussion presented in Section 5.4.4 of the AFC (February 2011).

5.4.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable soil-related LORS described in Section 5.4.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.4.5.5 of the AFC (February 2011).

5.4.6 References

No references in addition to those presented in Section 5.4.6 of the AFC (February 2011) were used for this AFC Refinement.

Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- DaC, Diablo clay, 2 to 9 percent slopes
- DaD, Diablo clay, 9 to 15 percent slopes
- DaE2, Diablo clay, 15 to 30 percent slopes, eroded
- HrC, Huerhuero loam, 2 to 9 percent slopes
- HrC2, Huerhuero loam, 5 to 9 percent slopes, eroded
- HrD, Huerhuero loam, 9 to 15 percent slopes
- HrD2, Huerhuero loam, 9 to 15 percent slopes, eroded
- LsE, Linne clay loam, 9 to 30 percent slopes
- OhF, Olivenhain cobbly loam, 30 to 50 percent slopes
- ScA, Salinas clay, 0 to 2 percent slopes
- SnG, San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes
- SuA, Stockpen gravelly clay loam, 0 to 2 percent slopes
- SuB, Stockpen gravelly clay loam, 2 to 5 percent slopes
- TeF, Terrace escarpments

FIGURE 5.4-1 (REVISED)
SOILS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874638
DATE: DECEMBER 2010

URS

Source: Natural Resources Conservation Service (NRCS), CA638 Soil Survey (Pacific Southwest), 2007

5.5 WATER RESOURCES

This section presents a discussion of the potential impacts related to water resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.5.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.5.1 in the AFC (February 2011), and is subject to the same physiographic, topographic, climate, and water quality conditions. Figure 5.5-2 (Revised) shows the Modified Gas Line Route A in relation to the Project Site, the Previous Gas Line Route A, and existing surface water features. The Modified Gas Line Route A would not cross any Federal Emergency Management Agency (FEMA)-designated flood hazard areas. As described in Section 5.6, Biological Resources, the refinement would not cross any intermittent streams or Clean Water Act (CWA) jurisdictional features. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.5.1 in the AFC (February 2011).

5.5.2 Environmental Consequences

Construction activities associated with the Modified Gas Line Route A would be similar to those analyzed in Section 5.5.3.1 through 5.5.3.5 of the AFC (February 2011). The Modified Gas Line Route A would be slightly shorter than the Previous Gas Line Route A, and would be constructed within existing road right-of-ways (i.e., under a lane of the road or within the roadway shoulder) along Alta Road and Otay Mesa Road, but would now include 2,700 feet within the road right-of-way along Enrico Fermi Drive, as shown on Figure 3.3-3 (Revised) of the AFC Refinement. As described in Sections 5.5.3.2 and 5.6.3 of the AFC (February 2011), a small portion of the Previous Gas Line Route A would have crossed CWA jurisdictional features. The Modified Gas Line Route A will not cross any such features and will avoid any that may be located nearby. Construction practices and Best Management Practices (BMPs) would be the same as previously described in Section 5.5.3.2 of the AFC. Therefore, construction impacts of the project would not result in any additional impacts beyond those analyzed in Section 5.5.3 of the AFC (February 2011).

Similarly, operation impacts of the Modified Gas Line Route A would be similar to those identified in Section 5.5.3.1 through 5.5.3.5 of the AFC (February 2011). As a result, impacts from operation of the project are unchanged from the discussion presented in Section 5.5.3 of the AFC (February 2011).

Construction and operation of the Modified Gas Line Route A would not result in changes to the project with respect to water resources and water quality. Therefore, the environmental consequences resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.5.3 in the AFC (February 2011).

5.5.3 Cumulative Impacts

The modifications will not result in additional impacts to water resources or water quality as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to water resources beyond those addressed in Section 5.5.3.6 of the AFC (February 2011).

5.5.4 Conditions of Certification

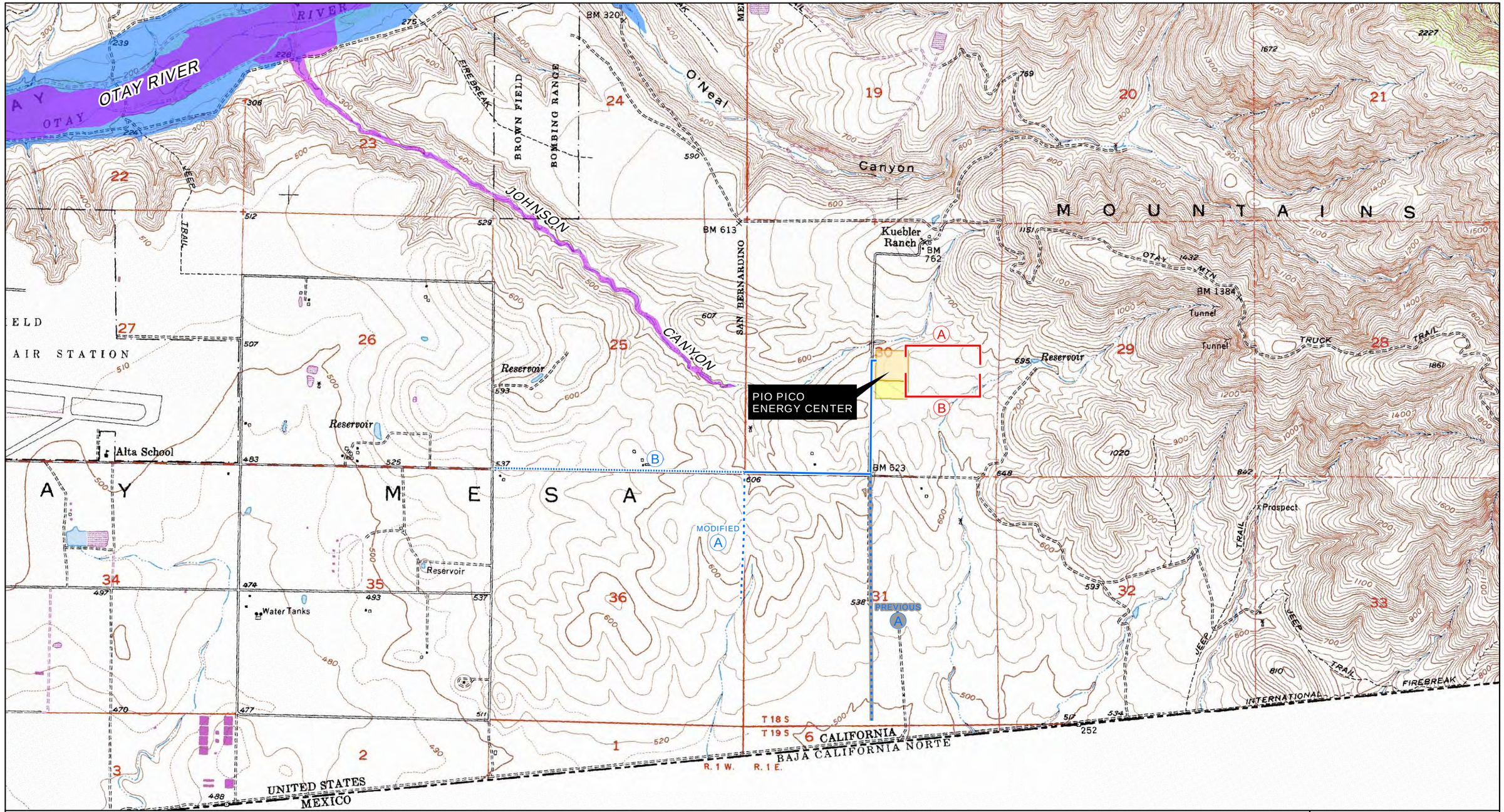
Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.5.4 of the AFC (February 2011).

5.5.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable water resources and water quality LORS described in Section 5.5.5 of the AFC (February 2011). The project would not require changes to the permits required and permit schedule described in Section 5.5.7 of the AFC (February 2011).

5.5.6 References

No references in addition to those presented in Section 5.5.8 of the AFC (February 2011) were used for this AFC Refinement.



Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- FEMA 100-Year Flood Hazard Area
- Dam Inundation Area

N

0 1,000 2,000 Feet

FIGURE 5.5-2 (REVISED)
SURFACE WATER FEATURES AND FLOOD INUNDATION AREAS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874838
DATE: DECEMBER 2010

URS

Source: San Diego Geographic Information Source (SanGIS) in Cooperation with the Department of Public Works, 2004. Federal Emergency Management Act Q3 Flood Data, 1997. USGS 24K Digital Raster Graphic Mosaics (Cal-Atlas 2003).

5.6 BIOLOGICAL RESOURCES

This section presents a discussion of the potential impacts related to water resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.6.1 Affected Environment

The Modified Gas Line Route A follows the same segments along Alta Road and Otay Mesa Road as analyzed in the AFC (February 2011) for Route A (previous) and Route B natural gas lines; therefore, this assessment will analyze the approximately 2,700-foot segment along Enrico Fermi Drive (refer to the revised Figure 5.6-1, Biological Study Area). Enrico Fermi Drive is a paved road with concrete curbs, and the additional segment of Modified Gas Line Route A will be located within the disturbed Enrico Fermi Drive right-of-way.

A California Natural Diversity Database (CNDDB) query was conducted to identify biological resources within one-mile of the Enrico Fermi Drive segment, as shown on Figure 5.6-2, Biological Resources Within a 1-Mile Radius of the Site (Revised). The CNDDB query did not identify species in addition to those identified in the February 2011 AFC.

Consistent with the study area setting described in Section 5.6.2 of the February 2011 AFC, the Modified Gas Line Route A is located within a predominantly anthropogenically-disturbed area containing developed/disturbed and non-native grassland land cover (refer to the revised Figure 5.6-4, Vegetation Communities/Land Cover Types). A biological resources survey was conducted along the segment of Enrico Fermi Drive on May 17, 2011 to assess general and dominant vegetation community types, community sizes, habitat types, and species present along the portion of the Modified Gas Line Route A not evaluated in the February 2011 AFC. Observations during the survey confirmed the developed/disturbed nature of the paved Enrico Fermi Road and right-of-way areas, including roadway curbs. Properties adjacent to Enrico Fermi Drive consisted of primarily developed/disturbed land cover types, and non-native grasslands (refer to the revised Figure 5.6-4). No plant and wildlife species, habitat types, or biological resources were observed in addition to those identified in Section 5.6.2 of the February 2011 AFC. In contrast, the study segment of Enrico Fermi Drive does not include suitable habitat for vernal pools, and/or vernal pool fairy shrimp. The study segment of Enrico Fermi Drive also does not include jurisdictional waters previously identified along the Previous Gas Line Route A.

5.6.2 Environmental Consequences

As a result of the absence of vernal pools, and/or vernal pool fairy shrimp, and jurisdictional waters along Enrico Fermi Drive, construction of the Modified Gas Line Route A would result in

less impact to biological resources than the Previous Gas Line Route A analyzed in the February 2011 AFC. For the remaining biological resources, construction of the Modified Gas Line Route A would not result in potential impacts in addition to the discussion presented in Section 5.6.3 of the February 2011 AFC.

Operation impacts of the Modified Gas Line Route A would be similar to those identified in Section 5.5.6.3 of the AFC (February 2011). As a result, impacts from construction and operation of the project are unchanged from the discussion presented in Section 5.6.3 of the AFC (February 2011).

5.6.3 Cumulative Impacts

As a result of the absence of vernal pools and associated vernal pool fairy shrimp, and jurisdictional waters, Modified Gas Line Route A would cause less impact to biological resources than the Previous Gas Line Route A. Therefore, the project, including the Modified Gas Line Route A, will not result in any significant cumulative impacts to biological resources beyond those addressed in Section 5.8.3 of the AFC (February 2011).

5.6.4 Conditions of Certification

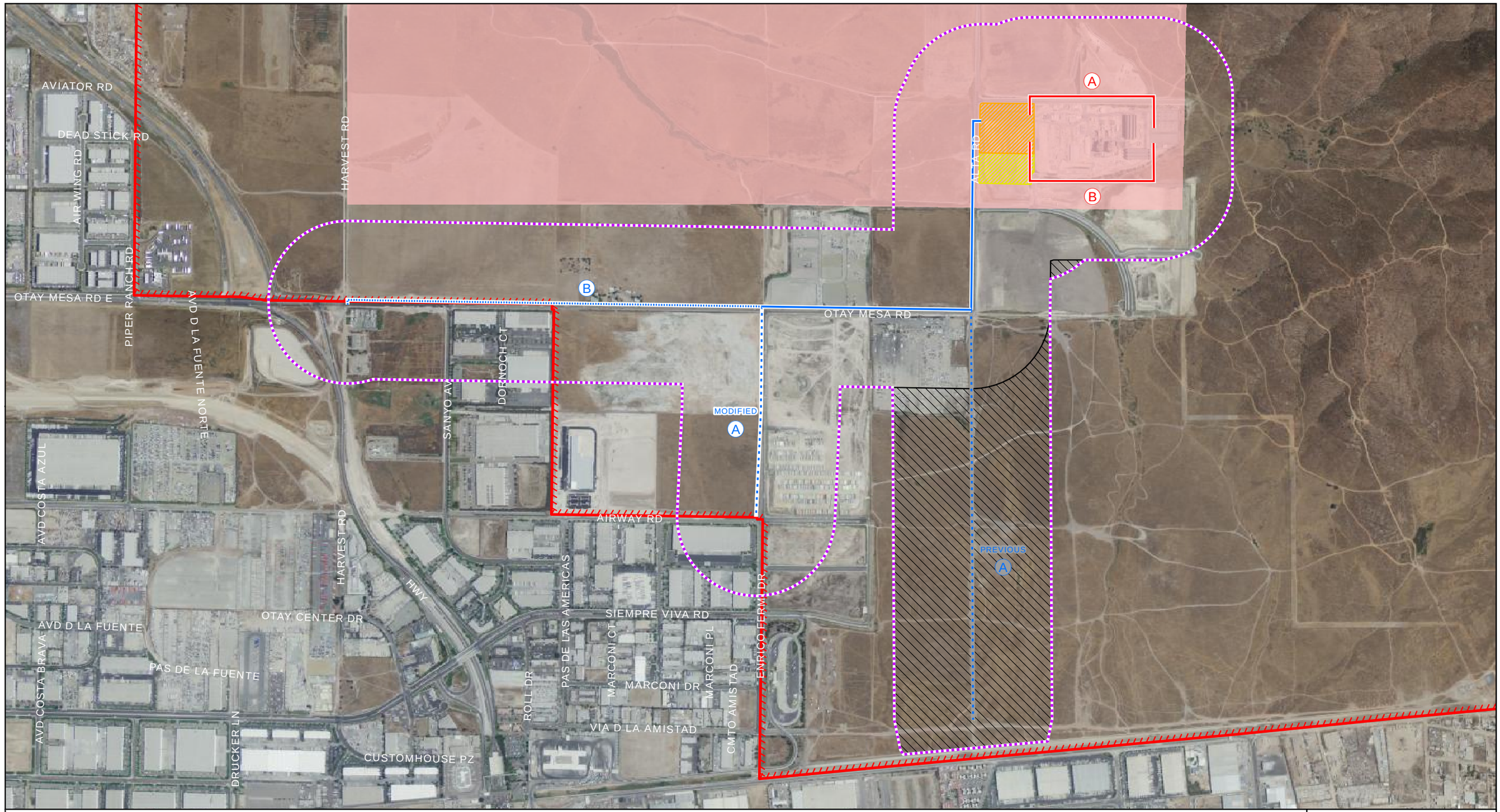
Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.6.5 of the AFC (February 2011).

5.6.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable biological resources LORS described in Section 5.6.6 of the AFC (February 2011). The project would not require changes to the permits required and permit schedule described in Section 5.6.8 of the AFC (February 2011) and PPEC Data Adequacy Supplement (April 2011).

5.6.6 References

No references in addition to those presented in Section 5.6.9 of the AFC (February 2011) and the PPEC Data Adequacy Supplement (April 2011) were used for this AFC Refinement.



Legend

- Biological Study Area
- Not Included in Final Design
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- USFWS National Wildlife Refuge Otay-Sweetwater Unit
- MSCP Boundary

N

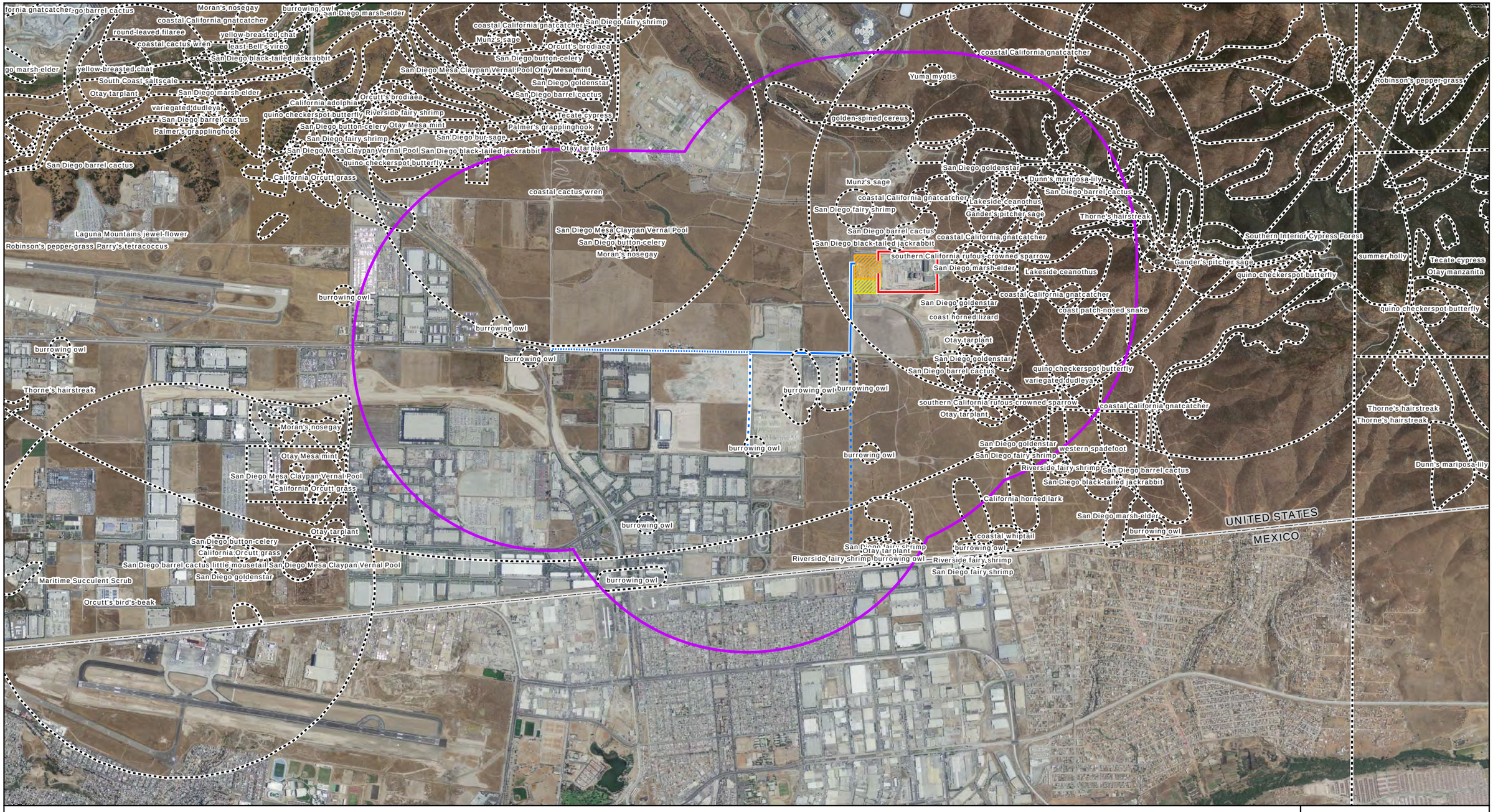
0 600 1,200 Feet

FIGURE 5.6-1 (REVISED)
BIOLOGICAL STUDY AREA

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS



Legend

- 1-Mile Radius of Proposed Site
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- California Natural Diversity Database (May 2010)

N

0 Feet 2,500

FIGURE 5.6-2 (REVISED)
BIOLOGICAL RESOURCES WITHIN A 1-MILE RADIUS OF THE SITE

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

AVIATOR RD
DEAD STICK RD
AIR WING RD
HARVEST RD
PIPER RANCH RD
OTAY MESA RD E
AVD D LA FUENTE NORTE
OTAY MESA RD
DORNOCH CT
SANYO AV
MODIFIED
A
B
AIRWAY RD
AVD COSTA AZUL
HARVEST RD
HWY
OTAY CENTER DR
AVD D LA FUENTE
AVD COSTA BRAVA
PAS DE LA FUENTE
DRUCKER LN
CUSTOMHOUSE PZ
ROLL DR
PAS DE LAS AMERICAS
SIEMPRE VIVA RD
MARCONI CT
MARCONI DR
MARCONI PL
VIA D LA AMISTAD
CMTO AMISTAD
ENRICO FERMI DR
ALTA RD
PREVIOUS

Legend

- Biological Study Area
- Not Included in Final Design
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Developed/Disturbed
- Riparian
- Non-Native Grassland

N

0 600 1,200 Feet

FIGURE 5.6-4 (REVISED)
VEGETATION COMMUNITIES/
LAND COVER TYPES

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

5.7 CULTURAL RESOURCES

This section presents a discussion of the potential impacts related to cultural resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

A cultural resources assessment (hereafter referred to as the "Addendum to the Cultural Resources Assessment Report," or "Addendum") was conducted for the Modified Gas Line Route A, and supplements the Cultural Resources Assessment Report prepared for the February 2011 AFC. The results of the supplemental cultural resources assessment, as presented in the Addendum (refer to Appendix K) indicate that no significant project-related impacts to significant cultural resources are anticipated for the Modified Gas Line Route A. In the event of the discovery of California Register of Historical Resources (CRHR)-eligible cultural resources within the project area during PPEC's construction phase, appropriate mitigation measures and conditions of certification will be used to employ site avoidance and/or proper treatment of previously unknown cultural resources. With the proposed conditions of certification outlined in the February 2011 AFC Section 5.7, Cultural Resources, the project is not expected to have significant environmental impacts and will comply with all applicable laws, ordinances, regulations, and standards (LORS).

5.7.1 Affected Environment

Since the Modified Gas Line Route A is located within the study area (see Figure 5.7-1, Regional Location) previously evaluated in Section 5.7.1 of the AFC (February 2011), the physiography, soils and geography, prehistory, and historic setting are unchanged from that presented in Section 5.7.1.3 and 5.7.1.4 of the AFC (February 2011).

5.7.1.1 Study Area

The PPEC project site, linears, and temporary laydown area are as described in Section 5.7.1 of the AFC (February 2011) with the exception of a portion of the Route A natural gas line. The Modified Gas Line Route A extends approximately 2,375 feet south along Alta Road, turns west on Otay Mesa Road for approximately 2,700 feet, then turns south on Enrico Fermi Drive for approximately 2,700 feet to Airway Road at which point it would connect to an existing SDG&E natural gas pipeline (see revised Figure 5.7-2, Site Vicinity). Since the Modified Gas Line Route A follows the same segments along Alta Road and Otay Mesa Road as analyzed in the AFC (February 2011) for the Previous Route A natural gas line, this assessment only analyzes the additional segment along Enrico Fermi Drive. Figures 5.7-1 and 5.7-2 (Revised) depict the project location and proposed refinement.

5.7.1.2 Site Description

The archaeological and historic architecture survey areas previously identified for the project site, laydown area, and project linears, excluding the portion of the Modified Route A Gas Line along Enrico Fermi Drive, are contained in Section 5.7.1.2 of the AFC (February 2011).

Archaeological Survey Area. The archaeological survey area for this supplemental assessment includes the segment of Modified Route A Gas Line along Enrico Fermi Drive, plus an additional 50-foot buffer on either side (see revised Figure 5.7-3, Survey Areas, Aerial and revised Figure 5.7-4, Survey Areas. USGS). Since the segment of the Modified Route A Gas Line along Enrico Fermi Drive is located within the road right-of-way and access to the parcels within the 50-foot buffer was not available, an archaeological survey was not conducted for this Refinement document.

Historic Architecture. The historic architecture survey area identified for this Refinement includes the segment of Modified Route A Gas Line along Enrico Fermi Drive, plus a parcel on both sides past the underground gas line route segment (see revised Figure 5.7-3, Survey Areas, Aerial and revised Figure 5.7-4, Survey Areas, USGS). Per the California Energy Commission (CEC) Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C), a proposed underground natural gas line is not considered an "above-ground linear facility," and therefore the historic architecture survey did not extend one half-mile past the gas line. Therefore, investigators performed a historic architecture survey for the parcels adjacent to the gas line corridor for this Refinement. Of note, the historic architecture survey occurred from public vantage points, since site access and right of entry were not available at the time of the survey for the privately-owned properties. In areas where view of the property was obstructed (e.g., tree overgrowth, private roads, etc.), investigators utilized available information to study the property. In general, the survey did not consider properties set back from the edge/boundary of their parcel and large rural properties were not identified beyond the area reasonably subject to effect by the project.

5.7.1.3 Disturbance within the Study Area

The segment of Modified Route A Gas Line along Enrico Fermi Drive is located in a developed area of Otay Mesa. The segment begins at Otay Mesa Road and terminates at Airway Road. To the east of the segment is a large paved truck lot used for commercial shipping. To the west is an open field that slopes west.

A full description of the study area surrounding the project site, laydown area, and project linears is provided in Section 5.7.1.5 of the AFC (February 2011).

5.7.1.4 Native American Contacts

The NAHC was contacted on November 16, 2010 to request a search of the Native American Sacred Lands File (SLF) to aid in determining the presence of Native American sacred sites within the project area. The results of the search request are provided in Section 5.7.1.9 of the AFC (February 2011).

On May 4, 2011, URS requested an additional search of the Native American Sacred Lands File (SLF) for the Modified Route A Gas Line segment along Enrico Fermi Drive. A list of Native

American contacts that may have knowledge of known cultural resources or sacred sites within the project area was also requested.

The NAHC responded on May 11, 2011, indicating their records search of the SLF failed to identify the presence of Native American cultural resources in the immediate project area. In addition to the response letter, the NAHC also provided a Native American contact list. Each contact on the list was sent a notification of the proposed undertaking by mail on May 19, 2011 with a request that they respond with information regarding any known cultural resources or sacred sites within the project area. To date, URS has not received any written responses regarding the Modified Gas Line Route A. Sample correspondence letters between URS, on behalf of Pio Pico Energy Center, LLC, and affected parties, including the NAHC, are included in Attachment D of the Addendum (Appendix K).

5.7.1.5 Key Personnel Qualifications

The key cultural resources personnel who conducted and/or supervised the field survey and prepared the AFC Refinement and supplemental cultural resources assessment are:

- Rachael Nixon, MA, RPA (URS Principal Investigator for this project)
- Jeremy Hollins, MA (URS Architectural Historian)
- Joel Levanetz (URS Architectural Historian)

Ms. Nixon and Mr. Hollins meet the professional standards of the Secretary of Interior Standards and Guidelines for Archaeology and Historic Preservation, National Parks Service, 1983. In addition, Ms. Nixon has been accredited by the Register of Professional Archaeologist (RPA). Other contributors include URS Architectural Historian Joel Levanetz. Qualifications of the primary individuals contributing to this assessment are provided in Attachment E of the Addendum (Appendix K).

5.7.1.6 Site Records and Literature Review

On November 16, 2010, Mr. David M. Caterino (Coordinator) and Mr. Nick Doose, of the South Coastal Information Center (SCIC), performed a records search at the SCIC at San Diego State University for all relevant previously recorded cultural resources and previous investigations completed for the project site, laydown area, and a one-mile search radius, as well as those within the transmission and natural gas line corridors, and a quarter-mile search area on either side of the linear corridors. The results of this records search are provided in Section 5.7.1.11 of the AFC (February 2011).

On May 5, 2011, Mr. Nick Doose performed a supplemental records search at the SCIC at San Diego State University. The SCIC is the California Historical Resource Information System (CHRIS) cultural resources database repository for San Diego and other counties in the region. Mr. Doose searched all relevant previously recorded cultural resources and previous

investigations completed for the segment of Modified Route A Gas Line along Enrico Fermi Drive and a quarter-mile search area on either side. The following information was reviewed by the SCIC: location maps for all previously recorded trinomial and primary prehistoric and historic archaeological sites and isolates; site record forms and updates for all cultural resources previously identified; previous investigation boundaries; and National Archaeological Database (NADB) citations for associated reports, historic maps, and historic addresses.

According to the SCIC, there is one previously conducted cultural resource investigation and one previously recorded cultural resources site within one-quarter mile of the segment of Modified Route A Gas Line along Enrico Fermi Drive, excluding cultural resource investigations and previously recorded cultural resources sites previously identified as part of the November 16, 2010 records search. The previously conducted investigation (NADB 1129574) and previously recorded cultural resource (CA-SDI-12884) are located approximately one-quarter mile west–southwest of the Route A Gas Line along Enrico Fermi Drive. The investigation, NADB 1129574, was completed in 2003 and completed archaeological testing for CA-SDI-12884, which was originally recorded in 1991 by Huey and Campell. In 1991, the site was recorded as a light lithic scatter consisting of metavolcanic tools and debitage. The investigation, NADB 1129574, recommended the site as not eligible or significant, as a result of the archaeological testing. The records search radius and the results of the records search are depicted in Figures 5A through 5D and Attachment C of the Addendum (Appendix K).

5.7.1.7 Field Surveys

Archaeological Field Survey. The results for the previously conducted archaeological field survey of the project site, laydown area, and project linears are provided in Section 5.7.1.12 of the AFC (February 2011).

A supplemental archaeological field survey was not conducted for the segment of Modified Route A Gas Line along Enrico Fermi Drive since the gas line is contained within a road right-of-way and access to the parcels within the 50-foot buffer on either side of the gas line was not available.

Historic Architecture Field Survey. On December 1, 2010, an intensive historic architecture survey was conducted to account for the properties that appeared to be older than 45 years (1966 or earlier) within the historic architecture survey area, which included the project site, laydown area, and project linears, plus an additional half-mile around the project site, laydown area and transmission line routes, and parcels adjacent on both sides of the underground gas line routes. The results of this survey are provided in Section 5.7.1.12 of the AFC (February 2011).

Historic Architecture Methodology. On May 9, 2011, a supplemental historic architecture survey was conducted by Mr. Joel Levanetz to account for the properties that appeared to be older than 45 years (1966 or earlier) within the supplemental historic architecture survey area, which included the segment of Modified Route A Gas Line along Enrico Fermi Drive and parcels adjacent on both sides of the gas line route segment.

Per the CEC Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C), a proposed underground natural gas line is not considered an "above-ground linear facility," and therefore the historic architecture survey did not extend a half-mile past the gas lines. Rather, investigators performed a historic architecture survey for the parcels adjacent to the gas line corridor. Of note, the historic architecture survey occurred from public vantage points, since site access and right-of-entry were not available at the time of the survey for the privately-owned properties on either site of the gas line route. In areas where view of the property were obstructed (e.g., tree overgrowth, private roads), investigators utilized available information to study the property. For the most part, the survey did not consider properties set back from the edge/boundary of their parcel and large rural properties were not identified beyond the area reasonably subject to effect by the project.

The guidelines set forth in CCR Section 15064.5(a), and the criteria outlined in PRC Section 5024.1 were used to evaluate properties that appeared to be older than 45 years within the historic architecture survey area. Following survey completion, properties that appeared to be older than 45 years were recorded and evaluated on the appropriate Department of Parks and Recreation (DPR) 523 series forms per the criterion of the CRHR and as historical resources for purposes of CEQA. Properties that did not appear to be older than 45 years or were known not to be older than 45 years were not recorded.

As part of the historic architecture survey, the County of San Diego Department of Planning and Land Use, the San Diego History Center, San Diego Archaeological Society, the Save our Heritage Organisation, and the Chula Vista Heritage Museum were contacted on May 13 and 19, 2011 to identify cultural resources within a quarter-mile radius of the Modified Gas Line Route A, pursuant to ordinance or recognized by a local historical society or museum. On June 2, 2011, Ms. Donna Golden of the Chula Vista Heritage Museum responded via email she did not know of any cultural resources within a quarter-mile radius of the Modified Gas Line Route A. To date, no other responses have been received. Copies of correspondence with these agencies and groups are included in Attachment C of the Addendum.

Historic Architecture Survey Results. As a result of the historic architecture survey, Enrico Fermi Drive was identified as an unrecorded historic property and the segment within the study area has been recorded on the appropriate DPR 523 series forms and recommended as not eligible for the CRHR and as historical resources for purposes of CEQA. The following is a summary of the segment Enrico Fermi Drive, which has been recorded and evaluated on the appropriate DPR 523 series form, included in Attachment A of the Addendum. Photographs depicting the survey area are included in Attachment B of the Addendum (Appendix K).

Segment of Enrico Fermi Drive. This segment of Enrico Fermi Drive extends approximately 2,700 feet south from Otay Mesa Road to Airway Road and generally features two lanes, asphalt paving material, sidewalk on the east side, and concrete curb on the west side. At the intersection of Otay Mesa Road and Enrico Fermi Drive, the northbound lane turns into a left turn lane and a right turn lane. At the intersection of Airway Road and Enrico Fermi Drive, the northbound lane is two merging lanes and the southbound lane becomes two lanes and a left turn pocket. Two

vacant, undeveloped parcels (Assessor Parcel Number [APN] 646-130-4200 and APN 646-130-2700) are located west of this segment of Enrico Fermi Drive. A developed parcel (APN 648-070-0900) used as a truck lot for commercial shipping (IMEX Transport) is located to the east.

To facilitate historical research, the following historic aerial photographs, available from NETR Online and the San Diego History Center were reviewed: 1953, 1964, 1968, 1971, 1974, 1978, 1981, 1982, 1989, 2003, and 2005. Prior to 1964, this segment of Enrico Fermi Road appeared as undeveloped or unimproved trail not used for pedestrian or vehicle circulation (per the 1953 aerial photograph). By the 1964 aerial photograph, this segment of Enrico Fermi Road appears as a widened unpaved lane, used as an arterial for circulation. By 1982, the lane was further widened but remained unpaved. Between 1989 and 2003 (per the aerials), this segment of Enrico Fermi Drive was paved as a two-lane built-up roadway. As indicated in the more recent aerial images, it appears Enrico Fermi Drive was either resurfaced or reconstructed between 2005 and the present.

This segment of the Enrico Fermi Drive roadway did not appear on the historic topographic maps provided by the SCIC. The historic topographic maps were issued from 1769-1885, 1872, 1903, and 1955. Review of the Thomas Guides revealed that the segment of Enrico Fermi Drive did not appear as a documented and named road until sometime between 1989 and 1992.

Adjacent to this segment of Enrico Fermi Drive are three parcels. There are two parcels to the west (APN 646-130-4200 and 646-130-2700) of the road and the one large parcel to the east (APN 648-070-0900). These parcels are related features to the larger roadway. By 1964, they first appear on historic aerials as agricultural fields. These parcels appear to have been tilled extensively and feature a network of circulation paths extending through the agricultural fields. By 1968, APN 648-070-0900 to the east was no longer in use as an agricultural field and no longer featured any of the previous circulation paths. In the 1981 aerial, all three parcels had been returned to fallow land and none of the paths used during the decades of cultivation remained.

The 2009 East Otay Mesa Specific Plan Amendment, characterized the general area as, "…a few scattered single-family residences, a State Truck Inspection facility, a 150-foot wide Border Enforcement Zone located immediately adjacent to and paralleling the border, and an auto storage/auction yard" (County of San Diego 2009). Since the specific amendment was issued in 2009, construction has been completed on several industrial subdivisions in the area. Although minor improvements such as modern drainage systems, street lights and traffic signals have been added to APNs 646-130-4200 and 646-130-2700, APN 648-070-0900 to the east of Enrico Fermi Drive has been heavily developed and improved within the last three years. The development and improvements include construction of a two and half-story industrial warehouse, several loading docks, and a surface parking lot. Currently, the site is used by the San Diego County Sheriff's Department as a satellite office and as a shipping station for IMEX Transport, Inc.

Upon review of the site survey and historical research, the segment of Enrico Fermi Drive in the survey area does not appear to meet the criteria of eligibility for inclusion on the CRHR or be

eligible as a historical resource for purposes of CEQA. Initial research has yielded no information indicating an association with significant historic events or people (Criteria 1 and 2 of the CRHR), nor does it significantly embody the distinctive characteristics of an architectural style, type or period, or represent the work of a master (Criterion 3 of the CRHR), or have the potential to yield important information (Criterion 4 of the CRHR). Overall, Enrico Fermi Drive has been consistently improved over the past 45 years. It is not a distinctive example of a purposefully engineered road, an aesthetic route, a cultural route, or a combination thereof. It does not have a specific or important association with any of the area's historic people or events, such as the early farming practices in Otay Mesa, the Navy airfield, or the establishment of detention facilities, nature reserves, industrial parks and facilities, or power generating facilities that define Otay Mesa's history. As such, Enrico Fermi Drive does not appear to be eligible for listing to the CRHR or considered a historical resource for purposes of CEQA.

For a property to qualify for listing in the CRHR or be considered a historical resource for purposes of CEQA, besides meeting one of the Criteria, it must also retain a significant amount of its historic integrity. Enrico Fermi Drive does not appear to be eligible to qualify for listing in the CRHR or be considered a historical resource for purposes of CEQA, and therefore an integrity analysis is not warranted.

The above property has been recorded and evaluated on the appropriate DPR 523 series forms included in Attachment A of the Addendum (refer to Appendix K), and the results of the survey are depicted on Figures 6 and 7 of the Addendum.

5.7.2 Environmental Consequences

The supplemental cultural resources assessment conducted on the Modified Gas Line Route A identified no cultural resources eligible for listing on the CRHR and did not identify historical resources for purposes of CEQA within the archaeological or historic architecture survey area for the segment of Modified Route A Gas Line along Enrico Fermi Drive, as presented in the Addendum in Appendix K. One historic architecture property, a segment of Enrico Fermi Drive, was identified within the survey area. The property was recorded on the appropriate DPR 523 series forms and recommended as appearing not eligible for listing on the CRHR and as a historical resource for purposes of CEQA.

The significance criteria for the assessment of environmental consequences are provided in Section 5.7.2.1 of the AFC (February 2011). Based on the supplemental assessment, construction, operation, and maintenance of the Modified Gas Line Route A are not expected to result in direct or indirect impacts to historic architecture and archaeological resources.

5.7.3 Cumulative Impacts

The Modified Gas Line Route A is not expected to result in additional impacts to historic architecture or archaeological resources. Therefore, impacts from the construction and operation of the project, including the Modified Gas Line Route A, are not expected to result in any

significant cumulative impacts to cultural resources beyond those address in Section 5.7.3 of the AFC (February 2011).

5.7.4 Conditions of Certifications and Mitigation Measures

Based on findings conducted for the supplemental cultural resources assessment on the Modified Gas Line Route A, as reported in Appendix K, the Modified Gas Line A is not expected to impact significant or unique cultural resources. However, buried cultural resources that have not been previously identified could be encountered during the project construction phase, and additional unknown subsurface archaeological deposits and/or features, may be encountered during ground-disturbing activities. Significant cultural resources impacted by the project would require mitigation, which may include data recovery. Additionally, prior to project construction an intensive pedestrian survey must be completed in the areas where right of entry was not authorized at the time of this Refinement assessment. This survey shall be conducted in accordance with Mitigation Measure CUL-6 of the February 2011 AFC.

Mitigation measures provided in Section 5.7.4.1 of the AFC (February 2011) would reduce potential impacts to cultural resources to a less than significant level in the event that cultural resources are identified within the project-related disturbance areas during construction. With implementation of mitigation measures, no impacts to cultural resources are anticipated for the construction, operation, and maintenance of the proposed project. The Modified Gas Line Route A is not expected to result in additional impacts to historic architecture or archaeological resources. Therefore, the Conditions of Certification for the project, including the Modified Gas Line A discussed herein, are unchanged from the discussion presented in Section 5.8.4 of the AFC (February 2011).

5.7.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable cultural resources LORS described in Section 5.7.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Sections 5.7.6 and 5.7.7 of the AFC (February 2011).

5.7.6 References

In addition to those presented in Section 5.7.8 of the AFC (February 2011), the following references were used in this section of the AFC Refinement:

California Department of Transportation District 11. Otay Mesa East Port of Entry / State Route 11: Presidential Permit Application. November 2007. Accessed May 2011.

County of San Diego: Department of Planning and Land Use. East Otay Mesa Business Park Specific Plan Amendment. April 2009. Accessed May 2011.

County of San Diego: Offices of County Assessor/Recorder/County Clerk. Available Public Records. Accessed May 2011.

Historic Topographic Maps, San Diego County: Historic Roads and Trails 1769-1885, Wheeler and Co. San Diego County 1872, USGS Cuyamaca 1903, USGS Otay Mesa 1955. Accessed May 2011.

NETR Online. Historic Aerials: 1953, 1964, 1968, 1971, 1981, 1989, 2003, 2005. HistoricAerials.com. Accessed May 2011.

San Diego County Aerial Photo Map Books: 1974, 1978, 1982. San Diego History Center Archives. Accessed May 2011.

Thomas Guide San Diego County: 1987, 1989, 1992. San Diego History Center Archives. Accessed May 2011

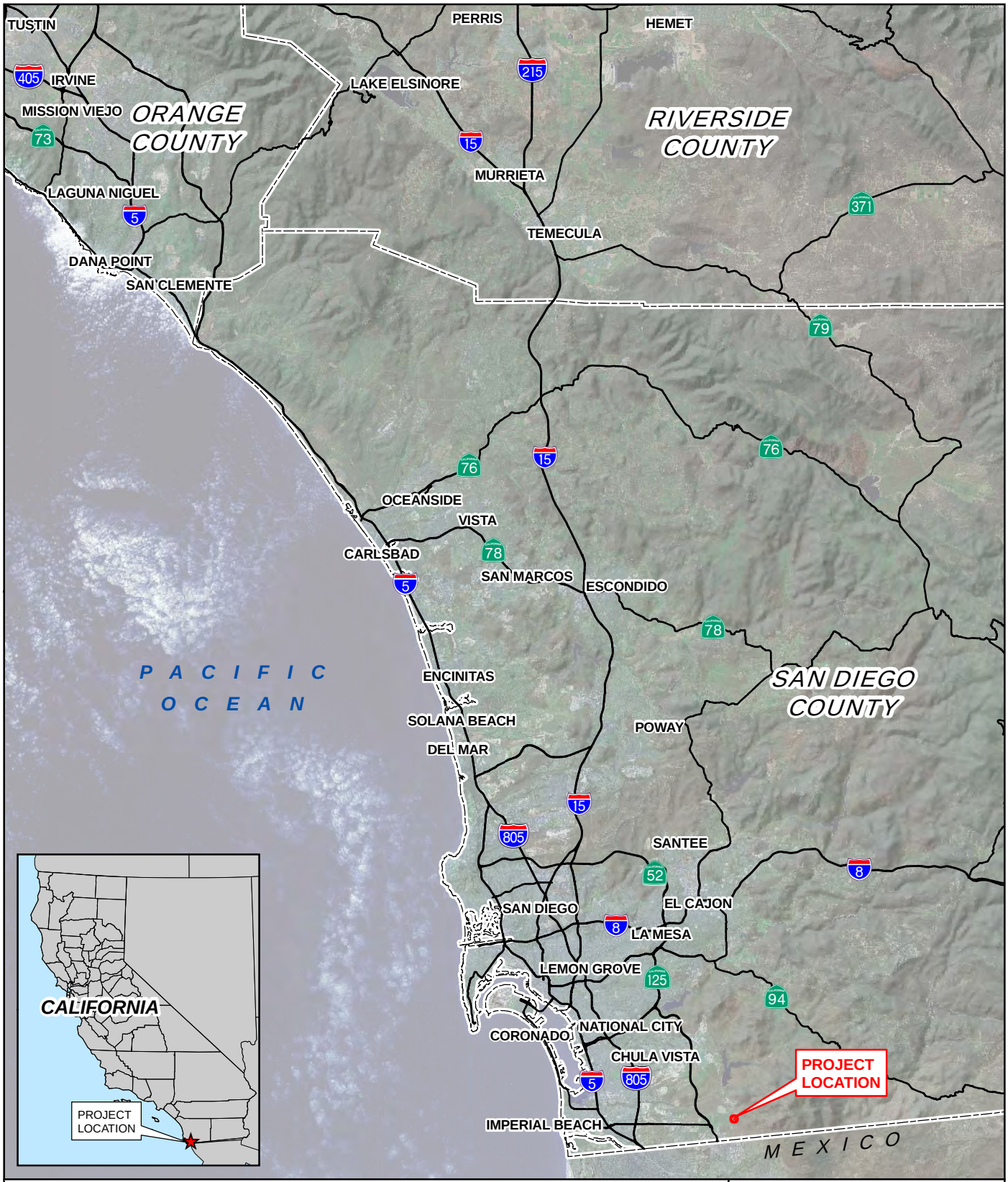
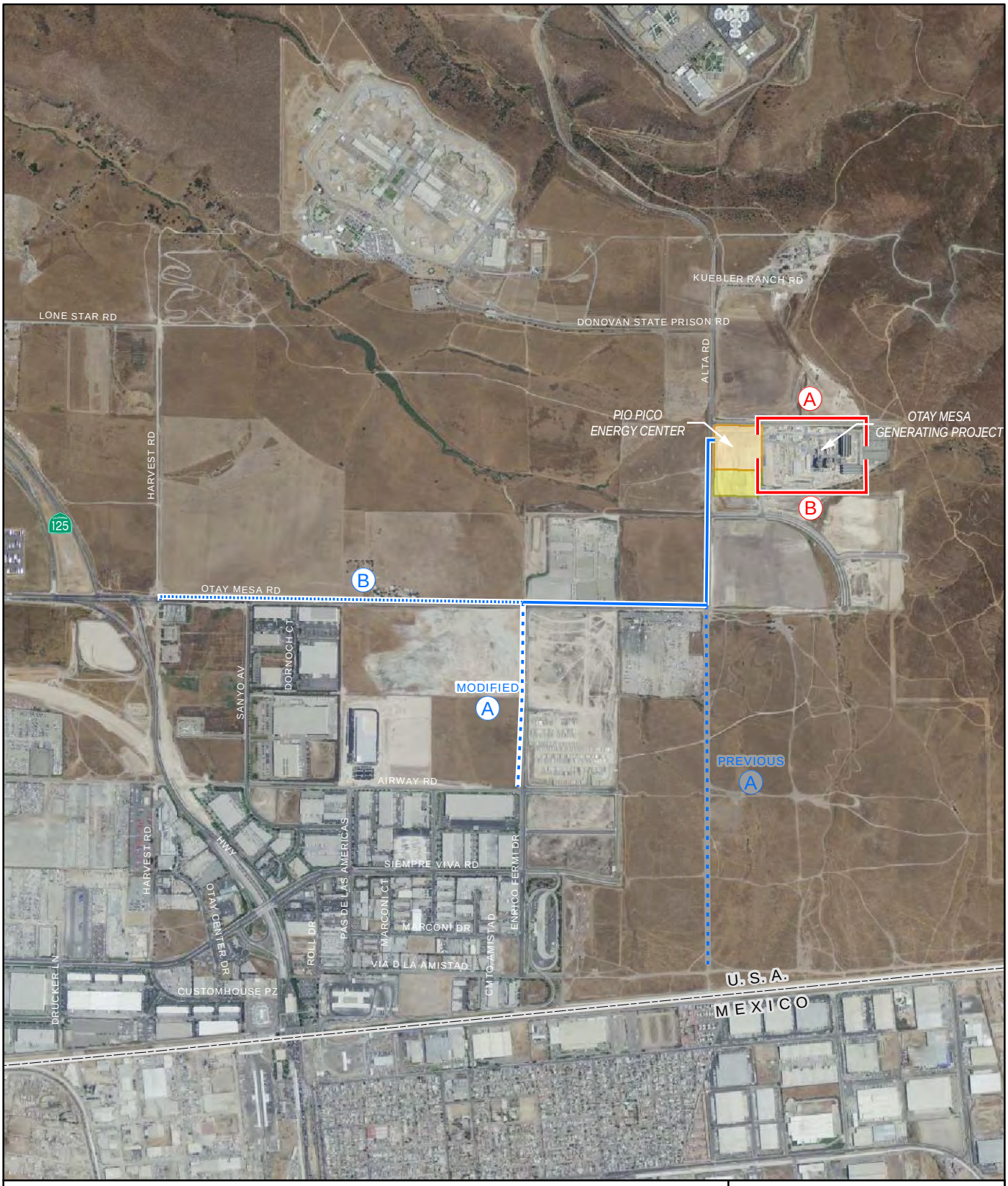


FIGURE 5.7-1
REGIONAL LOCATION

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874835
DATE: MAY 2011

URS



Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

N

0 1,000 2,000 Feet

FIGURE 5.7-2 (REVISED)
SITE VICINITY

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874835
DATE: MAY 2011

URS

Source: DigitalGlobe, 2009.

Legend

- Project Site
- Laydown Area
- Archaeological Survey Area (No Right of Entry)
- Historic Architecture Survey Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

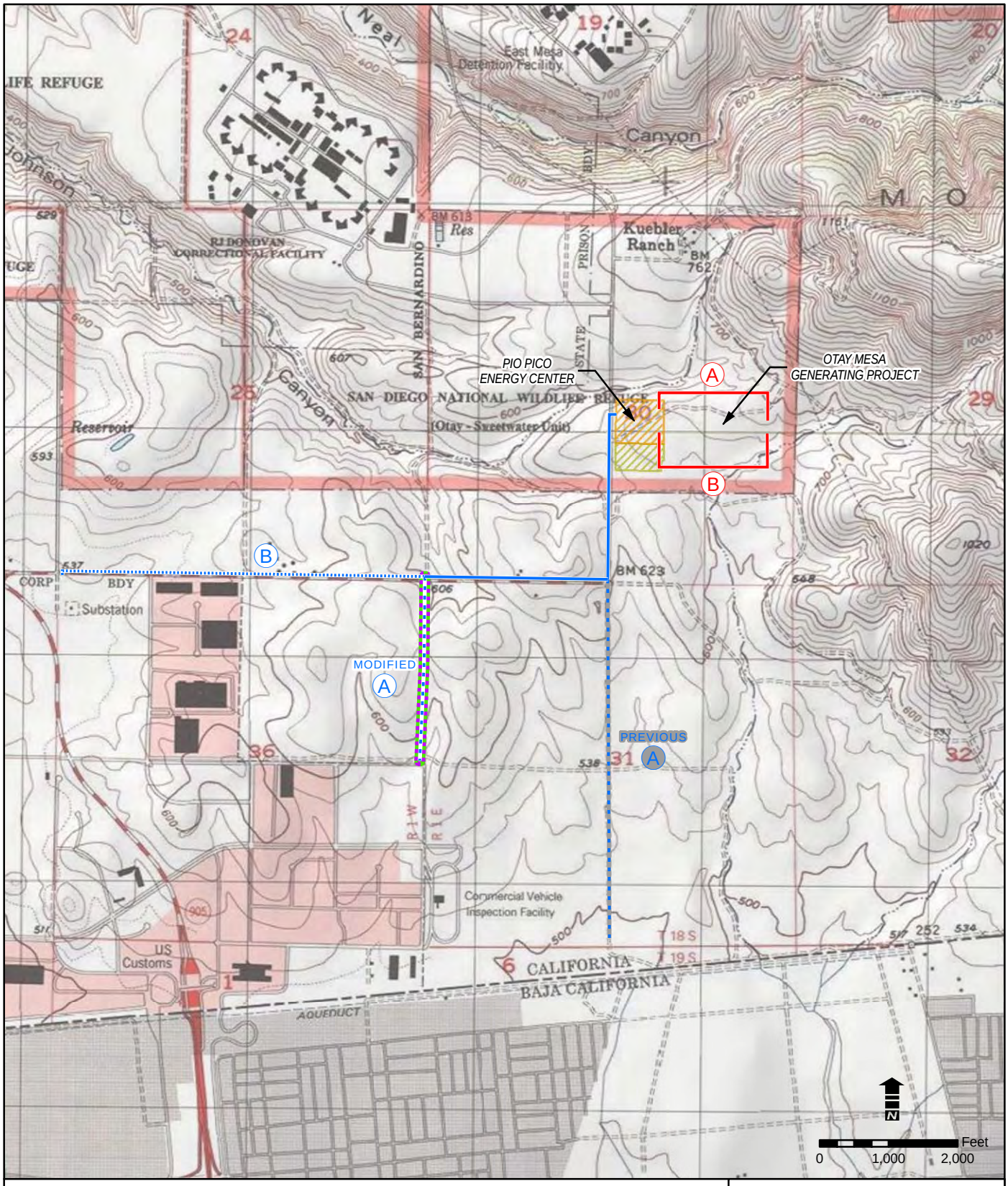
FIGURE 5.7-3 (REVISED)
SURVEY AREAS (AERIAL)

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874835
DATE: MAY 2011

URS

Source: DigitalGlobe, 2009.



Legend

- Project Site
- Laydown Area
- Archaeological Survey Area (No Right of Entry)
- Historic Architecture Survey Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

FIGURE 5.7-4 (REVISED)
SURVEY AREAS (USGS)

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874835
DATE: MAY 2011

URS

Source: USGS 24K Digital Raster Graphic Mosaics (Cal-Atlas 2003).

5.8 PALEONTOLOGICAL RESOURCES

This section presents a discussion of the potential impacts related to paleontological resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.8.1 Affected Environment

The Modified Gas Line Route A is generally located within the study area previously evaluated in Section 5.8.1 in the AFC (February 2011) and is contained within the same geologic context (refer to the revised Figure 5.8-1, Site Vicinity). Because the 1-mile buffer around the Modified Gas Line Route A extends beyond the boundaries of the previous paleontological records search radius conducted for the February 2011 AFC, a second records search was commissioned for the new portion of the Modified Gas Line Route A. The results of the paleontological records search (El Adli, 2011) was the same as those included in the AFC (February 2001), and did not identify paleontological localities in addition to those identified in the AFC (February 2011). The results of the second records search are included in this amendment as Appendix L. A pedestrian survey was conducted along the segment of Enrico Fermi Drive on May 24, 2011, which confirmed that underlying sediments belong to the Otay Formation, although no exposures exist adjacent to the Modified Gas Line Route A. No paleontological resources were observed. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.8.1 in the AFC (February 2011).

5.8.2 Environmental Consequences

Construction of the Modified Gas Line Route A would not result in any potential direct impacts to paleontological resources in addition to the discussion presented in Section 5.8.2 of the AFC (February 2011).

Section 5.8.2 of the AFC (February 2011) concluded that operation of the proposed project and its related facilities would have no impacts on paleontological resources. Similarly, operation of the Modified Gas Line Route A would have no impacts on paleontological resources.

5.8.3 Cumulative Impacts

Modified Gas Line Route A will not result in additional impacts to paleontological resources. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to paleontological resources beyond those addressed in Section 5.8.3 of the AFC (February 2011).

5.8.4 Conditions of Certification

The Modified Gas Line Route A addressed in this AFC Refinement poses the same effect to paleontological resources addressed in Section 5.8.2 of the AFC (February 2011). Therefore, the Conditions of Certification for the project, including the refinement discussed herein, are unchanged from the discussion presented in Section 5.8.4 of the AFC (February 2011).

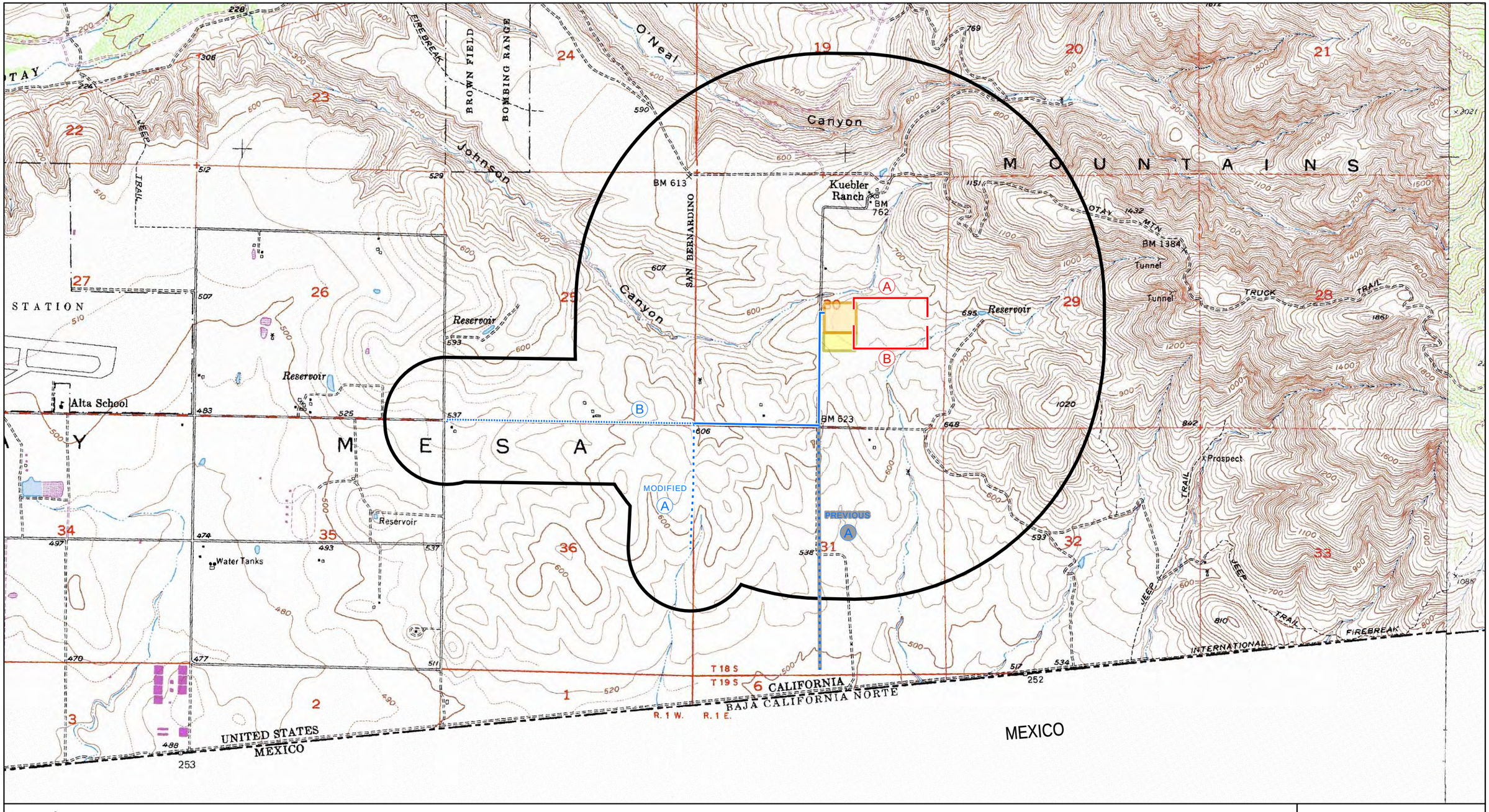
5.8.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable paleontological resource LORS described in Sections 5.8.5 of the AFC (February 2011).

5.8.6 References

The following reference was used for this AFC Refinement in addition to those presented in Section 5.8.8 of the AFC (February 2011):

El Adli, J. J. 2011. Paleontological record search and paleontological resource sensitivity assessment: Pio Pico Project, City of Chula Vista, CA, May 16.



Legend

- Project Site
- Laydown Area
- Study Area (1 mile buffer, linear 1/4 mile buffer)
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

N

0 1,000 2,000 Feet

FIGURE 5.8-1 (REVISED)
SITE VICINITY

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874835
DATE: DECEMBER 2010

URS

Source: USGS 24K Digital Raster Graphic Mosaics (Cal-Atlas 2003).

5.9 LAND USE

This section presents a discussion of the potential impacts related to land use from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.9.1 Affected Environment

The Modified Gas Line Route A is located within the same study area previously evaluated in Section 5.9.1 in the AFC (February 2011), and is subject to the same local plans, land use regulations, and general land use compatibility. However, the revised gas line alignment necessitates a modification to the previously identified existing land uses within one-quarter mile of the project's linear facilities from the AFC (February 2011). The affected environment will now include the addition of the following properties and existing land uses presented in Table 5.9-6.

TABLE 5.9-6
MODIFIED GAS LINE ROUTE A AND SURROUNDING LAND USES WITHIN ONE-QUARTER MILE OF THE SITE

APN	Zoning	Specific Plan Land Use Designation	General Plan Land Use	Property Owner	Description of Existing Land Use
Within One-quarter Mile of Project Linear Facilities					
64614216	Planned District	N/A	Industrial	Randy & Susan Eifler Revocable Trust 08-31-01	Manufacturing/ Industrial
64614217	Planned District	N/A	Industrial	Majestic Otay Partners LLC	Manufacturing/ Industrial
64614219, 64614220	Planned District	N/A	Industrial	Pacific Rim Industrial Park LLC	Manufacturing/ Industrial
64616133	Planned District	N/A	Industrial	James M. Wright	Manufacturing/ Industrial
64616134	Planned District	N/A	Industrial	Realty Associates Fund VII L P	Manufacturing/ Industrial

Source: City of San Diego, Development Services Department, May 16, 2011

The Modified Gas Line Route A also necessitates revisions to previous exhibits in Section 5.9 of the AFC (February 2011) to show the new alignment and one-quarter mile radius from project linear facilities. The following exhibits have been revised and provided at the end of this section:

- Figure 5.9-1, Jurisdictional Boundaries and Existing Land Uses Surrounding Site (Revised)
- Figure 5.9-2, City and County Zoning Designations (Revised)

- Figure 5.9-3, Existing Land Use Surrounding Project Site (Revised)
- Figure 5.9-5, Properties within One-Mile of Project Site and Quarter-Mile of Project Linears, and FMMP Data (Revised)

5.9.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A would not result in changes to the project with respect to potential effects on existing land uses and land use resources of the project area, as analyzed in Sections 5.9.2 in the AFC (February 2011). Existing land uses for those new properties identified and listed in Section 5.9.1 above are industrial and manufacturing in nature; no sensitive land uses have been identified on these properties. Therefore, the environmental consequences resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.9.2 in the AFC (February 2011).

5.9.3 Cumulative Impacts

The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to land use beyond those addressed in Section 5.9.3 of the AFC (February 2011).

5.9.4 Conditions of Certification

Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.9.4 of the AFC (February 2011).

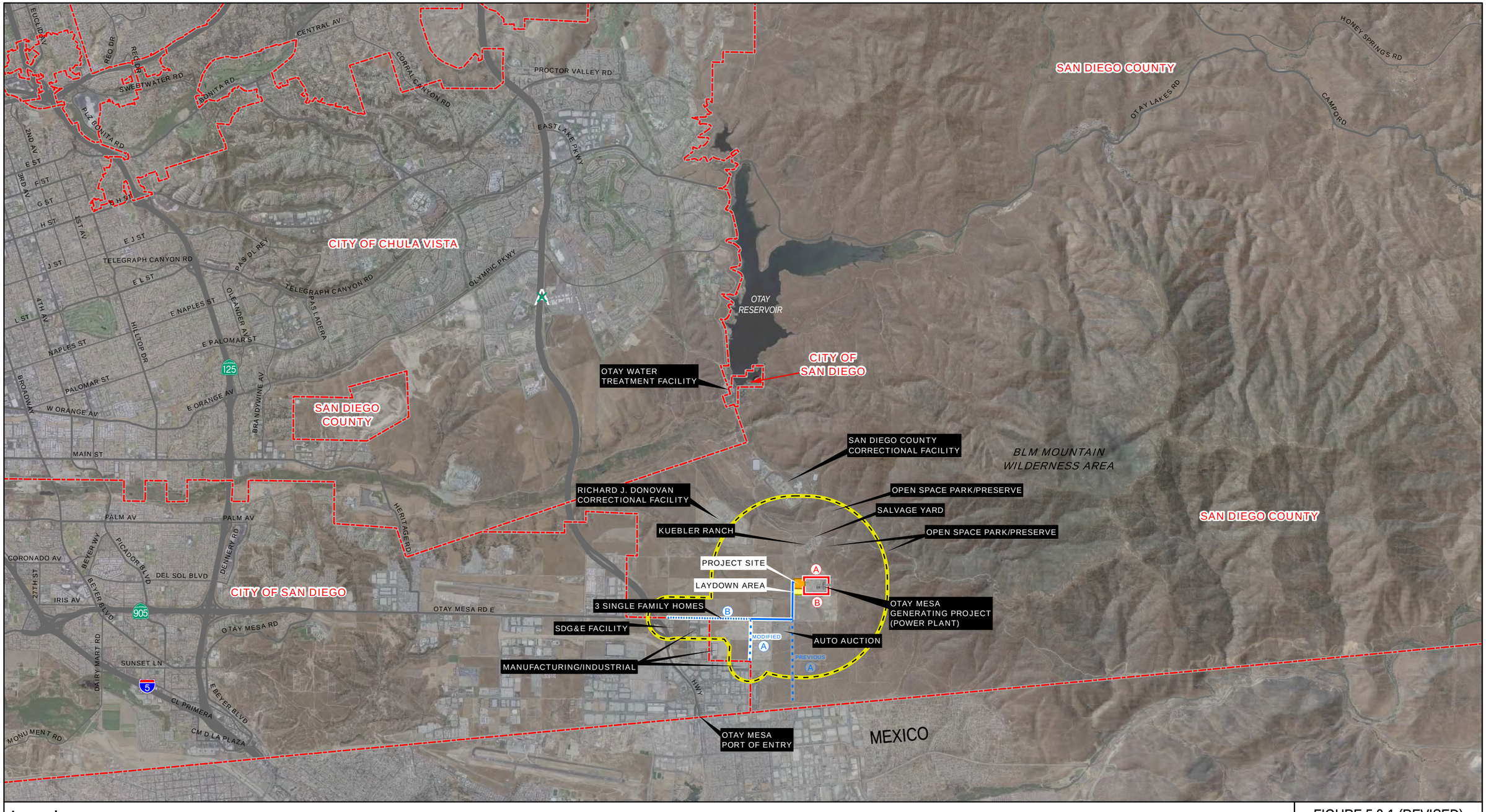
5.9.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the Modified Gas Line Route A, would not require changes to the permits, fees required, and associated schedules described in Section 5.9.5 of the AFC (February 2011).

5.9.6 References

The following reference was used for this AFC Refinement in addition to those presented in Section 5.9.6 of the AFC (February 2011):

City of San Diego. 2011. Official Zoning Map.



Legend

- Jurisdictional Boundary
- One-Mile Project Site Radius and Quarter-Mile Linears Radius
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

N

0 3,000 6,000 Feet

FIGURE 5.9-1 (REVISED)

JURSIDICTIONAL BOUNDARIES AND EXISTING LAND USES SURROUNDING SITE

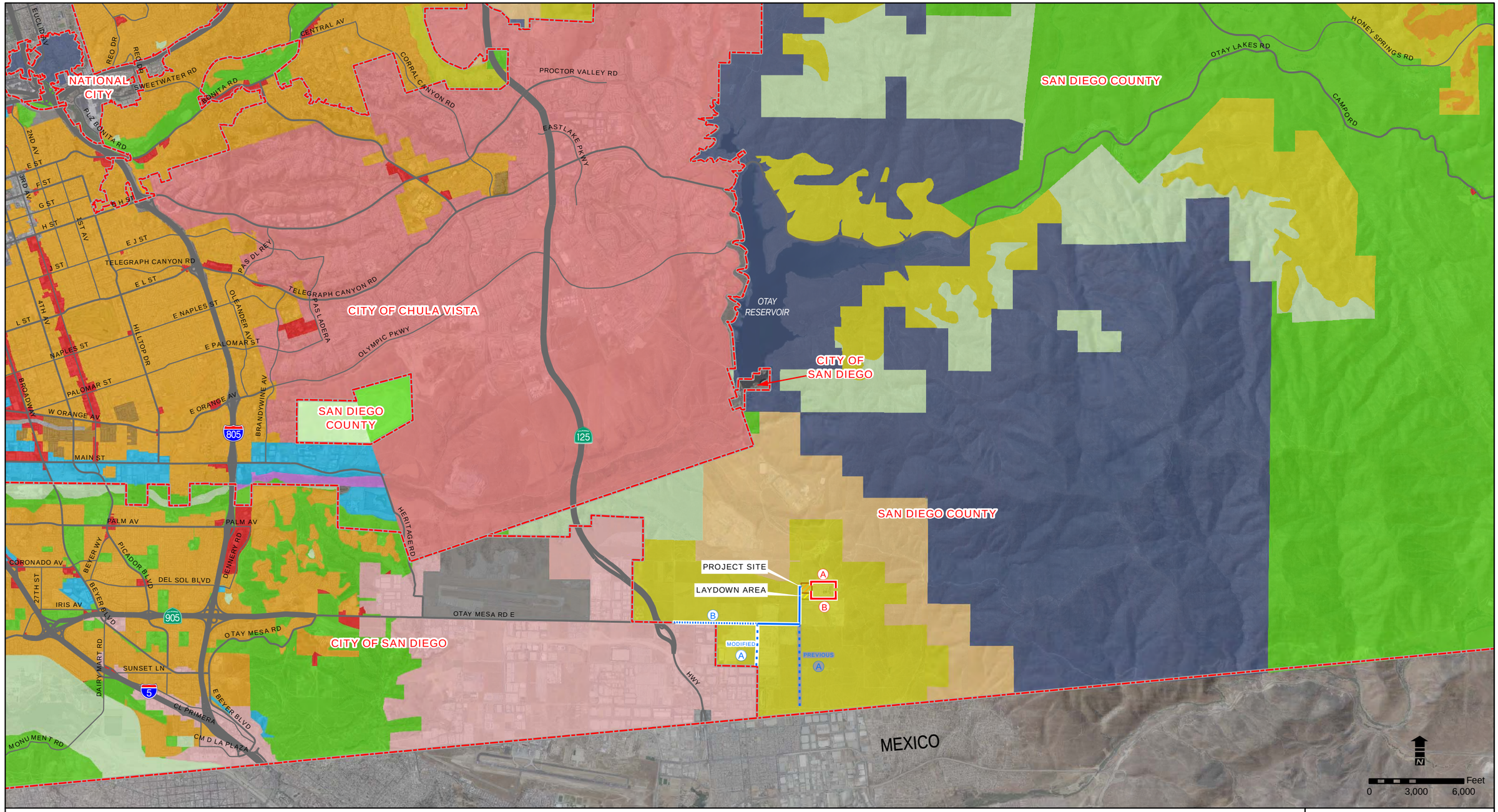
PIO PICO ENERGY CENTER

PROJECT NO.: 29874839

DATE: DECEMBER 2010

URS

Source: DigitalGlobe, 2009



Legend

- Jurisdictional Boundary
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

Zoning

- Agriculture
- Commercial
- Floodway
- Holding Area
- Industrial
- Limited Control
- Mobile Home Park
- Open Space
- Planned Community
- Planned District
- Residential
- Specific Plan
- Transportation and Utility
- Unclassified

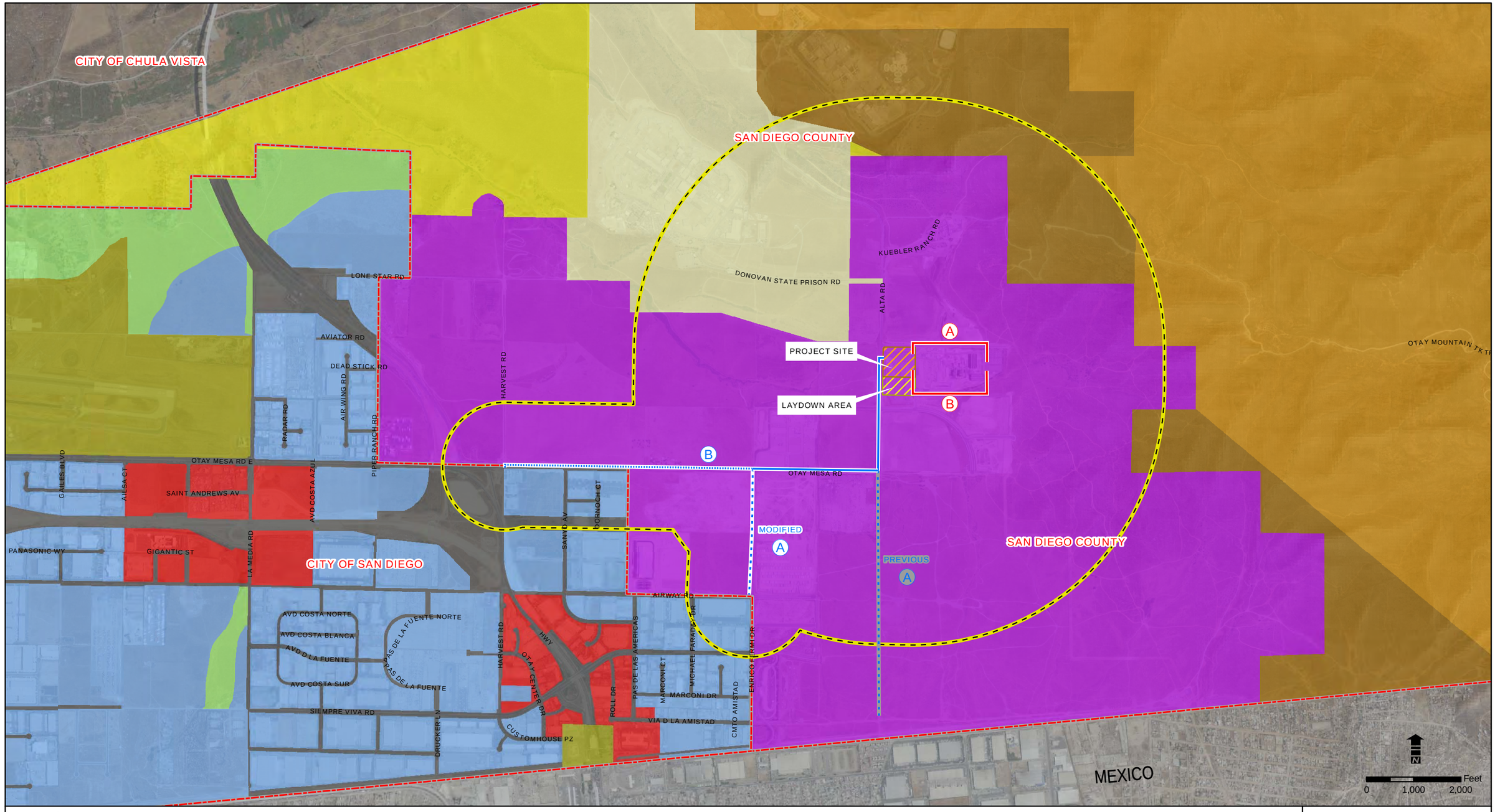
FIGURE 5.9-2 (REVISED)
CITY AND COUNTY
ZONING DESIGNATIONS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874839
DATE: DECEMBER 2010

URS

Source: SanGIS (City of San Diego and County of San Diego, 2008). City of Chula Vista, 2004.



Legend

- Jurisdictional Boundary
- One-Mile Project Site Radius and Quarter-Mile Linears Radius
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Roads / Freeways / Transportation
- Industrial Employment
- Commercial Employment, Retail, & Services
- Park, Open Space, & Recreation
- Institutional & Public and Semi-Public Facilities
- Impact Sensitive 1 DU/4,8,20 Acres
- Public/Semi-Public Lands
- Multiple Rural Use 1 DU/4,8,20 Acres
- Estate Residential 1 DU/2,4 Acres
- Specific Plan Area

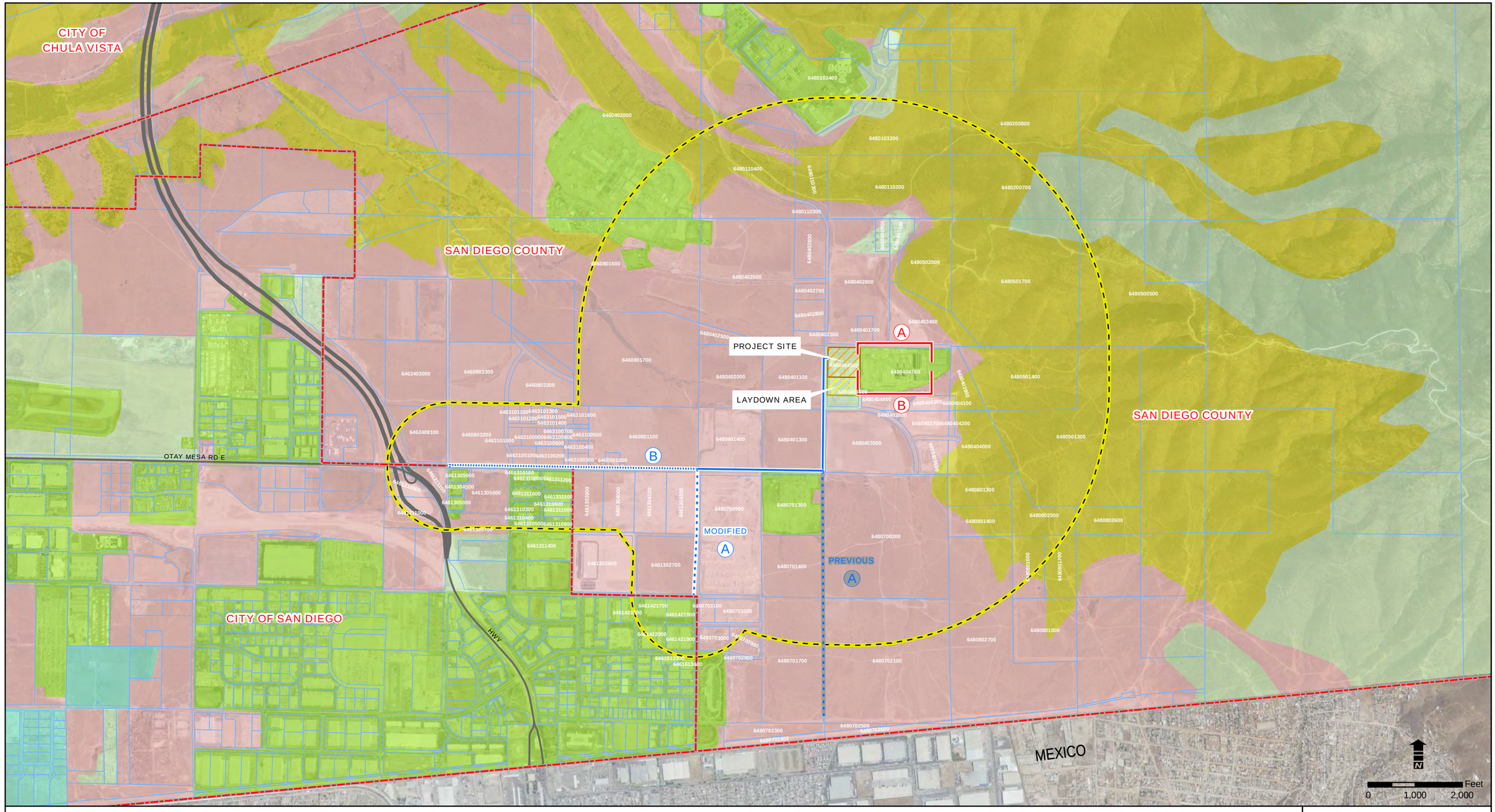
FIGURE 5.9-3 (REVISED)
EXISTING LAND USE SURROUNDING PROJECT SITE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874839
DATE: DECEMBER 2010

URS

Source: City of San Diego General Plan Land Use (2008) and General Plan for the County of San Diego (1995).



Legend

- Jurisdictional Boundary
- One-Mile Project Site Radius and Quarter-Mile Linears Radius
- Project Site
- Laydown Area
- Parcel Boundary
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

CDOC FMMP Farmland Classifications

- Farmland of Statewide Importance
- Farmland of Local Importance
- Grazing Lands
- Other Land
- Urban and Built-Up Land

FIGURE 5.9-5 (REVISED)

PROPERTIES WITHIN ONE-MILE OF PROJECT SITE AND QUARTER-MILE OF PROJECT LINEARS, AND FMMP DATA

PIO PICO ENERGY CENTER

PROJECT NO.: 29874839

DATE: DECEMBER 2010

URS

Source: Department of Conservation, Farmland Mapping & Monitoring Program, 2008.

5.10 SOCIOECONOMICS

This section presents a discussion of the potential impacts related to socioeconomics from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.10.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.10.1.1 in the AFC (February 2011), and is subject to the same population, housing, economic base, employment, public services and utilities, and fiscal resources identified in Sections 5.10.1.2 through 5.10.1.4 of the AFC (February 2011). Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.10.1 in the AFC (February 2011).

5.10.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A would not result in changes to the project including labor force needs, demands on public services, or fiscal resources, including construction and operation expenditures, as analyzed in Sections 5.10.2.1 through 5.10.2.7 in the AFC (February 2011). Therefore, the environmental consequences resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.10.2 in the AFC (February 2011).

5.10.3 Cumulative Impacts

The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to socioeconomics beyond those addressed in Section 5.10.4 of the AFC (February 2011).

5.10.4 Conditions of Certification

Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.10.5 of the AFC (February 2011).

5.10.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the Modified Gas Line Route A, would not require changes to the permits, fees required, and associated schedules described in Section 5.10.6.5 of the AFC (February 2011).

5.10.6 References

No references in addition to those presented in Section 5.10.7 of the AFC (February 2011) were used for this AFC Refinement.

5.11 TRAFFIC AND TRANSPORTATION

This section presents a discussion of the potential impacts related to traffic and transportation from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.11.1 Affected Environment

The affected environment resulting from the Modified Gas Line Route A is unchanged from the traffic study area presented in Section 5.11.1 of the February 2011 AFC, with the exception of an approximately 2,700-foot segment of Enrico Fermi Drive from Otay Mesa Road to the southern terminus and connection tie-in point to an existing SDG&E natural gas pipeline, as shown on the revised Figure 3.3-3, Potential Linears. The intersection of Enrico Fermi Drive and Otay Mesa Road was previously evaluated as a study intersection in the February 2011 AFC. Therefore, the following analysis evaluates an approximately 2,700 foot roadway segment of Enrico Fermi Drive south of Otay Mesa Road, which is the additional portion of gas line route A not previously analyzed in the February 2011 AFC.

The segment of Enrico Fermi Drive between Otay Mesa Road and Airway Road is currently a north-south oriented paved roadway with concrete curbs, and is located in unincorporated San Diego County within the San Diego County East Otay Mesa Specific Plan area. The East Otay Mesa Specific Plan Circulation Element classifies Enrico Fermi Drive as a major road. Enrico Fermi Drive provides for one southbound lane and two-northbound lanes just north of Airway Road, transitions to one southbound and one northbound lane midblock, and finally transitions to one southbound and two northbound through lanes (becoming left and right turn lanes) at its northerly terminus at the intersection with Otay Mesa Road. The average daily traffic (ADT) along the approximately 2,700-foot roadway segment of Enrico Fermi Drive (between Otay Mesa Road and Airway Road) was collected in May 2011, and indicated an ADT of 1,860 trips. Based on its current midblock configuration, the roadway is conservatively analyzed as a two-lane collector in this AFC Refinement document.

5.11.2 Environmental Consequences

The following analysis evaluates potential project impacts to the segment of Enrico Fermi Drive between Otay Mesa Road and Airway Road from the Modified Gas Line Route A. The remaining portion of the Modified Gas Line Route A follows the original route areas previously analyzed in Section 5.11.2 of the February 2011 AFC. Consistent with the traffic impact analysis methodology described in Section 5.11.2 in the AFC (February 2011), the County of San Diego roadway segment Level of Service (LOS) thresholds are summarized in Table 5.11-6 below.

TABLE 5.11-6[1]
COUNTY OF SAN DIEGO SEGMENT DAILY CAPACITY AND LEVEL OF SERVICE STANDARDS

	Levels of Service				
Functional Classification	A	B	C	D	E
Expressway (6-lane)	36,000	54,000	70,000	86,000	108,000
Prime Arterial (6-lane)	22,200	37,000	44,600	50,000	57,000
Major Street (4-lane)	14,800	24,700	29,600	33,400	37,000
Light Collector (2-lane)	1,900	4,100	7,100	10,900	16,200

Source: County of San Diego Department of Public Works Public Road Standards (February 9, 2010).

1 Table 5.11-6 is shown as presented in the February 2011 AFC, and is included in this section for the purposes of providing context for LOS standards and analysis.

5.11.2.1 Project Trip Generation

The project trip generation during construction of the Modified Gas Line Route A would remain the same as described in the February 2011 AFC for the Previous Route A, where the maximum workforce required to construct the project linear piping is estimated to be 10 workers per month (Table 3.9-2B of the February 2011 AFC), and construction of the project linear piping would occur during the first three months (Months 1 to 3) of construction, and would not coincide with the Project worst-case peak construction period (Section 3.9 of the February 2011 AFC). During operation, no anticipated trips are associated with the Modified Gas Line Route A; therefore, no further operational impact analysis were conducted within this AFC Refinement beyond those presented in Section 3.11.2 of the AFC (February 2011).

5.11.2.2 Traffic Impact Analysis

Table 5.11-20 summarizes traffic impacts to the roadway segment of Enrico Fermi Drive between Otay Mesa Road and Airway Road for current and forecasted traffic scenarios.

TABLE 5.11-20
ROADWAY SEGMENT LOS – ENRICO FERMI DRIVE

Level of Service (LOS) Analysis Scenarios	Cross-Section Classification	Time Period	Traffic Volume	Level of Service (LOS)
Year 2011 Existing Conditions (AFC Refinement, May 2011)	Collector	Daily	1,860	A
Year 2013 No Project Conditions	Collector	Daily	2,010	A
Year 2013 with Peak Project Construction Conditions[1]	Collector	Daily	2,030	A
Year 2014 No Project Conditions	Collector	Daily	2,080	A
Year 2014 Project Operations Conditions[2]	Collector	Daily	2,080	A

Notes:

1 The Peak Project Construction Activities are not anticipated to affect the segment of Enrico Fermi Drive, since construction of the Modified Gas Line Route A would occur during the first three months of construction, and would not coincide with the peak project construction period (Month 8). Construction of the linear piping would require a maximum total workforce = 10, or 20 daily trips.

2 No anticipated change or addition of operational trips. Proposed Modified Gas Line Route A is assumed to be constructed and completed.

Based on the current and forecasted low traffic volume on this roadway segment and the minimal workforce related trips associated with the construction of Modified Gas Line Route A, the roadway segment of Enrico Fermi Drive is anticipated to operate at an acceptable Level of Service (LOS A) for all scenarios described above. Therefore, construction impacts of the Modified Gas Line Route A would not result in additional impacts than the discussion presented in Section 5.11 of the AFC (February 2011).

Similarly, operation of the Modified Gas Line Route A would not involve additional activities, manpower or equipment in excess of those identified in Section 3.10 of the AFC (February 2011). As a result, impacts from operation of the project are unchanged from the discussion presented in Section 5.11 of the AFC (February 2011).

5.11.3 Cumulative Impacts

As described in Section 5.18.2.7 of the February 2011 AFC, the California Department of Transportation (Caltrans) proposes to construct State Route (SR)-11, a four-lane freeway/tollway that would connect SR-905 and SR-125 to the proposed East Otay Mesa Port of Entry. Several local access interchanges are envisioned for SR-11, including one proposed for Enrico Fermi Road, approximately midblock between Airway Road and Otay Mesa Road. Based on the Caltrans Preliminary Transportation Management Plan for State Route 11 and the Otay Mesa East Port of Entry (November 2010), the SR-11 proposal is currently in the Caltrans Project Approval and Environmental Document phase, and construction of the SR-11 is estimated to begin in late 2013. As a result, construction of the Modified Gas Line Route A, akin to the original Route A, would require coordination between SDG&E and Caltrans in order to minimize potential concurrent construction activities. Thus, the project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to traffic and transportation facilities beyond those addressed in Section 5.11.3 of the AFC (February 2011).

5.11.4 Conditions of Certification

The Modified Gas Line Route A poses the same effect to traffic and transportation as previously addressed in Section 5.11.4 of the AFC (February 2011). Therefore, the original Conditions of Certification for the project (TRANS-1), including the refinement discussed herein, are unchanged from the discussion presented in Section 5.11.4 of the AFC (February 2011).

5.11.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable Traffic and Transportation LORS described in in Sections 5.11.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.11.7 of the AFC (February 2011).

5.11.6 References

The following references were used for this AFC Refinement in addition to those presented in Section 5.11.8 of the AFC (February 2011):

National Data and Surveying Services, 2011. 24-Hour ADT Traffic Count. May.

State Route 11 and the Otay Mesa East Port of Entry, Tier II Environmental Impact Report/ Environmental Impact Statement, November, 2010.

California Department of Transportation. 2010. Preliminary Transportation Management Plan (TMP) for State Route 11 and the Otay Mesa East Port of Entry. November.

5.12 NOISE

This section presents a discussion of the potential impacts related to noise from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses potential noise impacts including the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.12.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.12.2 in the AFC (February 2011), and is subject to the same geographic, topographic, and noise conditions. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.12.2 in the AFC (February 2011).

5.12.2 Environmental Consequences

The nearest noise sensitive receiver is LT-1 (refer to Figure 5.12-1 of the February 2011 AFC), which is approximately 1,500 feet from the Modified Gas Line Route A. Construction of the Modified Gas Line Route A would result in an increase of construction noise levels at LT-1 from 51 dBA to 60 dBA L_{eq}. An L_{eq} of 60 dBA is below the allowable construction noise standard of 75 dBA L_{eq} established by the County of San Diego. Construction of the Modified Gas Line Route A would not result in any significant changes to the Project with respect to construction noise as analyzed in Section 5.12.4.1 in the AFC (February 2011). Operation of the Modified Gas Line Route A would not result in any significant changes to the project with respect to operational noise as analyzed in Section 5.12.4.2 in the AFC (February 2011). Therefore, the environmental consequences resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.12.4 in the AFC (February 2011).

5.12.3 Cumulative Impacts

The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to noise beyond those addressed in Section 5.12.5 of the AFC (February 2011).

5.12.4 Conditions of Certification

Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.12.6 of the AFC (February 2011).

5.12.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable noise LORS described in in Section 5.12.7 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.12.9 of the AFC (February 2011).

5.12.6 References

No references in addition to those presented in Section 5.12.10 of the AFC (February 2011) were used for this AFC Refinement.

5.13 VISUAL RESOURCES

This section presents a discussion of the potential impacts related to visual resources from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.13.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.13.1 in the AFC (February 2011), and is subject to the same regional landscape setting, viewshed, and visual environment as originally discussed in Section 5.13.1 of the AFC. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.12.2 in the AFC (February 2011).

5.13.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A would not involve activities or conditions in excess of those identified in Section 5.4.2 of the AFC (February 2011). As a result, impacts from the project, including the changes discussed herein, are unchanged from the discussion presented in Section 5.4.2.7 of the AFC (February 2011). Because the gas line will be underground and not visible, once the gas line is installed, no visual impacts are anticipated.

5.13.3 Cumulative Impacts

Cumulative impacts discussed in Section 5.13.3 of the project AFC are applicable to the proposed Project changes. No additional cumulative impacts to visual resources have been identified as part of this supplemental analysis.

5.13.4 Conditions of Certification

The conditions of certification for temporary impacts related to construction presented in Section 5.13.4 of the project AFC are applicable to the proposed project changes. No additional mitigation measures are recommended based on the project modifications.

5.13.5 Laws, Ordinances, Regulations, Standards, and Permits

The LORS presented in Section 5.13.5 of the project AFC are applicable to the revised project and no additional LORS are recommended. Similarly, the agency contact information presented in Section 5.13.11 of the project AFC is unchanged and the proposed Project modifications do not affect the required permits or Project schedule presented in Section 5.13.5 of the project AFC.

5.13.6 References

No additional references beyond those presented in Section 5.13.6 of the project AFC were used for this supplemental analysis.

5.14 WASTE MANAGEMENT

This section presents a discussion of the potential impacts related to waste management from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures/conditions of certification, and applicable LORS resulting from the Modified Gas Line Route A.

5.14.1 Affected Environment

The affected environment (types of wastes generated and the management methods for such wastes) resulting from the Modified Gas Line Route A are unchanged from that presented in Section 5.14.1 in the AFC (February 2011).

5.14.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A, would not involve changes to waste management beyond those analyzed in Section 5.14.1 and 5.14.2 of the AFC (February 2011). Therefore, impacts of the project, including the refinement discussed herein would not result in additional impacts than the discussion presented in Section 5.14.2 of the AFC (February 2011).

5.14.3 Cumulative Impacts

The modifications would not result in additional impacts from waste management as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, would not result in any significant cumulative impacts from waste management beyond those addressed in Section 5.14.3 of the AFC (February 2011).

5.14.4 Conditions of Certification

Implementation of Mitigation Measures/Conditions of Certification WM-1 through WM-7, as described in Section 5.14.4 of the AFC (February 2011), provide waste management procedures for handling non-hazardous and hazardous wastes. Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.14.4 of the AFC (February 2011).

5.14.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable waste management LORS described in in Sections 5.14.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.14.7 of the AFC (February 2011).

5.14.6 References

No references in addition to those presented in Section 5.14.8 of the AFC (February 2011) were used for this AFC Refinement.

5.15 HAZARDOUS MATERIALS HANDLING

This section presents a discussion of the potential impacts related to hazardous materials handling from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures/conditions of certification, and applicable LORS resulting from the Modified Gas Line Route A.

5.15.1 Affected Environment

The affected environment (procedures for handling hazardous materials during construction and operation) resulting from the Modified Gas Line Route A are unchanged from that presented in Section 5.15.1 in the AFC (February 2011).

5.15.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A, would not involve changes to hazardous materials handling beyond those analyzed in Section 5.15.1 and 5.15.2 of the AFC (February 2011). Therefore, impacts of the project, including the refinement discussed herein would not result in additional impacts than the discussion presented in Section 5.15.2 of the AFC (February 2011).

5.15.3 Cumulative Impacts

The modifications would not result in additional impacts from hazardous materials handing as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts from hazardous materials handling beyond those addressed in Section 5.15.3 of the AFC (February 2011).

5.15.4 Conditions of Certification

Implementation of Mitigation Measures/Conditions of Certification HAZMAT-1 through HAZMAT-10, as described in Section 5.15.4 of the AFC (February 2011), provide procedures for hazardous materials handling. The Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.15.4 of the AFC (February 2011).

5.15.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable hazardous materials handling LORS described in in Sections 5.15.5 of the AFC (February 2011). Implementation of the project, including the Modified Gas Line Route A, would not require

changes to the permits required and permit schedule described in Section 5.15.7 of the AFC (February 2011).

5.15.6 References

No references in addition to those presented in Section 5.15.8 of the AFC (February 2011) were used for this AFC Refinement.

5.16 PUBLIC HEALTH

This section presents a discussion of the potential impacts related to public health from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures, and applicable LORS resulting from the Modified Gas Line Route A.

5.16.1 Affected Environment

The Modified Gas Line Route A is located within the study area previously evaluated in Section 5.16.1 in the AFC (February 2011), and is subject to the same geographic, meteorological, air quality, and population conditions. Therefore, the affected environment resulting from the Modified Gas Line Route A is unchanged from that presented in Section 5.16.1 in the AFC (February 2011).

5.16.2 Environmental Consequences

Construction of the Modified Gas Line Route A, would not involve activities or equipment resulting in emissions or releases in excess of those analyzed in Section 5.16.2.1 of the AFC (February 2011). Therefore, construction impacts of the project, including the refinement discussed herein would not result in additional impacts than the discussion presented in Section 5.16.2.1 of the AFC (February 2011).

Similarly, operation of the Modified Gas Line Route A, would not involve activities, emissions, or releases in excess of those identified in Section 5.16.2.2 (Operations Impacts), Section 5.16.2.3 (Public Health Impact Assessment), Section 5.16.2.4 (Hazardous Materials), Section 5.16.2.5 (Operation Odors), and Section 5.16.2.5 (Electromagnetic Field Exposure) of the AFC (February 2011). As a result, impacts from operation of the project, including the changes discussed herein, are unchanged from the discussion presented in Sections 5.16.2 of the AFC (February 2011).

5.16.3 Cumulative Impacts

The modifications will not result in additional impacts to public health as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to public health beyond those addressed in Section 5.16.3 of the AFC (February 2011).

5.16.4 Conditions of Certification

The Modified Gas Line Route A poses the same effect to public health as previously addressed in Section 5.16.4 of the AFC (February 2011). Therefore, the Conditions of Certification for the

project, including the refinement discussed herein, are unchanged from the discussion presented in Section 5.2.4 of the AFC (February 2011).

5.16.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable public health LORS described in in Sections 5.16.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.16.7 of the AFC (February 2011).

5.16.6 References

No references in addition to those presented in Section 5.16.8 of the AFC (February 2011) were used for this AFC Refinement.

5.17 WORKER SAFETY

This section presents a discussion of the potential impacts related to worker safety from the Modified Gas Line Route A, as described in Section 3.0, Modified Gas Line Route A Description, of this AFC Refinement.

The discussion below addresses the affected environment, environmental consequences, cumulative impacts, mitigation measures/conditions of certification, and applicable LORS resulting from the Modified Gas Line Route A.

5.17.1 Affected Environment

The affected environment (exposure to hazards and worker safety procedures) resulting from the Modified Gas Line Route A are unchanged from that presented in Section 5.17.1 and 5.17.2 in the AFC (February 2011).

5.17.2 Environmental Consequences

Construction and operation of the Modified Gas Line Route A, would not involve changes to worker safety beyond those analyzed in Section 5.17.1 and 5.15.2 of the AFC (February 2011). Therefore, impacts of the project, including the refinement discussed herein would not result in additional impacts than the discussion presented in Section 5.17.2 of the AFC (February 2011).

5.17.3 Cumulative Impacts

The modifications would not result in additional impacts to worker safety as a result of the proposed project refinement. The project, including the changes resulting from the Modified Gas Line Route A, will not result in any significant cumulative impacts to worker safety beyond those addressed in Section 5.17.3 of the AFC (February 2011).

5.17.4 Conditions of Certification

Implementation of Mitigation Measures/Conditions of Certification WORKER SAFETY-1 and WORKER SAFETY-2, as described in Section 5.17.4 of the AFC (February 2011), provide procedures for worker safety. Implementation of the Modified Gas Line Route A would result in no changes to mitigation measures and conditions of certification identified in Section 5.17.4 of the AFC (February 2011).

5.17.5 Laws, Ordinances, Regulations, Standards, and Permits

The project, including the changes discussed herein, will comply with applicable worker safety LORS described in in Sections 5.17.5 of the AFC (February 2011). The project, including the Modified Gas Line Route A, would not require changes to the permits required and permit schedule described in Section 5.17.7 of the AFC (February 2011).

5.17.6 References

No references in addition to those presented in Section 5.17.8 of the AFC (February 2011) were used for this AFC Refinement.

This AFC Refinement to the California Energy Commission for the Pio Pico Energy Center (PPEC) was prepared by numerous contributors, including the following key people.

LIST OF KEY CONTRIBUTORS

Responsibility	Name	Company/Affiliation
Licensing Project Manager	Gary Chandler	Pio Pico Energy Center, LLC
Project Coordinating Manager	Dave Jenkins	Pio Pico Energy Center, LLC
Development Engineering Manager	Mike King	Pio Pico Energy Center, LLC
Project Engineer Project Manager	Craig Kebodeaux	Kiewit
Counsel	Melissa Foster	Stoel Rives, LLP
AFC Project Manager	Maggie Fitzgerald	URS Corporation
Assistant AFC Project Manager	Jennifer Wu	URS Corporation
Agriculture and Soils	Ray Rice	URS Corporation
Air Quality	Gary Rubenstein	Sierra Research
Biological Resources	Lincoln Hulse	URS Corporation
Cultural Resources	Rachael Nixon	URS Corporation
Geologic Hazards and Resources	Ray Rice	URS Corporation
Hazardous Materials Handling	Tricia Winterbauer	URS Corporation
Land Use	Virginia Viado	URS Corporation
Noise	Ron Reeves	URS Corporation
Paleontological Resources	Joe Stewart	URS Corporation
Public Health and Safety	Gary Rubenstein	Sierra Research
Socioeconomics	Jennifer Wu	URS Corporation
Traffic and Transportation	Noel Casil	URS Corporation
Visual Resources	Corinne Lytle	URS Corporation
Waste Management	Tricia Winterbauer	URS Corporation
Water Resources	Anne Connell	URS Corporation
Worker Safety	Tricia Winterbauer	URS Corporation

APPENDIX J-1
BIOLOGICAL TECHNICAL REPORT

BIOLOGICAL TECHNICAL REPORT
PIO PICO ENERGY CENTER
SAN DIEGO COUNTY, CALIFORNIA

December 2010
Modified May2011

Prepared for:
Pio Pico Energy Center, LLC

Prepared by:
URS

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

1.0 Introduction

This report documents the findings of an evaluation of biological resources[1] conducted by URS Corporation (URS) for the proposed Pio Pico Energy Center project (hereafter referred to as the project). For the purposes of this report, the "study area" includes the project's proposed ground disturbance footprint (project footprint) and a 500-ft buffer, to the maximum extent practical[2] (Figures 1 and 2).

The project is located within a predominately anthropogenically-disturbed area (e.g., adjacent power plant) in an unincorporated area of San Diego County, California. The project occurs at an approximate elevation of 635 feet above mean sea level (msl). The project also occurs within the California, San Bernardino Merdian, Section 30, Township 18 South, and Range 1 East of the Otay Mesa United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS, 1975). The majority of the study area is currently disturbed and/or bifurcated with existing dirt roads and bare ground of open graded fields and is absent of native habitat. Land use in the surrounding vicinity of the study area includes ruderal, non-native grasslands, developed areas, commercial, and public infrastructure. The intended use of this document is to disclose and evaluate habitat conditions and determine the potential for occurrence of common and special-status species[3], their habitats[4], and special aquatic resource areas[5] within study area limits.

1 For the purposes of this analysis, "biological resources" refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the Project's study area.

2 Where 100% pedestrian coverage of the study area was not possible due to limited access (e.g., fenced areas where access to private property or other physical barriers [vegetative cover, health and safety concerns, etc.]), field observations were made from the nearest appropriate vantage points via public right-of-ways with binoculars and/or via aerial photographic interpretation.

3 For the purposes of this analysis, "special-status species" refers to any species that has been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game) or resource conservation organizations (e.g., California Native Plant Society). The term "special-status species" excludes those avian species solely identified under Section 10 of the Migratory Bird Treaty Act (MBTA) for federal protection. Nonetheless, MBTA Section 10 protected species are afforded avoidance and minimization measures per state and federal requirements.

4 A "habitat" is defined as the place, or type of locale where a plant or animal naturally or normally lives and grows.

5 For the purposes of this analysis, "special aquatic resource areas" are defined as potential: United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); Regional Water Quality Control Board (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) (et seq.) of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne); and California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFG Code).

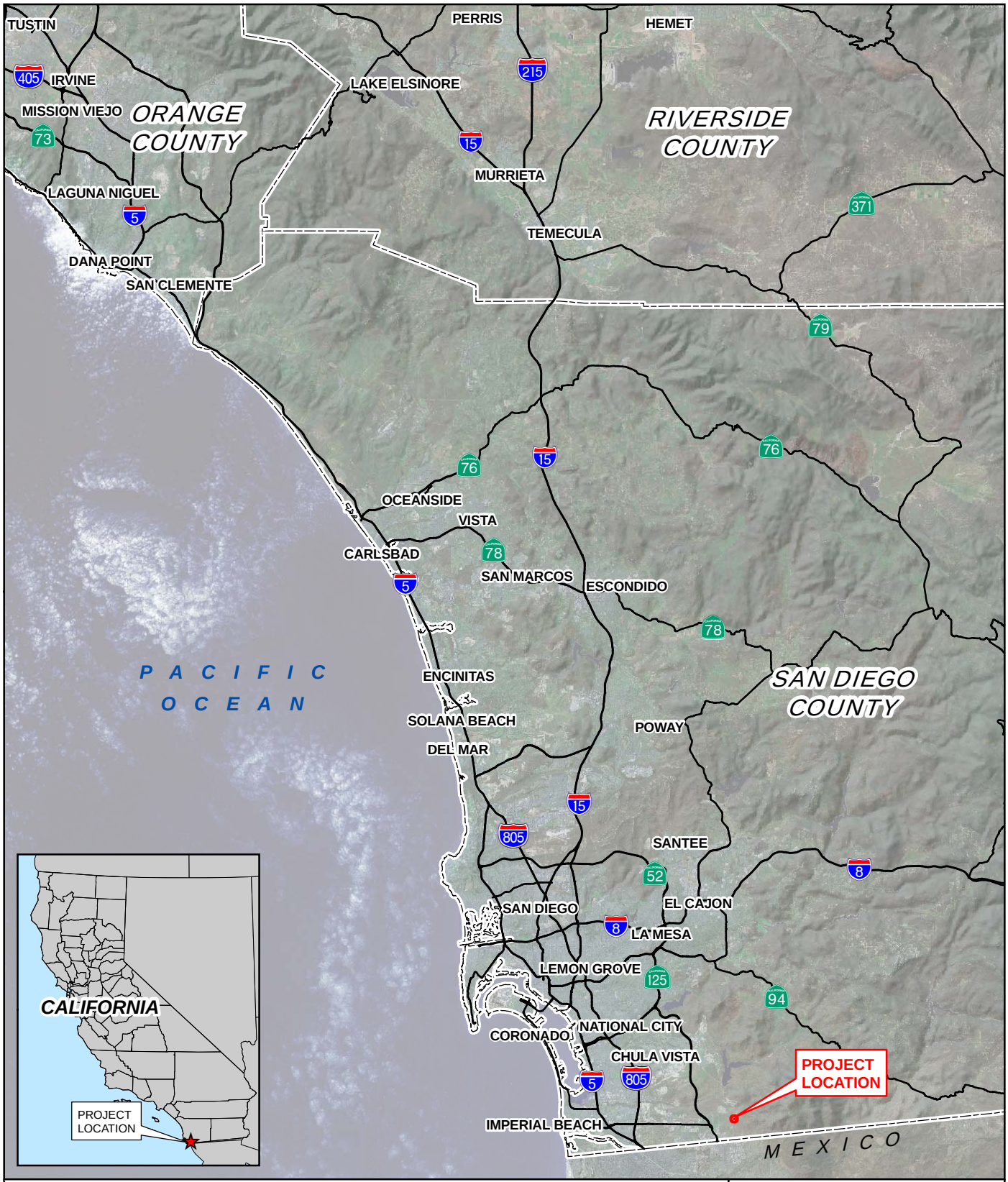
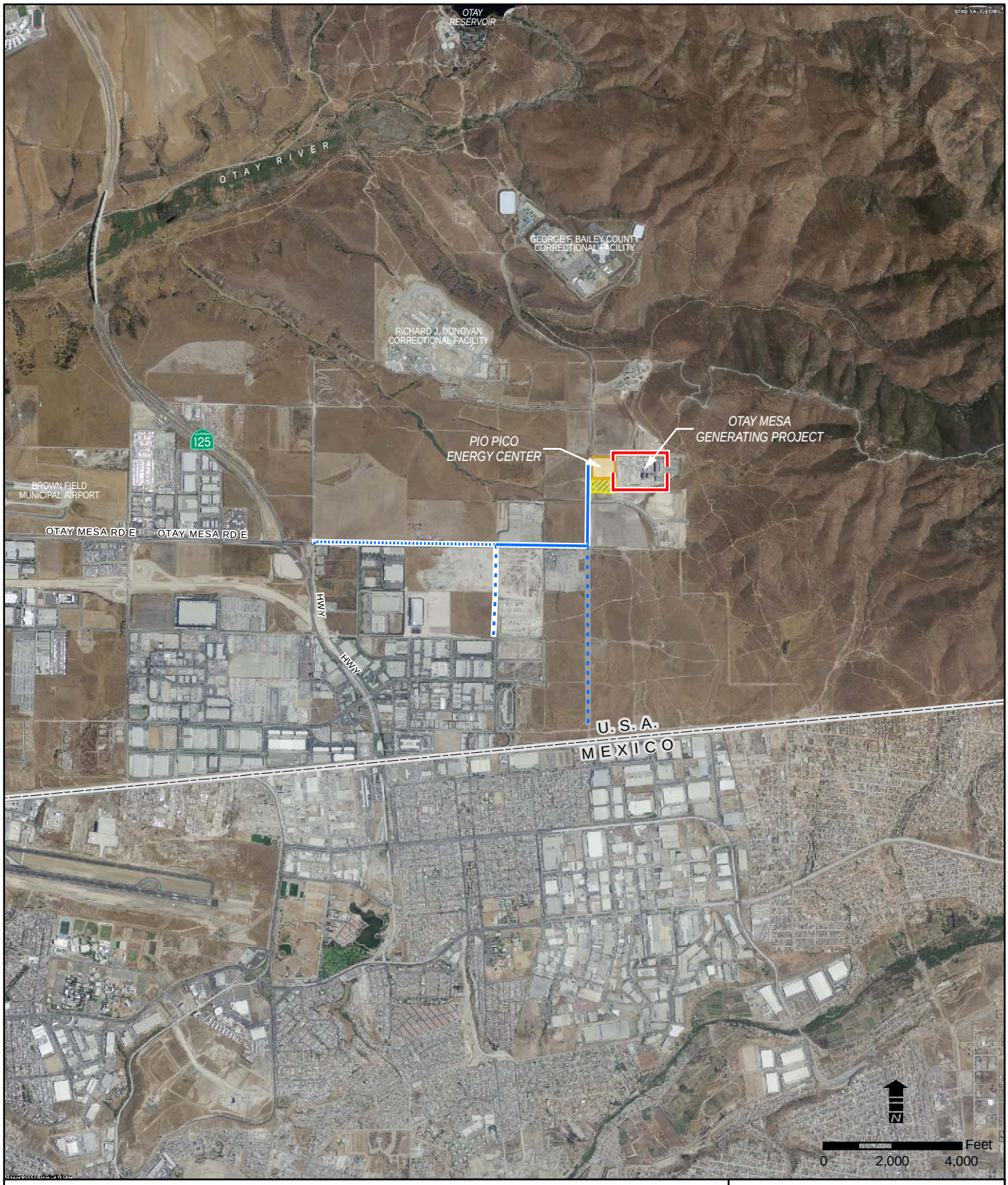


FIGURE 1
REGIONAL LOCATION

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS



Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line

FIGURE 2
SITE VICINITY

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

2.0 Methods

Prior to beginning field surveys, URS consulted resource specialists and reviewed available information from resource management plans and relevant documents to determine the locations and types of biological resources that have the potential to exist within and adjacent to the project study area; resources were evaluated within one mile and ten miles of the project pursuant to California Energy Commission's (CEC) evaluation guidelines. The materials reviewed included, but were not limited to, the following:

- County of San Diego, Biological Mitigation Ordinance (1996)
- County of San Diego in Conjunction with the United States Fish and Wildlife Service (USFWS). Multiple Species Conservation Program
- USFWS Critical Habitat Mapper and File Data (USFWS, 2010a and 2010b)
- USFWS Carlsbad Field Office Species List for San Diego County
- The California Natural Diversity Database (CDFG, 2010)
- California Native Plant Society Electronic Inventory (CNPS, 2010)
- Aerial Photographs (Digital Globe, 2009)

Wildlife corridors were also evaluated within the study area. This evaluation included a literature review to identify any previously recognized regional[6] and/or local[7] wildlife corridors or linkages (Ogden Environmental, 1993). To evaluate the arrangement of open space for its usefulness as a wildlife corridor, a group of focal target species was selected as well. The focal species included the larger mammal species: mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), bobcat (*Felis rufus*), coyote (*Canus latrans*), and kit fox (*Vulpes macrotis*). Detection of sign and/or visual observation of these species were documented during the various field efforts. These data will be analyzed to determine areas of high wildlife use.

Pedestrian-based field surveys were performed as well to assess general and dominant vegetation community types, community sizes, habitat types, and species present within communities. Community type descriptions were based on observed dominant vegetation composition based on the criteria and definitions of widely accepted vegetation classification systems (Holland, 1986; Sawyer, Keeler-Wolf and Evens, 2009). Plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Hickman, 1993). Scientific and common species names were recorded according to Hickman (1993). The presence of a wildlife species was based on direct observation, and wildlife sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific

[6]Regional corridors link two or more large areas of natural open space and serve to maintain demographic and genetic exchange between wildlife populations residing within these geographically distinct areas (Beier and Loe, 1992).

[7]Local corridors give resident animals access to essential resources (e.g., water, food, cover, or den sites) within a large habitat patch and may also function as secondary connections to the regional corridor system (Beier and Loe, 1992).

name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity were documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider, 1980; Halfpenny, 2000; Sibley, 2000; Elbroch, 2003; and Stebbins, 2003).

The study area was also assessed for its potential to support special-status species based on habitat suitability comparisons with reported occupied habitats. The following definitions were utilized to determine the need for subsequent surveys and to assess project-related effects to special-status species:

Absent [A] - Species distribution is restricted by substantive habitat requirements, which do not occur within the project footprint, and no further survey or study is necessary to determine likely presence or absence of this species.

Low [L] - Species distribution is restricted by substantive habitat requirements, which are negligible within the project footprint, and no further survey or study is obligatory to determine likely presence or absence of this species.

Habitat Present [HP] - Species distribution is restricted by substantive habitat requirements, which occur within the project footprint, and further survey or study may be necessary to determine likely presence or absence of species.

Present [P] - Species or species sign were observed to be present in the project footprint.

Additionally, suspected special aquatic resource areas were examined and evaluated within the study area using the general methodology set forth in:

- The U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory 1987);
- The USACE's Interim Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region Direction on Delineating Arid Streams (Wakeley et al., 2006);
- The USACE's and Environmental Protection Agency's June 2007 issued Clean Water Act (CWA) Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States Guidance Document (USACE, 2007); and
- Those analysis tools detailed in A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607 (ESD, 1994).

Detailed field survey methods are provided in the Preliminary Jurisdictional Delineation Report which presents our best effort at estimating jurisdictional boundaries using the most up-to-date regulations, written policies, and guidance from the USACE, Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG). Nonetheless, only the USACE, RWQCB, and CDFG can make a final determination of jurisdictional boundaries for this project.

3.0 Results

URS biologists Carol Thompson and Dennis Miller conducted surveys of the study area in November 2010. Ms. Thompson's professional experience includes nearly a decade performing habitat assessments, biological resource surveys, and special-status species monitoring across California. Ms. Thompson has a broad range of plant and wildlife taxonomy and data collection skills. She is also recognized as an authority in the identification and natural history of the Stephen's kangaroo rat, vernal pool branchiopods, California gnatcatcher, and least Bell's Vireo. Accordingly, Ms. Thompson holds USFWS 10(a)(1)(A) permits to survey and monitor for those species and routinely supports URS infrastructure, power, and transportation projects throughout Central and Southern California.

Mr. Miller has an extensive background in field research and ecological studies. As a biologist Mr. Miller has participated in projects which include vegetation mapping, biological monitoring, small mammal trapping, vernal pool branchiopod surveys, and protocol USFWS special status species surveys for avian and botanical surveys. He has prepared numerous biological reports, assessments, to demonstrate compliance with the Federal Energy Regulatory Commission (FERC), Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), California Energy Commission (CEC), California Department of Transportation (Caltrans), California Coastal Commission (CCC), state and federal Endangered Species Acts. Mr. Miller has participated in consultation with regulating agencies including California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS).

Weather conditions during the surveys included clear skies, temperatures ranging from 65–75 degrees Fahrenheit (^{o}F), and winds from 0 to 2 miles per hour (mph).

Vegetation communities / land cover types

Five vegetation communities/land cover types were observed within the study area which includes: Non-Native Grassland, Mule Fat/Tamarisk Scrub, Riparian, Disturbed/Developed (Table 1 and Figure 3). Vegetation community types are described below. Representative photos of the study area are provided in Attachment A, Photograph Log.

Table 1. Vegetation Communities Observed Within the Study Area

VEGETATION COMMUNITY TYPE	ACRES
Non-Native Grassland	425.0
Riparian	5.64
Disturbed/Developed	388.8

Non-Native Grassland

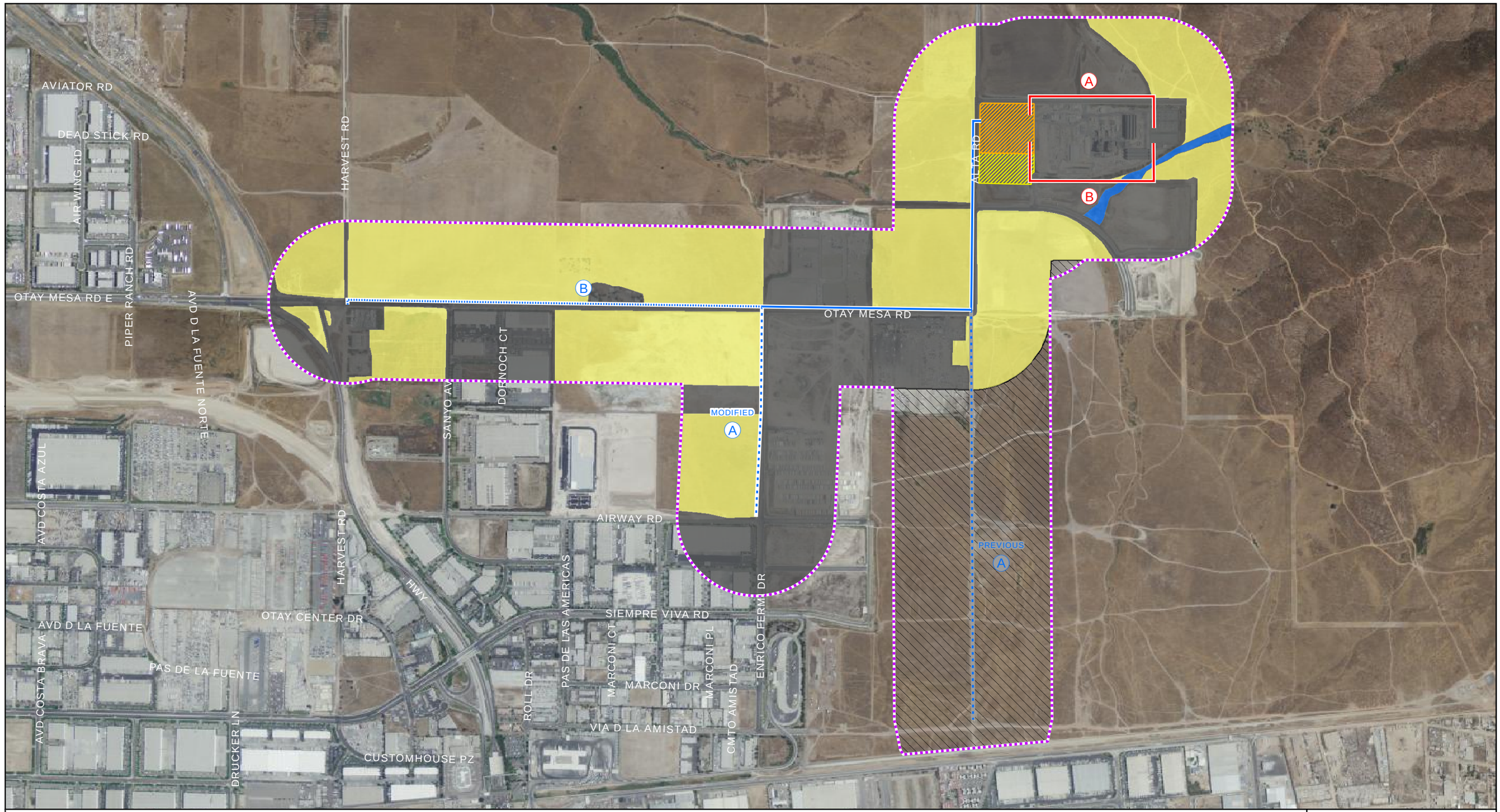
Non-Native Grassland generally occurs on fine-textured loam or clay soils that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in old fields or openings in native scrub habitats and is characterized by a dominant cover (greater than 50% cover) of annual grasses and occasionally native and nonnative annual forbs (Holland, 1986). Non-native grasses have replaced native grassland and coastal sage scrub at many localities throughout Southern California.

Riparian

Dominant riparian species within the study area include southern cattail (*Typha domingensis*), tall umbrella sedge (*Cyperus eragrostis*), and arroyo willow (*Salix lasiolepis*). This vegetation is present for most, or all, of the growing season in most years and is dominated by perennial species.

Disturbed / Developed

Disturbed vegetation has developed within portions of the study area having varying levels of anthropogenic disturbance. Disturbed areas are dominated by broad-leaf herbaceous species such as mustards (*Brassica* spp.; *Hirshfeldia incana*), horseweed (*Conyza canadensis*), and thistles (*Centaurea* spp., *Silybum* spp., *Carduus* spp.) and often have a subdominant cover (less than 50% cover) of annual non-native grasses. Developed lands within the study area include a power plant, roadways, parking lots, vacant lots, and other private/public infrastructure with ornamental plantings. Species composition in developed communities within the study area varied and dominated by non-native cultivar species. Disturbed and developed vegetation communities are found throughout the study area.



Legend

- Biological Study Area
- Not Included in Final Design
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Developed/Disturbed
- Riparian
- Non-Native Grassland

N

0 600 1,200 Feet

FIGURE 3
VEGETATION COMMUNITIES

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Special-Status Plants

Thirty nine (39) special status plant species are reported to occur within the USGS Otay Mesa 7.5-minute Quadrangle Map that includes the project footprint (Table 2). Eight of the listed plants are considered endangered or threatened plant species. All 39 listed species were determined to have an "Absent" or "Low" potential for occurrence within the project disturbance footprint, and no further survey or study is necessary to determine presence or absence of these species. All plant species observed during the surveys are listed in Attachment B.

Table 2. Special-Status Plant Species Potential for Occurrence within the Project Footprint

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Acanthomintha ilicifolia San Diego thorn-mint	Annual herb. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools/clay soils. Occurs from 33 to 3,150 ft. in elevation.	Apr-Jun	Fed: THR CA: END CNPS: List 1B.1 Local: NE	Low
Adolphia californica California adolphia	Deciduous shrub. Found in chaparral, coastal shrub, and valley and foothill grassland/clay soils. Occurs from 150 to 2,400 ft. in elevation.	Dec-May	Fed: NONE CA: NONE CNPS: List 2.1	Low
Ambrosia chenopodiifolia San Diego bur-sage	Shrub. Found in coastal scrub. Occurs from 180 to 540 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Ambrosia monogyra Singlewhorl burrobush	Shrub. Found in chaparral and Sonoran desert scrub/sandy soils. Occurs from 33 to 1,640 ft. in elevation.	Aug-Nov	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Atriplex coulteri Coulter's saltbush	Perennial herb. Found in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland/alkaline or clay soils. Occurs from 10 to 1,500 ft. in elevation.	Mar-Oct	Fed: NONE CA: NONE CNPS: List 1B.2	Low
Atriplex pacifica South Coast saltscale	Annual herb. Found in coastal bluff scrub, coastal dunes, coastal scrub, and playas. Occurs from 0 to 460 ft. in elevation.	Mar-Oct	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Bergerocactus emoryi Golden-spined cereus	Stem succulent. Found in closed-cone coniferous forest, chaparral, and coastal scrub/sandy soils. Occurs from 10 to 1,300 ft. in elevation.	May-Jun	Fed: NONE CA: NONE CNPS: List 2.2	Absent

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Brodiaea orcuttii Orcutt's brodiaea	Bulbiferous herb. Found in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools/mesic and clay soils, sometimes serpentine. Occurs from 100 to 5,500 ft. in elevation.	May-Jul	Fed: NONE CA: NONE CNPS: List 1B.1 Local: NE	Low
California macrophylla Round-leaved filaree	Annual herb. Found in cismontane woodland and valley and foothill grasslands/clay soils. Occurs from 50 to 4,000 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Calochortus dunnii Dunn's mariposa-lily	Bulbiferous herb. Found in closed-cone coniferous forest, chaparral, and valley and foothill grassland/ gabbroic or metavolcanic, rocky soils. Occurs from 1,250 to 6,000 ft. in elevation.	Apr-Jun	Fed: NONE CA: RARE CNPS: List 1B.2 Local: NE	Absent
Camissonia lewisii Lewis' evening primrose	Annual herb. Found in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland/sandy or clay soils. Occurs from 0 to 980 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 3	Low
Ceanothus cyaneus Lakeside ceanothus	Evergreen shrub. Found in closed-cone coniferous forest and chaparral. Occurs from 770 to 2,480 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2 Local: NE	Absent
Ceanothus otayensis Otay Mountain ceanothus	Evergreen shrub. Found in chaparral/metavolcanic or gabbroic rock. Occurs from 1,968 to 3,600 ft. in elevation.	Jan-Apr	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Comarostaphylis diversifolia ssp. *diversifolia* Summer holly	Evergreen shrub. Found in chaparral and cismontane woodland. Occurs from 100 to 1,800 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Cordylanthus orcuttianus Orcutt's bird's-beak	Annual herb; hemiparasitic. Found in coastal scrub. Occurs from 33 to 1,150 ft. in elevation.	Apr-Jul	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Cylindropuntia californica var. *californica* Snake cholla	Perennial succulent. Found in chaparral and coastal scrub. Occurs from 100 to 165 ft. in elevation.	April - May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Deinandra conjugens Otay tarplant	Annual herb. Found in coastal scrub, and valley and foothill grassland/clay soils. Occurs from 246 to 985 ft. in elevation.	May-Jun	Fed: THR CA: END CNPS: List 1B.1 Local: NE	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Dudleya variegata Variegated dudleya	Perennial herb. Found in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools/clay soils. Occurs from 10 to 1,900 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2 Local: NE	Low
Eryngium aristulatm var. *parishii* San Diego button-celery	Annual/perennial herb. Found in coastal scrub, valley and foothill grassland, and vernal pools/mesic soil. Occurs from 66 to 2,035 ft. in elevation.	Apr-Jun	Fed: END CA: END CNPS: List 1B.1	Low
Ferocactus viridescens San Diego barrel cactus	Stem succulent. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Occurs from 10 to 1,500 ft. in elevation.	May-Jun	Fed: NONE CA: NONE CNPS: List 2.1	Low
Fremontodendron mexicanum Mexican flannelbush	Evergreen shrub. Found in closed-cone coniferous forest, chaparral, and cismontane woodland/ gabbroic, metavolcanic, or serpentinite. Occurs from 32 to 2,350 ft. in elevation.	Mar-Jun	Fed: END CA: RARE CNPS: List 1B.1	Absent
Harpagonella palmeri Palmer's grapplinghook	Annual herb. Found in chaparral, coastal scrub, and valley and foothill grassland/clay. Occurs from 66 to 3,130 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 4.2	Low
Hesperocyparis forbesii Tecate cypress	Evergreen tree. Found in closed-cone coniferous forest and chaparral/clay soils, gabbroic or metavolcanic rock. Occurs from 836 to 4,900 ft. in elevation.	N/A	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Iva hayesiana San Diego marsh-elder	Perennial herb. Found in marshes and swamps and playas. Occurs from 33 to 1640 ft. in elevation.	Apr-Oct	Fed: NONE CA: NONE CNPS: List 2.2	Low
Lepechinia ganderi Gander's pitcher sage	Shrub. Found in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland/gabbroic or metavolcanic rock. Occurs from 1,000 to 3,300 ft. in elevation.	Jun-Jul	Fed: NONE CA: NONE CNPS: List 1B.3 Local: NE	Absent
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	Annual herb. Found in chaparral and coastal scrub. Occurs from 3 to 2,900 ft. in elevation.	Jan-Jul	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Monardella stoneana Jennifer's monardella	Perennial herb. Found in closed-cone coniferous forest, chaparral, coastal scrub, and riparian scrub/usually rocky intermittent streambeds. Occurs from 33 to 2,600 ft. in elevation.	Jun-Sept	Fed: NONE CA: NONE CNPS: List 1B.2	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Monardella viminea Willowy monardella	Perennial herb. Found in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland/alluvial ephemeral washes. Occurs from 165 to 740 ft. in elevation.	Jun-Aug	Fed: END CA: END CNPS: List 1B.1 Local: NE	Absent
Muilla clevelandii San Diego goldenstar	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland, and vernal pools/clay. Occurs from 64 to 1,525 ft. in elevation.	Apr-May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Myosurus minimus ssp. *apus* Little mousetail	Annual herb. Found in valley and foothill grassland and vernal pools/alkaline soils. Occurs from 66 to 2,100 ft. in elevation.	Mar-Jun	Fed: NONE CA: NONE CNPS: List 3.1	Low
Nama stenocarpum Mud nama	Annual/perennial herb. Found in marshes and swamps (lake margins, riverbanks). Occurs from 16 to 1,650 ft. in elevation.	Jan-Jul	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Navarretia fossalis Spreading navarretia	Annual herb. Found in chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, and vernal pools. Occurs from 100 to 4265 ft. in elevation.	Apr-Jun	Fed: THR CA: NONE CNPS: List 1B.1	Low
Orcuttia californica California Orcutt grass	Annual herb. Found in vernal pools. Occurs from 50 to 2,165 ft. in elevation.	Apr-Aug	Fed: END CA: END CNPS: List 1B.1	Low
Pogogyne nudiuscula Otay Mesa mint	Annual herb. Found in vernal pools. Occurs from 295 to 820 ft. in elevation.	May-Jul	Fed: END CA: END CNPS: List 1B.1	Low
Quercus dumosa Nutall's scrub oak	Evergreen shrub. Found in closed-cone coniferous forest, chaparral, and coastal scrub/sandy, clay loam soils. Occurs from 50 to 1,312 ft. in elevation.	Feb-Apr	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Salvia munzii Munz's sage	Evergreen shrub. Found in chaparral and coastal scrub. Occurs from 390 to 3,500 ft. in elevation.	Feb-Apr	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Stemodia durantifolia Purple stemodia	Perennial herb. Found in Sonoran desert scrub (often mesic, sandy soils). Occurs from 590 to 984 ft in elevation.	Jan-Dec	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Streptanthus bernardinus Laguna Mountains jewel-flower	Perennial herb. Found in chaparral and lower montane coniferous forest. Occurs from 2,200 to 8,200 ft. in elevation.	May-Aug	Fed: NONE CA: NONE CNPS: List 4.3	Absent
Tetracoccus dioicus Parry's tetracoccus	Deciduous herb. Found in chaparral and coastal scrub. Occurs from 540 to 3,280 ft. in elevation.	Apr-May	Fed: NONE CA: NONE CNPS: List 1B.2	Absent

Status Codes:
Federal designations: (Federal Endangered Species Act, USFWS):
END: Federal-listed, endangered.
THR: Federal-listed, threatened.
NONE: Not listed.

State designations: (California Endangered Species Act, CDFG)
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare
NONE: Not listed.

California Native Plant Society (CNPS) designations:
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

Threat Codes:
.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Local Designation: City of Chula Vista MSCP Subarea Plan
NE: Narrowly Endemic

Special-Status Wildlife

Twenty-five (25) special status wildlife species are reported to occur within the USGS Otay Mesa Quadrangle Map that includes the project footprint (Table 3). Twenty-three of these special-status wildlife species had an "Absent" or "Low" potential of occurrence within the project study area and therefore no further survey or study is necessary to determine presence or absence of these species. The remaining two special-status wildlife were determined to have a moderate potential for occurrence, and further evaluation would be necessary to assess project-related effects to these species. All wildlife species observed during the surveys are listed in Attachment C.

The two species with a moderate potential for occurrence within the study area include:

- San Diego fairy shrimp (*Branchinecta sandiegonensis)*
- Burrowing owl (*Athene cunicularia*)

Table 3. Special-Status Wildlife Species Potential for Occurrence within the Project Footprint

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
INVERTEBRATES			
Branchinecta sandiegonensis San Diego fairy shrimp	Occurs in tectonic swales/earth slump basins in grassland and coastal sage scrub habitats. Inhabits seasonally astatic pools filled by winter/spring rains and hatches in warm water later in the season. Endemic to Orange and San Diego counties.	Fed: FE CA: NONE	Moderate
Callophrys thornei Thorne's hairstreak	Generally associated with chaparral or closed-coned coniferous habitats.	Fed: NONE CA: NONE*	Absent
Euphydryas editha quino Quino checkerspot butterfly	Occurs in open coastal sage scrub, chaparral and grassland habitats. Populations are limited to Riverside and San Diego counties.	Fed: FE CA: NONE	Absent
Streptocephalus woottoni Riverside fairy shrimp	Occurs in tectonic swales/earth slump basins in grassland and coastal sage scrub habitats. Inhabits seasonally astatic pools filled by winter/spring rains and hatches in warm water later in the season. Endemic to west Riverside, Orange, and San Diego counties.	Fed: FE CA: NONE	Absent
REPTILES AND AMPHIBIANS			
Aspidoscelis hyperythra Orange-throated whiptail	Frequents coastal chaparral, thornscrub, and streamside growth. Occurs in washes, streams, terraces, and other sandy areas, often where there are rocks and patches of brush and rocky hillsides.	Fed: NONE CA: SSC	Low
Aspidoscelis tigris stejnegeri Coastal whiptail	Inhabits grasslands, coastal sage scrub, chaparral, and woodlands that support adequate prey species.	Fed: NONE CA: NONE *	Low
Phrynosoma coronatum blainvillii San Diego coast horned lizard	Found in a wide variety of habitats, including coastal sage, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest. Key habitat elements are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Fed: NONE CA: SSC	Low
Salvadora hexalepis virgultea Coast patch-nosed snake	Found in semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Fed: NONE CA: SSC	Absent

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Spea hammondii Western spadefoot	Occurs primarily in grasslands; occasional populations occur in valley-foothill hardwood woodlands. Ranges throughout the Central Valley and adjacent foothills; usually common where it occurs. In the Coast Ranges, it is found from Point Conception, Santa Barbara county, south to the Mexican border. Found from near sea level to 4470 ft in elevation.	Fed: NONE CA: SSC	Low
Thamnophis hammondii Two-striped garter snake	Generally found around pools, creeks, cattle tanks, and other water sources; often in rocky areas, oak woodland, chaparral, brushland, and coniferous forest.	Fed: NONE CA: SSC	Absent
BIRDS			
Athene cunicularia Burrowing Owl	Found in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. A subterranean nester that is dependent upon burrowing mammals, most notably the California ground squirrel.	Fed: NONE CA: SSC	Moderate
Campylorhynchus brunneicapillus sandiegensis Coastal Cactus Wren	Found in coastal sage scrub habitat. Nests almost exclusively in prickly pear (*Opuntia littoralis*) and coastal cholla (*O. prolifera*).	Fed: NONE CA: SSC	Absent
Eremophila alpestris actia California Horned Lark	Occurs in open terrain, which is often sparsely vegetated.	Fed: NONE CA: NONE *	Low
Icteria virens Yellow-breasted Chat	Inhabits dense thickets, brush, and secondary growth. Nests in dense shrubs.	Fed: NONE CA: SSC	Absent
Polioptila californica californica Coastal California Gnatcatcher	Local, uncommon, obligate resident of arid coastal sage scrub vegetation on mesas, hillsides and in washes. Nests almost exclusively in California sagebrush.	Fed: FT CA: SSC	Absent
Vireo belli pusillus Least Bell's Vireo	Resides in low riparian areas close to the water or dry riverbeds. Nests are usually constructed in bushes or within the branches of mesquite (*Prosopis* spp.), willows, and mule fat. Found below 2000 ft in elevation.	Fed: FE CA: SE	Absent
MAMMALS			
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	Found in sparse, low desert shrub lands up to dense, high coastal sage-scrub vegetation.	Fed: NONE CA: SSC	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Eumops perotis californicus Western mastiff bat	Forages in dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Roosts in colonies under exfoliating rock slabs (e.g., granite, sandstone, or columnar basalt) and in similar crevices in large boulders and buildings; generally high above ground.	Fed: NONE CA: SSC	Absent
Lasiurus blossevillii Western red bat	Occurs in riparian areas. Roosts alone, generally in the foliage of trees and shrubs.	Fed: NONE CA: SSC	Absent
Lepus californicus bennettii San Diego black-tailed jackrabbit	Occurs in coastal sage scrub and grassland habitats.	Fed: NONE CA: SSC	Low
Myotis ciliolabrum Western small-footed myotis	Occurs in rocky areas in coniferous forest, desert, chaparral, and riparian zones. Roosts alone or in small groups in cliff and rock crevices, buildings, concrete overpasses, caves, and mines.	Fed: NONE CA: NONE *	Absent
Myotis yumanensis Yuma myotis	Low-flying bat. Occurs in a wide variety of upland and lowland habitats, including riparian, arid scrublands and deserts, and forests. Often associated with permanent water sources, typically rivers and streams. Roosts in bridges, buildings, cliff crevices, caves, mines, and trees.	Fed: NONE CA: NONE *	Absent
Neotoma lepida intermedia San Diego desert woodrat	Typically found in the coastal scrub of southern California from San Diego County to San Luis Obispo County. Prefer moderate to dense vegetation canopies. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	Fed: NONE CA: SSC	Absent
Nyctinomops femorosaccus Pocketed free-tailed bat	Found near large, open water sources in a variety of habitats, including desert shrub and pine-oak forest. Roosts in colonies in crevices of rugged cliffs, high rocky outcrops, slopes, and buildings.	Fed: NONE CA: SSC	Absent
Taxidea taxus American badger	Uncommon, permanent resident found throughout most of the state. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Extirpated from many areas in Southern California.	Fed: NONE CA: SSC	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Status Codes FEDERAL Federal Endangered Species Act FE Federal Endangered FT Federal Threatened CH Critical Habitat STATE California Endangered Species Act SE State Endangered ST State Threatened FP Fully Protected CDFG Code SSC California Species of Special Concern * Other			

Special Aquatic Resource Areas

This document presents our best effort at estimating the extent of special aquatic resource areas within the study area[8]; nonetheless, only the USACE, CDFG, and RWQCB can make a final determination of the boundaries of their jurisdictions. Several small ephemeral washes and drainages were identified during the surveys. Consequently, completion of a jurisdictional wetlands and waters determination on those lands likely subject to USACE, RWQCB, and CDFG jurisdiction is warranted to determine project implementation level affects to these and other features observed within the study area.

[8] Formal wetlands and waters delineation was not performed by URS.

4.0 Conclusions

The majority of the study area has been previously disturbed and the region includes developed areas containing commercial and public infrastructure. The project footprint lacks suitable habitat that would typically support the majority of special-status species. However, the literature review and field survey data suggests that there is potential for two special-status species to utilize the project footprint. These two species include the burrowing owl and San Diego fairy shrimp. Consequently, further survey or study may be necessary to determine likely presence or absence of these species. The following measures are also recommended as a means of avoiding and minimizing adverse impacts to biological resources that have the potential to occur within the project footprint:

- In order to comply with the MBTA and relevant sections of the California Fish and Game Code, any vegetation clearing should take place outside of the typical avian nesting season (15 February to 31 August) to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, a qualified biologist should conduct a pre-construction nesting-bird survey prior to project initiation. If active nests are observed, a minimum buffer zone from occupied nests is recommended to the maximum extent practicable. Once nesting has ended, the buffer may be removed.
- Limits of grading and construction activities within the project footprint should be clearly delineated with temporary staking, flagging, or similar materials.
- The project footprint should be minimized to the maximum extent feasible and access to it should be via pre-existing/maintained access routes to the greatest extent possible.
- To avoid attracting predators and nuisance species, the project footprint shall be clear of debris, where possible. All food-related trash items should be enclosed in sealed containers and regularly removed from the project footprint.

Several potential special aquatic resource areas were identified within the study area. Consequently, completion of a jurisdictional determination on those lands likely subject to CWA, RWQCB, and CDFG jurisdiction is warranted to determine project implementation level affects to these features as well. With the execution of the avoidance and minimizations measures recommended above, the project is not expected to adversely impact common or special-status species.

The services performed by URS and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations to Pio Pico Energy Center, LLC (PPEC LLC), either expressed or implied, and no warranty or guarantee is included or intended in this report. Opinions relating to presence, absence, or potential for occurrence of biological resources are based on limited data and actual conditions may vary from those encountered at the times and locations where the data were obtained despite due professional care. The services provided have been performed in accordance with a scope of work negotiated between PPEC LLC and URS. Any reliance on this report by any other party shall be at such party's sole risk unless that party has written authorization from URS to use this work product. The purpose of this restriction is to attempt to protect the interests of parties for whom the work product may be appropriately directed.

5.0 References

Burt, W.H. and R. P. Grossenheider. 1980. A Field Guide to Mammals: North America; North of Mexico. New York, NY: Houghton Mifflin Company.

CDFG (California Department of Fish and Game). 2010. RareFind California Department of Fish and Game Natural Diversity Database (CNDDB) La Habra USGS 7.5-Minute Quadrangle. Sacramento, CA: California Department of Fish and Game, Biogeographic Data Branch.

CNPS (California Native Plant Society). 2010. CNPS Electronic Inventory of Rare and Endangered Plants: CNPS.

County of San Diego, Board of Supervisors. 1996. Biological Mitigation Ordinance.

County of San Diego in conjunction with the United States Fish and Wildlife Service, California Department of Fish and Game. October 22, 1997. County of San Diego Multiple Species Conservation Program

Digital Globe. 2008. Aerial Photography: Digital Globe.

Elbroch, M. 2003. Mammal Tracks & Sign, A Guide to North American Species. Mechanicsburg, PA: Stackpole Books.

Halfpenny, J.C. 2000. Scats and Tracks of the Desert Southwest, A Field Guide to the Signs of 70 Wildlife Species. Helena, MT: Falcon Publishing, Inc.

Hickman, J.C. (ed) 1993. The Jepson Manual: Higher Plants of California. Berkeley: University of California Press.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California (California Department of Fish and Game The Resources Agency, ed), p. 156. Sacramento, CA.

Sawyer and Keeler-Wolf and Evens. 2009. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

Sibley, D.A. 2000. National Audubon Society. The Sibley Guide To Birds. New York, NY: Alfred A. Knopf, Inc.

Stebbins, R.C. 2003. A Field Guide To Western Reptiles and Amphibians. New York, NY: Houghton Mifflin.

USGS (United States Geological Service). 1975 7.5-Minute Quadrangle Map La Habra, California.

USFWS (United States Fish and Wildlife Service). 2010a. Critical Habitat Portal. USFWS

USFWS (United States Fish and Wildlife Service). 2010b. San Diego Fish and Wildlife Office Endangered and Threatened Species List. In: U.S. Department of the Interior, editor. Carlsbad, CA: USFWS.

ATTACHMENT A. PHOTOGRAPH LOG

	Photograph: 1 Direction: West
	Photograph: 2 Direction: East

	Photograph: 3 Direction: North
	Photograph: 4 Direction: South

ATTACHMENT B. PLANT SPECIES OBSERVED WITHIN THE PROJECT STUDY AREA

SCIENTIFIC NAME	COMMON NAME
FLOWERING PLANTS	
MONOCOTS	
Arecaceae	Palm Family
Washingtonia sp.	Fan palm
Cyperaceae	Sedge Family
Cyperus eragrostis	Tall umbrella-sedge
Poaceae	Grass Family
Avena barbata *	Slender wild oat
Avena fatua *	Wild oat
Bromus diandrus * †	Ripgut brome
Bromus hordeaceus *	Soft chess
*Bromus japonicus**	Japanese broom
Bromus madritensis *	Foxtail chess
Bromus sp.* †	Brome grass
Cynodon dactylon *	Bermuda grass
Elymus condensatus	Giant wildrye
Lolium multiflorum *	Italian wild rye
Piptatherum miliaceum	Smilo grass
Polypogon monspeliensis *	Annual beard grass
Typhaceae	Cattail Family
Typha domingensis	Southern cattail
DICOTS	
Aizoaceae	Fig-Marigold Family
Carpobrotus edulis	Iceplant
Anacardiaceae	Sumac Family
Rhus ovata	Sugar bush
Schinus molle *	Pepper tree
Apiaceae	Carrot Family
Foeniculum vulgare * †	Sweet fennel
Apocynaceae	Dogbane Family
Nerium oleander	Oleander
Asteraceae	Aster Family
Ambrosia psilostachya	Ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	Mugwort
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Conyza canadensis †	Common horseweed
Encilia californica	California encilia
Heterotheca grandiflora †	Telegraph weed
Isocoma menziesii var. *menziesii* †	Goldenbush
Iva hayesiana **	San Diego marsh elder

SCIENTIFIC NAME	COMMON NAME
Lactuca serriola * †	Prickly lettuce
Picris echioides * †	Bristly ox-tongue
Sonchus asper *	Prickly sow thistle
Sonchus oleraceus *	Sow thistle
Stephanomeria exigua	Wreath-plant
Brassicaceae	Mustard Family
Brassica nigra * †	Black mustard
Hirschfeldia incana * †	Shortpod mustard
Cactaceae	Cactus Family
Cylindropuntia sp.	Cholla
Opuntia littoralis	Coastal prickly pear
Chenopodiaceae	Goosefoot Family
Atriplex semibaccata * †	Australian saltbush
Salsola tragus * †	Russian thistle
Convolvulaceae	Morning Glory Family
*Convolvulus arvensis** †	Bindweed
Euphorbiaceae	Spurge Family
Chamaesyce polycarpa	Small seeded spurge
Eremocarpus setigerus	Doveweed
Ricinus communis *	Castor bean
Fabaceae	Pea Family
Melilotus alba * †	White sweetclover
Trifolium repens * †	White clover
Geraniaceae	Geranium Family
Erodium botrys * †	Longbeak stork's bill
Erodium cicutarium * †	Redstem stork's bill
Lamiaceae	Mint Family
Marrubium vulgare *	Common horehound
Malvaceae	Mallow Family
Malva parviflora * †	Cheeseweed
Myrtaceae	Myrtle Family
Eucalyptus sp. * †	Eucalyptus tree
Onagraceae	Evening Primrose Family
Oenothera elata	Hooker's evening primrose
Polygonaceae	Buckwheat Family
Rumex crispus *	Curly dock
Primulaceae	Primrose Family
Anagallis arvensis *	Scarlet pimpernel
Rosaceae	Rose Family
Heteromeles arbutifolia †	Toyon
Salicaceae	Willow Family
Salix exigua	Sandbar willow
Salix lasiolepis	Arroyo willow

SCIENTIFIC NAME	COMMON NAME
Solanaceae	Nightshade Family
Nicotiana glauca * †	Tree tobacco
Tamaricaceae	Tamarisk Family
Tamarix ramosissima	Mediterranean tamarisk
Urticaceae	Nettle Family
Urtica dioica	Stinging nettle
Verbenaceae	Verbena Family
Lantana sp.*	Lantana

*indicates non-native species, ** listed species, † on project foot print as well as study area.

ATTACHMENT C. WILDLIFE SPECIES OBSERVED WITHIN THE STUDY AREA

SCIENTIFIC NAME	COMMON NAME
REPTILES	
PHRYNOSOMATIDAE	SPINY LIZARDS
Sceloperous occidentalis	Western fence lizard
BIRDS	
ACCIPITRIDAE	HAWKS, KITES, AND EAGLES
Buteo jamaicensis	Red-tailed Hawk
ARDEIDAE	HERONS AND EGRETS
Ardea alba	Great Egret
COLUMBIDAE	PIGEONS AND DOVES
Zenaida mcroura	Mourning Dove
FALCONIDAE	FALCONS
Falco sparverius	American Kestrel
ICTERIDAE	NEW WORLD BLACKBIRDS AND ORIOLES
Sturnella neglecta	Western Meadowlark
POLIOPTILIDAE	GNATCATCHERS
Polioptila caerulea	Blue gray Gnatcatcher
STRIGIDAE	TYPICAL OWLS
Athene cunicularia	Burrowing Owl
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's Hummingbird
TYRANNIDAE	TYRANT FLYCATCHERS
Sayornis nigricans	Black Phoebe
Tyrannus vociferans	Cassin's Kingbird
TYTONIDAE	BARN OWLS
Tyto alba	Barn Owl
MIMIDAE	MOCKINGBIRDS AND THRASHERS
Mimus polyglottos	Northern Mockingbird
CORVIDAE	JAYS AND CROWS
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
EMBERIZIDAE	AMERICAN SPARROWS
Zonotrichia leucophrys	White-crowned Sparrow
FRINGILLIDAE	FINCHES
Carpodacus mexicanus	House Finch
MAMMALS	
CANIDAE	FOXES, DOGS, WOLVES, AND COYOTES
Canis familiaris	Domestic Dog (sign)
Canis latrans	Coyote (sign)
LEPORIDAE	RABBITS AND HARES
Sylvilagus sp.	cottontail (sign)
SCIURIDAE	SQUIRRELS
Otospermophilus beecheyi	California ground squirrel (sign)

APPENDIX J-2
JURISDICTIONAL DETERMINATION

PRELIMINARY JURISDICTIONAL DETERMINATION REPORT

PIO PICO ENERGY CENTER PROJECT

SAN DIEGO COUNTY, CALIFORNIA

Prepared for

Pio Pico Energy Center, LLC.

December 2010
Modified May 2011

URS

2020 East First Street, Suite 400
Santa Ana, California 92705

TABLE OF CONTENTS

SECTION PAGE

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

LIST OF ABBREVIATED TERMS

CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
EPA	U.S. Environmental Protection Agency
FAC	Faculative
FACU	Faculative Upland
FACW	Faculative Wetland
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning System
IWMC	California Interagency Watershed Mapping Committee
kV	kilovolt
LSAA	Lake and Streambed Alteration Agreement
msl	mean sea level
MW	megawatt
NI	No Indicator
NRCS	Natural Resources Conservation Service
OBL	Obligate Wetland
OHWM	Ordinary High Water Mark
PPEC	Pio Pico Energy Center
Project	Pio Pico Energy Center Project
Project footprint	Area of temporary and/or permanent impact
Porter-Cologne	Porter-Cologne Water Quality Control Act
Rapanos Decision	John A. Rapanos v. United States; and June Carabell v. United States Army Corps of Engineers
RHA	Rivers and Harbor Act of 1899
RPW	Relatively Permanent Water
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas and Electric
Study Area	Proposed disturbance footprint, 500-foot buffer, and surrounding watersheds
SWANCC	Solid Waste Agency of Northern Cook County vs. USACE
SWRCB	State Water Regional Control Board
TNW	Traditional Navigable Water
UPL	Obligate Upland
URS	URS Corporation
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
WDR	Waste Discharge Report
WoUS	Waters of the United States
WoS	Waters of the State
WQC	Water Quality Certification Program

1.0 INTRODUCTION

This Preliminary Jurisdictional Determination Report summarizes the findings of: (1) U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); (2) Regional Water Quality Control Board (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) (et seq.) of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne); and (3) California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFG Code) for the Pio Pico Energy Center project (hereafter referred to as the "project"). The project is located within the Otay Mesa United States Geographical Survey (USGS) 7.5-Minute Series Topographic Quadrangle Map (USGS, 1975) (Figures 1 and 2). It is located approximately three miles southeast of Chula Vista, 18 miles southeast of the City of San Diego and approximately 1.5 miles north of the U.S.–Mexico border.

The intended use of this report is to disclose and evaluate any special aquatic resource areas[1] within the project's "study area." For the purposes of this document, the "study area" is defined project's proposed disturbance footprint (project footprint), an approximate 500-foot buffer[2], and the surrounding localized watersheds. This document presents URS Corporation's (URS) best effort at estimating special aquatic resource area boundaries using the most up-to-date regulations, written policies, and guidance from the USACE, RWQCB, and CDFG. Nonetheless, only the USACE, RWQCB, and CDFG can make a final determination of special aquatic resource area boundaries and jurisdiction.

[1] For the purposes of this document, special aquatic resource areas are being defined as the potential limits of: USACE jurisdiction pursuant to Section 404 of the CWA; the RWQCB legal authority in accordance with Section 401 of the CWA and Porter-Cologne; and CDFG's jurisdiction pursuant to Section 1600 (et seq.) of the California Fish and Game (CFG) Code.

[2] Where 100% pedestrian coverage of the study area was not possible due to limited access (e.g., fenced areas where access to private property or other physical barriers [vegetative cover, health and safety concerns, etc.]), field observations were made from the nearest appropriate vantage points via public right-of-ways with binoculars and/or via aerial photographic interpretation.

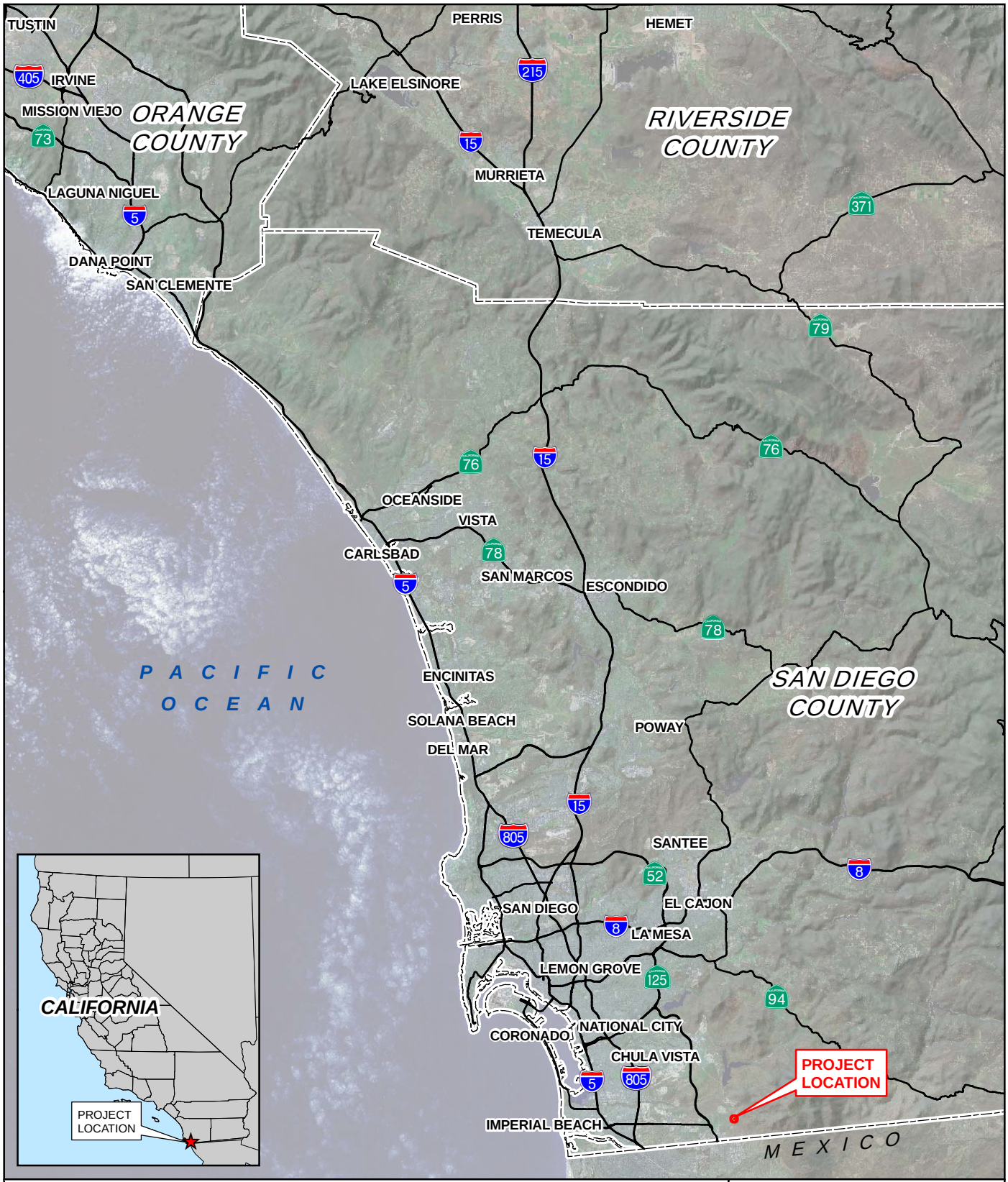
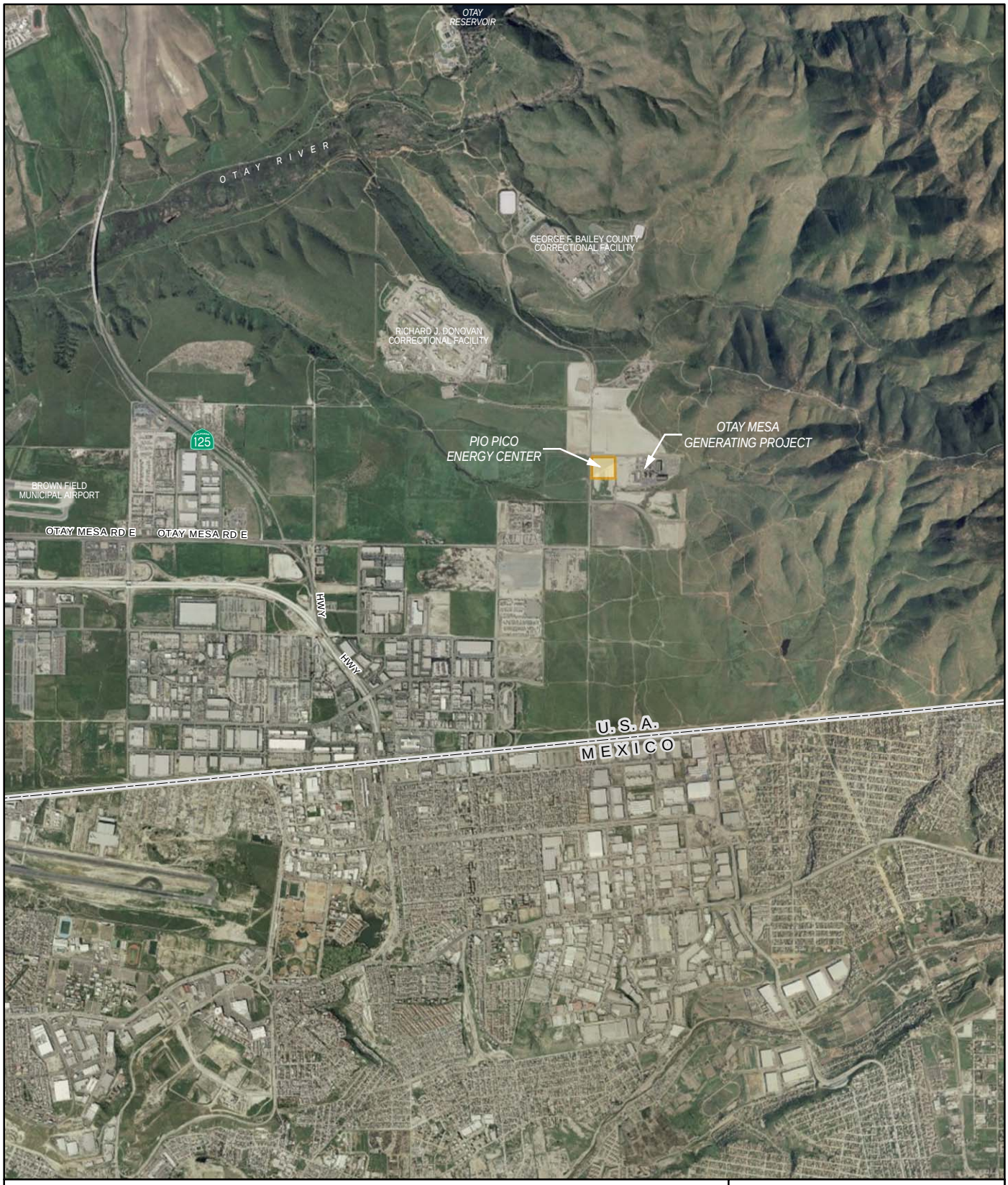


FIGURE 1
REGIONAL LOCATION

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS



Legend

Project Location

N

0 2,000 4,000 Feet

FIGURE 2
PROJECT LOCATION

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

1.1 SUMMARY OF USACE JURISDICTION PURSUANT TO SECTION 404 OF THE CWA

The USACE regulates discharge of fills to Waters of the United States (WoUS[3]) through Section 404 of the CWA. The study area contains seven unnamed, potential WoUS drainage features. Each drainage feature is a non-Relatively Permanent Water (RPW) tributary to, and having a significant nexus with, a Traditional Navigable Water (TNW) and may be within the jurisdiction of Section 404 of the CWA. A total of 4.25 acres of potential CWA Section 404 jurisdiction occurs within the study area, consisting of 4.15 acres of non-wetland WoUS and 0.1 acres of WoUS with USACE-defined wetlands. No temporary impacts or permanent losses to potential CWA Section 404 jurisdiction are expected with the project.

1.2 SUMMARY OF RWQCB JURISDICTION PURSUANT TO SECTION 401 OF THE CWA AND THE PORTER-COLOGNE WATER QUALITY CONTROL ACT

The RWQCB regulates fills to Waters of the State (WoS) through the CWA Section 401 Water Quality Certification (WQC) Program and Porter-Cologne. Pursuant to CWA Section 401, the RWQCB's legal authority within the project's study area is equal to CWA Section 404 jurisdiction. Because the seven drainage features within the study area are potentially subject to CWA Section 404 jurisdiction (and subsequently CWA Section 401 jurisdiction), there is no additional RWQCB jurisdiction subject to Porter-Cologne. A total of 4.25 acres of CWA Section 401 jurisdiction occur within the study area, consisting of 4.15 acres of non-wetland WoS and 0.1 acres of WoS with included wetlands. No temporary impacts or permanent losses to CWA Section 401 jurisdiction are expected with the project.

1.3 SUMMARY OF CDFG JURISDICTION PURSUANT TO SECTION 1600 (ET SEQ.) OF THE CFG CODE

Pursuant to Section 1600 (et seq.) of the CFG Code, the CDFG regulates diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. Seven features within the study area contain a bed, bank, and channel and function as drainages that provide functions and values for wildlife and are therefore subject to CFG Code Section 1600 (et seq.) jurisdiction. These features are all unnamed drainages consisting of 6.25 acres of non-riparian bed, bank, and channel, and 0.3 acres of associated riparian vegetation. No temporary impact or permanent losses to CFG Code Section 1600 (et seq.) jurisdiction are expected as a result of the project.

1.4 REQUIRED PERMITS

[3] The term WoUS is defined as follows (33 CFR 328.3): (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce; (4) All impoundments of waters otherwise defined as WoUS; (5) Tributaries of WoUS identified above; (6) The territorial seas; and (7) Wetlands adjacent to waters (other than waters that are themselves wetlands).

Project implementation may require a CWA Section 404 permit, a 401 WQC, and a CDFG Lake and Streambed Alteration Agreement (LSAA) Notification for any impacts to drainage features within the project footprint. Permitting recommendations are provided in Section 6.0.

2.0 DESCRIPTION OF PROJECT AND LAND USE WITHIN THE PROJECT VICINITY

2.1 PROJECT DESCRIPTION

Pio Pico Energy Center (PPEC) is a proposed 300 megawatt (MW) simple-cycle electrical generating facility located in an industrial area of San Diego County, adjacent to the existing Otay Mesa Generating Project. PPEC will supply fast response power to help San Diego Gas & Electric (SDG&E) meet cyclic demand and further utilize renewable resources. The project will be constructed on disturbed land and prepared land, and will include a 230 kilovolt (kV) transmission line, a natural gas supply pipeline, and short connections into adjacent streets for potable and recycled water supply, and sewer and stormwater discharge.

The project site is comprised of a 9.99 acre parcel located in the southeast quadrant of the Alta Road and Calzada de la Fuente intersection. The proposed project site comprises the entire parcel with Assessor's Parcel Number (APN) 648-040-45, and the laydown area consists of 6.00 acres of an adjacent parcel to the south (APN 648-040-46).

2.2 LOCATION AND LAND USE

The project is located within Sections 25, 30, 31, and 36; Township 18 South; Range 1 East of the Otay Mesa USGS 7.5-Minute Topographic Quadrangle Map (USGS, 1975). The Universal Transverse Mercator (UTM) coordinates at the approximate center of the study area are 507694 meters east and 3603988 meters north. The project occurs at an approximate elevation of 635 feet above mean sea level (msl) and is mainly composed of undeveloped annual grasslands, cleared/disturbed lots, dirt roads, and paved roadways (i.e., Otay Mesa Road, Calzada de la Fuente, Paseo de la Fuente, and Alta Road). Much of the study area has been disturbed from development, vegetation clearing, and from off-road-vehicle activities associated with the U.S. Border Patrol.

3.0 REGULATORY OVERVIEW

3.1 REVIEW OF USACE JURISDICTION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT

3.1.1 Waters of the United States

The USACE regulates the discharge of dredged and/or fill material into WoUS pursuant to Section 404 of the CWA. The USACE has authority to permit the discharge of dredged or fill material in WoUS under Section 404 of the CWA and to permit work and the placement of structures in navigable WoUS under the Rivers and Harbors Act of 1899 (RHA).

Ordinary High Water Mark

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, including intermittent streams, extend to the ordinary high water mark (OHWM). The OHWM is defined as "that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3[e]). In 2005, the USACE issued Regulatory Guidance Letter 05-05, which added the following additional indicators of an OHWM: wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and changes in plant communities (USACE, 2005).

USACE-Defined Wetlands

Wetlands are defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a dominance of vegetation typically adapted for life in saturated soil conditions." The methods set forth in the USACE Wetland Manual generally require that in order to be considered a wetland, the vegetation, soils, and hydrology of an area must exhibit at least minimal hydric characteristics (EL, 1987; USACE, 2008b). Although the manual provides great detail in methods and allows for varying atypical or problematic conditions, a wetland should normally meet each of the following three criteria:

1. More than 50% of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands [Reed, 1988]);

2. Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions). Such soils, known as "hydric soils," have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season; and

3. Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least 5% of the growing season during a normal rainfall year (Note: for most of low-lying southern California, 5% of the growing season is equivalent to 18 days).

3.1.2 USACE Terminology

The following definitions are from the Rapanos Guidance Memoranda (USACE, 2007a and 2008a):

"Adjacent," as defined in USACE and Environmental Protection Agency (EPA) regulations, means "bordering, contiguous, or neighboring." Wetlands separated from other WoUS by man-made dikes or barriers, natural river berms, beach dunes, and the like are 'adjacent wetlands.' Wetlands that are not separated from a tributary by upland features, such as a berm or dike, are considered "abutting."

A "tributary," as defined in the Rapanos guidance memoranda, means a natural, man-altered, or man-made water body that carries flow directly or indirectly into traditional navigable waters. For purposes of determining "significant nexus" with a traditional navigable water, a "tributary" is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point where the tributary enters a higher order stream).

A water body is considered to have a "significant nexus" with a TNW if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream TNW. A "TNW" includes all of the "navigable waters of the United States," defined in 33 C.F.R. § 329 and by numerous decisions of the federal courts, plus all other waters that are navigable-in-fact.

In the context of CWA jurisdiction post-Rapanos, a water body is "relatively permanent" if its flow is year-round or is continuous at least "seasonally," (e.g., typically three months). Wetlands adjacent to a "relatively permanent" tributary are also jurisdictional if those wetlands directly abut such a tributary (USACE, 2008a).

The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water (USACE, 2008a):

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to, but that do not directly abut, a relatively permanent non-navigable tributary

In general, the USACE does not assert jurisdiction over the following features (USACE 2008a):

- *Ditches*. "Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water (greater than three months) generally are not jurisdictional under the CWA, because they are not tributaries or they do not have a significant nexus to TNWs."

- *Swales*. "Swales are generally shallow features in the landscape that may convey water across upland areas during and following storm events. Swales usually occur on relatively flat slopes and typically have grass or other low-lying vegetation throughout the swale. Swales are generally not waters of the U.S. because they are not tributaries or they do not have a significant nexus to TNWs."

3.1.3 Review of RWQCB Jurisdiction Pursuant to Section 401 of the Clean Water Act and Porter-Cologne

The RWQCB regulates fills to WoUS under the Section 401 WQC, which in most instances, mirrors CWA Section 404 jurisdiction. In the absence of CWA Section 404 jurisdiction over isolated waters or WoS, RWQCB jurisdiction over WoS is extended through Porter-Cologne. WoS are defined in Section 13050(e) of the CWC and include any surface water or groundwater, including saline waters, within the boundaries of the State. Porter-Cologne provides a comprehensive framework to protect water quality in California. It requires that any entity who plans to discharge waste where it might adversely affect WoS must first notify the RWQCB, which may impose requirements to protect water quality.

The Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC) decision created "gaps" relating to isolated waters that are no longer subject to the CWA. In response, the State Water Regional Control Board (SWRCB) issued a 2004 Memorandum (SWRCB, 2004), stating that RWQCBs should consider setting a higher regulatory priority on discharges to "isolated waters" than to similar discharges to federally-protected waters of similar value. The 2004 Memorandum further stated that "dredging, filling, or excavation" of "isolated" waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a Waste Discharge Report (WDR) to the RWQCB and comply with other requirements of Porter-Cologne. Among the procedures recommended in the Memorandum was that the RWQCB refer to the same regulatory considerations generally applied to the issuance of Section 401 permits when issuing a WDR (SWRCB, 2004).

According to the SWRCB, the SWANCC decision did not affect the authority of the state to regulate discharges to isolated, non-navigable waters of the state, and had no impact upon the RWQCBs' authority to act under state law (SWRCB, 2001). Simply because RWQCBs often opted to regulate discharges in the past through Section 401 in lieu of, or in addition to, issuing WDRs does not preclude RWQCBs from issuing WDRs in the absence of Section 401 certification (SWRCB, 2001). The State's position is that these general WDRs will continue to apply to certain discharges to non-federal waters.

3.1.4 Review of CDFG Jurisdiction Pursuant to Section 1600 (et seq.) of the California Fish and Game Code

Pursuant to Division 2, Chapter 6, Sections 1600-1603 et seq., the CDFG regulates any proposed activity that may substantially modify, divert, obstruct, or any activity that causes changes to the flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. According to the 14 CCR 1.72, a "stream" (including creeks and rivers) is defined as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs." CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. For clarification, the CDFG Legal Advisor has prepared the following opinion (ESD-CDFG, 1994):

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated (by CDFG) as natural waterways.

- Artificial waterways without the attributes of natural waterways should generally not be subject to CFG Code provisions.

4.0 METHODS

4.1 LITERATURE REVIEW

Prior to conducting fieldwork, the following literature was reviewed to determine watershed characteristics and the locations/types of aquatic resources that may be present within the study area limits, as follows:

- Otay Mesa 7.5 minute USGS topographic map (USGS, 1975);
- 2008 color aerial photographs (Digital Globe, 2009);
- Google Earth version 5.1.3533.1731 (Nov 9, 2009);
- Soil Survey for San Diego Area, California (USDA-NRCS ,1973);
- Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (USDA-NRCS, 2007);
- California Interagency Watershed Mapping Committee (IWMC) 2004;
- Federal Emergency Management Agency (FEMA) 2000; and
- National Wetlands Inventory (USFWS, 2010).

4.2 PROCEDURES AND FIELD DATA COLLECTION TECHNIQUES

4.2.1 Clean Water Act Procedures and Data Collection Methods

A routine study area field determination was conducted by URS biologists Greg Hoisington and Dennis Miller for USACE-defined WoUS and wetlands using the methods set forth in the USACE Wetland Delineation Manual (EL, 1987) and the Arid West Regional Supplement (USACE, 2008b). Mr. Hoisington is an Ecologist and Permitting Specialist (e.g., Clean Water Act [CWA] Section 404 and 401, California Fish and Game Code [CFGC] Sections 1600, 2800, 3500 et. seq., California Coastal Commission [CCC], Migratory Bird Treat Act [MBTA], and federal and state Endangered Species Acts [ESA]). Mr. Hoisington has over 8 years of professional experience in natural resource permitting; construction monitoring; Global Positioning System (GPS) data collection with Trimble GPS unit having sub-meter accuracy; and special status species surveys for avian and botanical surveys. Mr. Hoisington predominantly develops permit applications, conducts wetland delineations and/or participates in consultation with regulating agencies including California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Coastal Commission (CCC).

Mr. Miller has an extensive background in field research and ecological studies. As a biologist Mr. Miller has participated in projects which include vegetation mapping, biological monitoring, small mammal trapping, vernal pool branchiopod surveys, and protocol USFWS special status species surveys for avian and botanical surveys. He has prepared numerous biological reports and assessments to demonstrate compliance with the Federal Energy Regulatory Commission (FERC), Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), California Energy Commission (CEC), California Department of Transportation (Caltrans), California Coastal Commission (CCC), and state and federal Endangered Species Acts. Mr. Miller has participated in consultation with regulating agencies including California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS).

The study area was surveyed on December 6, 2010 and May 18, 2011 in order to determine the presence/absence and boundaries of potential special aquatic resources (i.e., WoS, WoUS, and wetlands) that were identified in the

literature review as well as through field observations. Areas that were determined to have an OHWM, or pond or flow for greater than 5% of the growing season (i.e., approximately 12-18 days), were further analyzed for hydrophytic vegetation, hydric soils, and hydrology as described below.

Total CWA jurisdictional limits were delineated for WoS, WoUS, and wetlands based on the presence of a well-defined OHWM and/or wetland boundaries for each feature. Identification and location of the OHWM followed guidance provided in Lichvar and Wakely (2004), Lichvar et al. (2006), and Lichvar and McColley (2008). The OHWM of USACE-defined WoUS and wetlands were delineated in the field with a sub-meter Trimble GeoXH Global Positioning System (GPS) receiver, where accessible, or delineated on high-resolution aerial photographs and subsequently digitized with Geographic Information Systems (GIS) where no access was possible (i.e., private property). The linear length, width, and area of each feature were calculated with GIS in order to determine total CWA jurisdiction within the study area.

Vegetation

Vegetation within potential special aquatic features was recorded on Wetland Determination Data Forms (Arid West Region, Version 2.0), which are provided in Attachment A. Plant species were determined based on the *Jepson Manual, Higher Plants of California* (Hickman, 1993) and Holland (1986), and the wetland indicator status of plant species was based on the *National List of Plant Species that Occur in Wetlands, California Region 0* (Reed, 1988). Vegetation was categorized based on their probability to occur in wetlands or uplands according to the wetland indicator status listed in Table 1 (EL, 1987; Reed, 1988).

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (>99% probability).
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%).
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability 34 to 66%).
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%).
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%).
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

The wetland vegetation criterion was considered to be met if the Dominance Test using the 50/20 rule was satisfied (e.g., any species, or group of species, that contributed to a cumulative total of 50% of the total dominant coverage plus any other species individually comprising at least 20% coverage) (USACE, 2008b).

Soils

Soil texture, matrix, redoximorphic features[4] (e.g., mottles) and the presence of subsoil layers impervious to water infiltration were documented from soil pits. Soils were examined for positive hydric soil indicators such as low chroma, mottles (e.g., iron or manganese concretions), histic epipedons, organic layers, gleization, sulfidic odor, or other primary hydic soil indicators listed on the Arid West Wetland Determination Data Form. Soil color and characteristics were determined from moist soil peds using Munsell Soil Color Charts (Munsell Color, 2000). Soils were evaluated by digging

[4] Redoximorphic features are considered spots or blotches of different colors or shades of color interspersed within the dominant color in a soil layer - usually resulting from the presence of periodic reducing soil conditions.

pits to a depth of approximately 16 inches, where possible. GPS position data was collected at each soil pit and included on project figures. Paired upland and wetland soil pits were evaluated in order to determine and delineate an abrupt wetland/upland boundary. Hydric soil assessments were predominately based upon the guidance provided in the Arid West Regional Supplement (USACE, 2008b), the Pocket Guide to Hydric Soil Field Indicators (WTI, 2010), and the Field Indicators of Hydric Soils (USDA-NRCS, 2010). Supplemental soil information for the regional area was also evaluated within the Soil Survey for the San Diego Area (USDA-NRCS, 1973). Specific pit depths, soil color/texture, and other soil data obtained at each soil sample location are provided in Attachment A.

Hydrology

Areas supporting a prevalence of hydrophytic vegetation and hydric soils were further evaluated for wetland hydrology. Hydrological information was determined through field observation, as well as analysis of recent precipitation data in the vicinity of the study area in order to determine the presence/absence of primary and/or secondary hydrological indicators (i.e., surface water, saturation, sediment debris or drift deposits, watermarks, soil cracks, oxidized root channels, biotic or salt crusts, or other hydrological indicators [Lichvar and Wakely, 2004; Lichvar et al., 2006; Lichvar and McColley, 2008; USACE, 2008b; NWS, 2010]).

All suspected jurisdictional features observed in the field were classified as having hydrology that was either a RPW (i.e., flowing for greater than three months per year), or a non-RPW (i.e., seasonal, flowing less than or equal to three months). Field observations of hydrology and recent precipitation data (NWS, 2010) were analyzed to evaluate whether a feature was classified as a RPW or non-RPW (see Sections 5.3 and 5.4 below).

Interstate or Foreign Commerce Connection

Areas that were identified as special aquatic resources were further evaluated to determine if they had an Interstate or Foreign Commerce Connection. Areas that met the USACE's three technical criteria for wetlands and that have an Interstate or Foreign Commerce Connection were determined to be WoUS subject to USACE jurisdiction (USACE, 2008b). Areas that were not vegetated, but contained an OHWM and hydrological connection to a TNW were also considered to be subject to USACE jurisdiction due to their Interstate Commerce Connection.

Currently, the following are assumed to have an Interstate or Foreign Commerce Connection (33 C.F.R. section 328.3 et seq.):

- Navigable waters;
- Wetlands adjacent to navigable waters;
- Non-navigable tributaries of navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

Significant Nexus with a Traditional Navigable Water

A water body is considered to have a "significant nexus" with a TNW if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a downstream TNW. A "TNW" includes all of the "navigable waters of the United States," defined in 33 C.F.R. § 329 and by numerous decisions of the Federal courts, plus all other waters that are navigable-in-fact. A significant nexus

analysis was performed for any non-RPW, and its adjacent wetlands, that was tributary to a TNW. The significant nexus analysis included the following:

- Identification of the entire relevant reach of the tributary and an assessment of the flow characteristics and functions of the tributary in combination with the functions performed by any adjacent wetlands. This assessment was intended to determine whether the tributary and any adjacent wetlands had more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of the receiving TNW.
- A consideration of hydrologic factors including the volume, duration, and frequency of flow, as well as a consideration of the physical characteristics of the tributary (e.g., channel morphology, dimensions, floodplain position and area, OHWM, channel substrate, etc.); the proximity to the TNW; the size of the watershed; and average annual rainfall;
- A consideration of the ecological factors including the ability of the tributary and any adjacent wetlands to carry pollutants and flood waters to traditional navigable waters; the ability of the tributary and any adjacent wetlands to provide aquatic habitat that supports biota of a traditional navigable water; the ability for adjacent wetlands to trap and filter pollutants or store flood waters; and the ability to maintain water quality.

The localized watershed associated with any non-RPW requiring a significant nexus analysis was estimated by utilizing field observations of natural and artificial topography and landbreaks (i.e., roadways, developments, and infrastructure), as well as GIS topographic analysis. Relevant reach lengths, stream order, and total distance of each feature were determined with GIS.

4.2.2 CDFG Procedures and Data Collection Methods

Suspected CDFG jurisdictional areas were assessed in the field for the presence of streambeds containing a defined bed and bank and any associated riparian vegetation. Streambeds and suspected riparian habitats were evaluated using the CFG Code Section 1600 (et seq.) and guidance described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG, 1994). The surface area of the bed and banks for each feature was determined in the field with a sub-meter Trimble GeoXH GPS receiver, or by utilizing high resolution aerial maps and GIS analysis where access was limited. If adjacent bank, floodplain, and/or terrace areas were vegetated with riparian species, then the feature plus any associated riparian vegetation was mapped and included as part of CDFG jurisdiction. Riparian vegetation mapping extended to the outer drip line of the vegetation associated with the bed, bank and channel of any feature. Vegetation within and adjacent to features containing a defined bed, bank or channel were recorded based on Hickman (1993).

4.3 JURISDICTIONAL IMPACT ANALYSIS

Project figures depict current land use conditions (i.e., existing dirt roads, and associated public/private infrastructure) including existing special aquatic resource areas within study area boundaries. To determine impact acreages within jurisdictional lands, calculations of the quantity of permanent and temporary impacts were generated by superimposing the cut and fill limits from final project engineering plans over aerial maps that detail the study area's special aquatic resource delineated limits. Any placement of permanent above-ground facilities, utilities, roadways, or other permanent cut and/or fill within special aquatic resource areas was considered a permanent loss. Temporary impacts include access areas, laydown yards, under-ground utilities, and any other lands that will have temporary vegetation and/or soil disturbance within jurisdictional features, but will be returned to pre-project conditions after construction.

- Total CWA jurisdiction was determined for wetlands, WoS, and non-wetland WoUS within the study area based on the surface area of each feature within the OHWM, or the lateral limits of any adjacent wetland. Total temporary impacts to wetlands, WoS, and non-wetland WoUS were then calculated by utilizing a ten-foot buffer around permanent linear project facilities (e.g., linear gas lines, water lines, and transmission line towers) and a 50-foot buffer around the power plant site.

- Total CDFG jurisdiction was determined within the study area for each feature containing a defined bed, bank, and channel. The surface area of any feature within the study area was determined based on bank widths in order to subsequently assess project impacts within the jurisdiction of Section 1600 (et seq.) of the CFG Code. Total temporary impacts to riparian or non-riparian WoS were then calculated by utilizing a ten-foot buffer around permanent linear project facilities (e.g., linear gas lines, water lines, and transmission line towers) and a 50-foot buffer around the power plant site.

5.0 RESULTS

This section presents the results of the delineation of USACE jurisdiction pursuant to Section 404 of the CWA; RWQCB legal authority in accordance with Section 401 of the CWA and Porter-Cologne; and CDFG jurisdiction pursuant to Section 1600 (et seq.) of the CFG Code. Six unnamed features were observed and delineated within the study area (Figure 3). Wetland Determination Data Forms are included in Attachment A and representative photographs are included in Attachment B.

5.1 VEGETATION COMMUNITIES/LAND COVER TYPES

Four vegetation community/land cover types were observed within the study area and are discussed below (Holland, 1986):

- Non-Native Grassland;
- Mule Fat/Tamarisk Scrub;
- Emergent Wetland; and
- Disturbed/Developed.

5.1.1 Non-Native Grassland

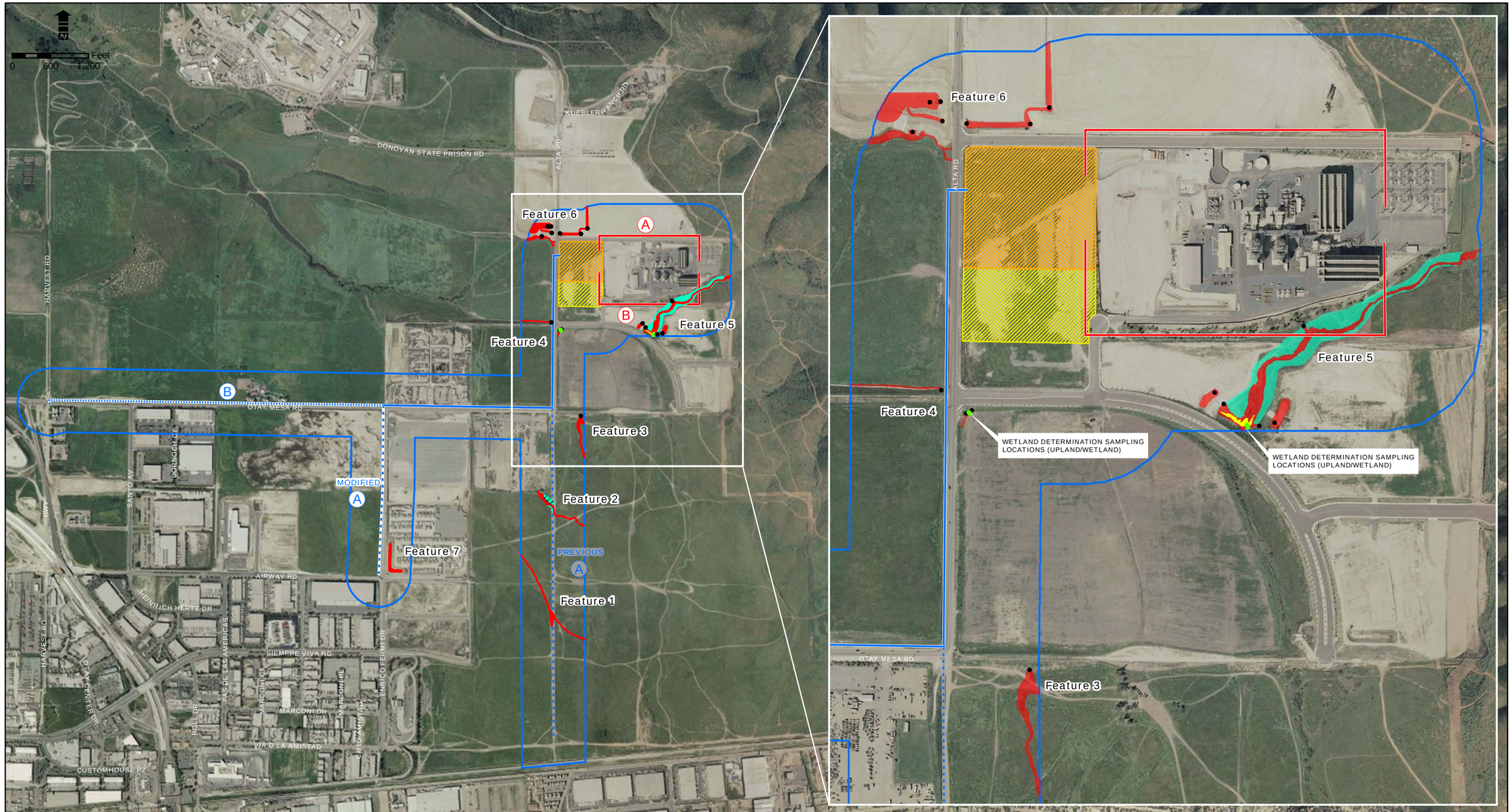
Non-native grassland habitat within the study area generally occurs on fine-textured loam or clay soils that are moist during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in open, disturbed or undeveloped fields and is characterized by a dominant cover (greater than 50% cover) of annual grasses and occasionally native and nonnative annual forbs. Typical dominant species include wild oats (*Avena barbata*; NI), ripgut brome (*Bromus diandrus*; NI), and red brome (*Bromus madritensis;* NI).

5.1.2 Mule Fat/Tamarisk Scrub

Mule fat/tamarisk scrub habitat within the study area consists of areas dominated by depauperate, tall, riparian scrub species including mule fat (*Baccharis salicifolia*; FACW) and salt cedar (*Tamarix ramosissima*; FACW). This early seral community is maintained by frequent ephemeral flooding. Mule fat/tamarisk scrub is limited to drainages within the northeast and central portion of the study area.

5.1.3 Emergent Wetlands

Emergent wetlands are characterized by herbaceous annual and perennial freshwater hydrophytes. Dominant species within the study area include southern cattail (*Typha domingensis*; OBL), tall umbrella sedge (*Cyperus eragrostis*; FACW), and arroyo willow (*Salix lasiolepis*; FACW). This vegetation is present for most, or all, of the growing season in most years and is dominated by perennial species.



Legend

- Study Area
- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Culvert
- Wetland Determination Sampling Location
- CDFG 1600 (et seq.) Jurisdictional Limits
- Clean Water Act (Section 404 and 401) Non-Wetland Jurisdictional Limits and CDFG 1600 Limits
- CDFG 1600 (et seq.) Riparian Jurisdictional Limits
- Clean Water Act (Section 404 and 401) Wetland Jurisdictional Limits

FIGURE 3
CWA AND CDFG JURISDICTIONAL DETERMINATION

PIO PICO ENERGY CENTER

PROJECT NO.: 29874638

DATE: DECEMBER 2010

URS

Source: DigitalGlobe, 2009.

5.1.4 Disturbed/Developed

Disturbed vegetation has developed within portions of the study area having varying levels of anthropogenic disturbance. Disturbed areas are dominated by broad-leaf herbaceous species such as mustards (*Brassica* spp.; NI, *Hirshfeldia incana*; NI), horseweed (*Conyza canadensis*; NI), and thistles (*Centaurea* spp., *Silybum* spp.; NI, *Carduus* spp.; NI) and often have a subdominant cover (less than 50% cover) of annual non-native grasses. Developed lands within the study area include roadways, parking lots, vacant lots, residences, and other private/public infrastructure with ornamental plantings. Species composition in developed communities within the study area varied and dominated by non-native cultivar species. Disturbed and developed vegetation communities are found throughout the study area.

5.2 SOILS

Four soil types occur within the study area, which are described below (USDA-NRCS, 1973) (Figure 4):

- Huerhuero loam, 9-15% slope, eroded (HrD);
- Diablo Clay, 2-9% Slope (DaC);
- Diablo Clay, 9-15% Slope (DaD); and
- Salinas Clay, 0-2% Slope (ScA).

5.2.1 Huerhuero Loam Series

The Huerhuero loam series consists of moderately well drained loams that have clay subsoil and slopes ranging from 2 to 30%. They are not characterized as hydric soils. These soils formed in a sandy marine environment. The upper part of the subsoil is brown, moderately alkaline clay, and extends to a depth of about 41 inches. The frost free season for this soil series varies from 300 to 350 days. The Huerhuero loam series contains the following soil type within the study area:

- Huerhuero loam, 9 to 15% slope (HrD). This soil series is similar to Huerhuero loam, 2 to 9% slope, except it is strongly sloping with moderate sheet erosion and has an effective rooting depth of 20 to 40 inches. It is moderately well drained and non-hydric with moderate erosion hazard. This soil map unit occurs in the eastern limits of the study area.

5.2.2 Diablo Clay Series

The Diablo Clay series consists of well drained, moderately-deep to deep clay derived from soft, calcareous sandstone and shale. These soils are not hydric and occur on uplands with slopes from 2 to 50%, and annual precipitation from 12 to 14 inches. Vegetation consists primarily of annual grasslands with scattered shrubs. The frost free season for this soil series varies from 300 to 340 days. The Diablo Clay soils consist of the following soil series:

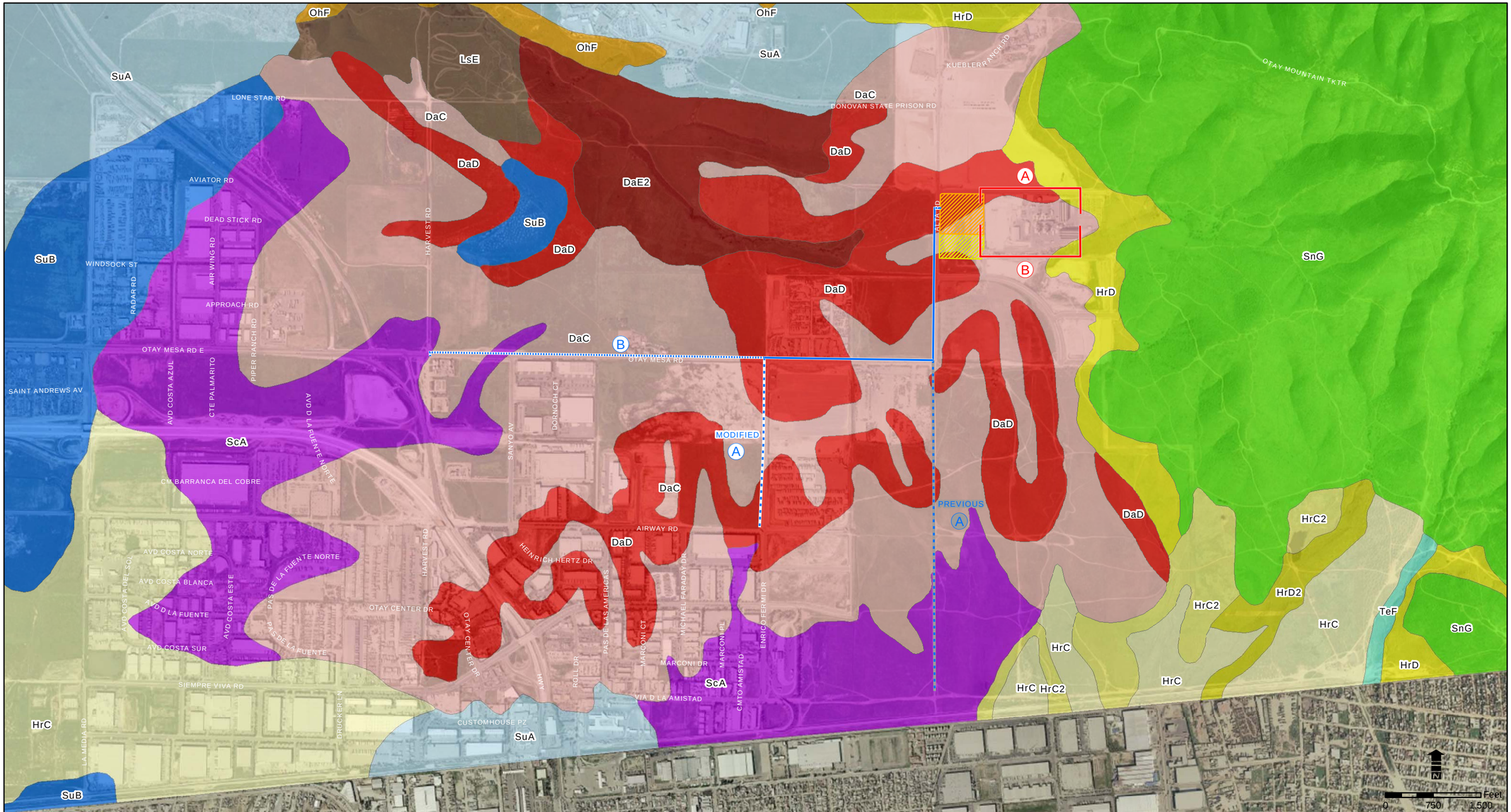
- Diablo Clay, 2-9% Slope (DaC). This soil series is gently to moderately sloping and is 34 to 40 inches deep over rock. Available water capacity is 5 to 6 inches with runoff that is slow to medium and the erosion hazard slight to moderate. This soil map unit occurs throughout the majority of the study area.

- Diablo Clay, 9-15% Slope (DaD). This soil series is strongly sloping and is 26 to 37 inches deep over rock. Available water capacity is 4 to 5.5 inches with runoff that is medium and the erosion hazard slight to moderate. This soil map unit occurs throughout the majority of the study area.

5.2.3 Stockpen Series

The Stockpen Series consists of moderately well drained, non-hydric, moderately deep gravelly clay loams. These soils are located on marine terraces and have slopes from 0 to 5%. Vegetation is primarily annual and perennial grasses and forbs. The frost free season for this soil series varies from 320 to 340 days. The Stockpen Series consists of the following soil series:

- Salinas Clay, 0-2 Percent Slope (ScA). This nearly level soil is on marine terraces with slopes that are dominantly 1%. Low, broad-based hummocks, locally referred to as mimamounds, occur in undisturbed areas. This soil map unit occurs solely within the southern limits of the study area.



Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- DaC, Diablo clay, 2 to 9 percent slopes
- DaD, Diablo clay, 9 to 15 percent slopes
- DaE2, Diablo clay, 15 to 30 percent slopes, eroded
- HrC, Huerhuero loam, 2 to 9 percent slopes
- HrC2, Huerhuero loam, 5 to 9 percent slopes, eroded
- HrD, Huerhuero loam, 9 to 15 percent slopes
- HrD2, Huerhuero loam, 9 to 15 percent slopes, eroded
- LsE, Linne clay loam, 9 to 30 percent slopes
- OhF, Olivenhain cobbly loam, 30 to 50 percent slopes
- ScA, Salinas clay, 0 to 2 percent slopes
- SnG, San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes
- SuA, Stockpen gravelly clay loam, 0 to 2 percent slopes
- SuB, Stockpen gravelly clay loam, 2 to 5 percent slopes
- TeF, Terrace escarpments

FIGURE 4
SOILS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Source: Natural Resources Conservation Service (NRCS), CA638 Soil Survey (Pacific Southwest), 2007

5.3 HYDROLOGY

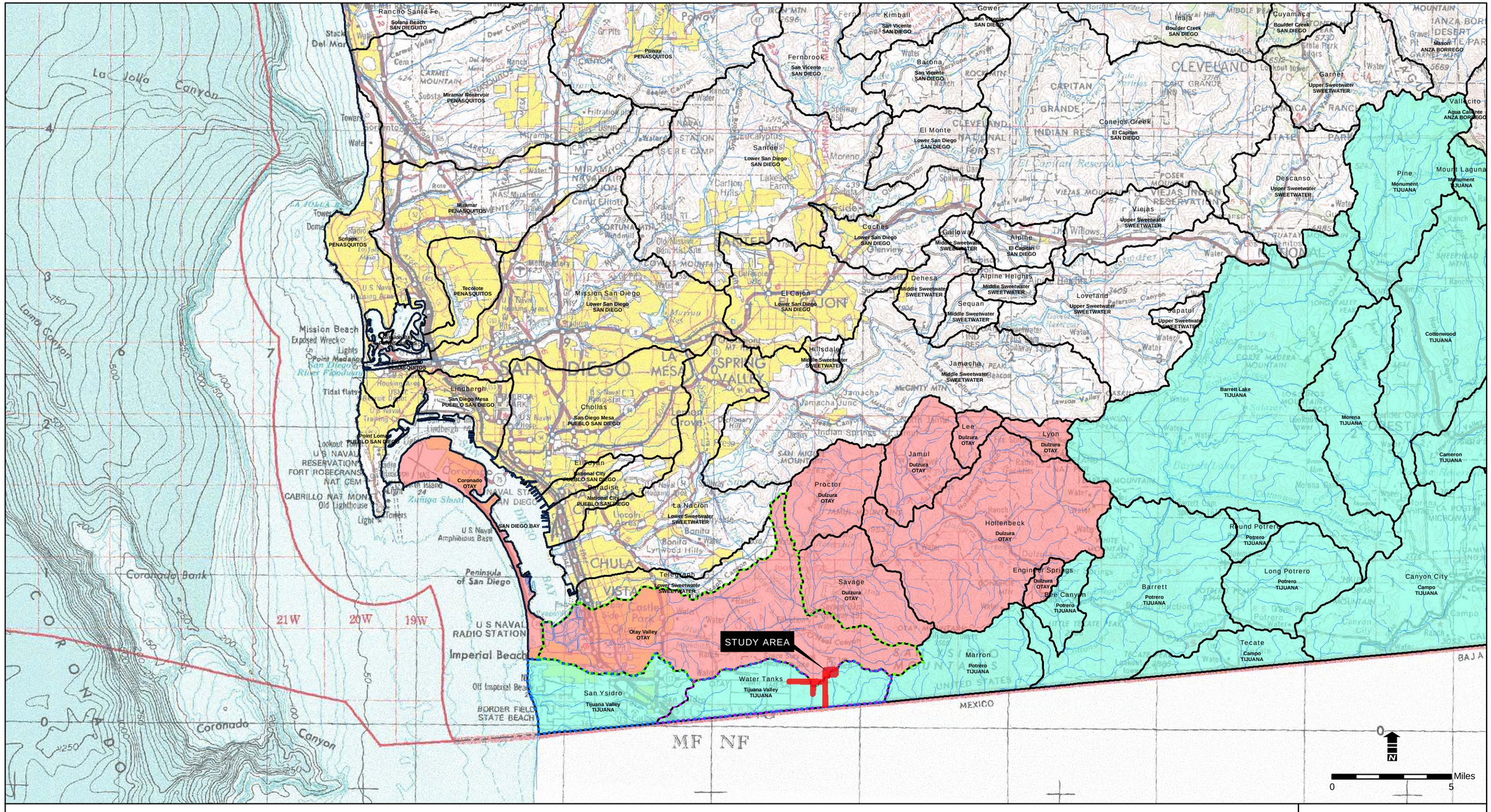
The PPEC project site is at an elevation of approximately 635 feet above msl on a mesa sloping southwest from the western edge of the San Ysidro Mountains. The study area is located within two regional watersheds: the Otay Hydrologic Unit to the north and the Tijuana Hydrological Unit to the south. The boundary of these two regional watersheds generally passes through the center of the study area; therefore, the northern portion of the study area drains toward the Otay River, whereas the southern portion of the study area drains toward the Tijuana River (Figure 5). The northern watershed consists of the Otay Hydrologic Unit, which drains a 98,305-acre area and contains the smaller Otay Valley Hydrologic Area draining a 29,545-acre area (IWMC, 2004). Flows within the northern portion of the study area drain 3.0 miles though an unnamed blue line drainage referred to as Johnson Valley to the Otay River, which drains flows west 11.0 miles to San Diego Bay.

The southern watershed (Tijuana Hydrologic Unit) drains a total of approximately 298,960 acres within California. The Tijuana Hydrologic Unit is divided into the smaller Tijuana Valley Hydrologic Area, which drains a 19,748-acre area, and the smaller Water Tanks Hydrologic Subarea, which drains a 9,574-acre area. Flows within the southern portion of the study area drain south for approximately 1.6 miles through the Tijuana Valley Hydrologic Area south though Mexico to the Tijuana River. The Tijuana River then directs flows 8.9 miles northwest back into the U.S., and 5.3 miles west to the Pacific Ocean at Imperial Beach.

The FEMA has delineated inundation areas for 100-year and 500-year floods (FEMA, 2000), as delineated on Figure 6. Figure 6 illustrates the extent of FEMA's 100-year flood zone, which does not overlap the study area.

The regional climate within the vicinity of the study area consists of hot and dry summer months with relatively cool, wetter winters. Seasonal rainfall occurs predominantly in the winter and spring months (Nov-April) and was above average during the fall 2009 to summer 2010 period, but well below average for fall 2010 prior to the field delineation. Precipitation data for the Chula Vista, California region (Weather Station No. 041758, approximately 9.2 miles west of the study area) included the following (NWS, 2010):

- Average annual precipitation is 10.13 inches (data from 1914-2009);
- Seasonal precipitation during fall 2009 – summer 2010 measured 11.51 inches;
- Seasonal precipitation during fall 2010 prior field delineation measured 0.8 inches, which was less than half of average rainfall (1.7 inches) for the fall period (data from 1971-2000); and
- The last significant precipitation event (>0.1 inches) prior to field delineation was 0.42 inches on 21 November 2010 (16 days prior to field delineation).



Legend

- Study Area
- Hydrologic Sub-Area
- Water Tanks Hydrologic Sub-Area
- Tijuana Valley Hydrologic Area
- Otay Valley Hydrologic Area
- Tijuana Hydrologic Unit
- Otay Hydrologic Unit

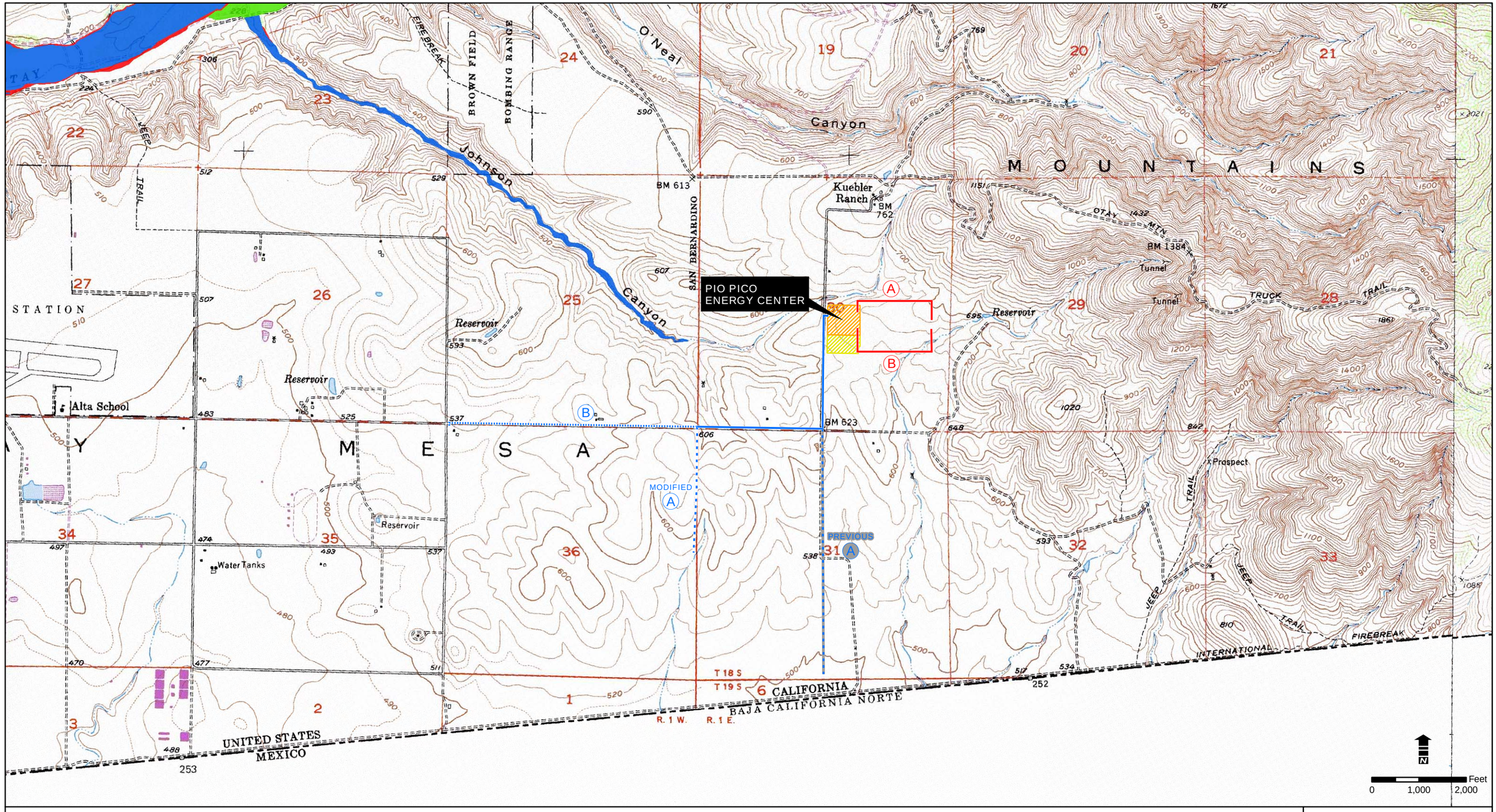
FIGURE 5
REGIONAL WATERSHEDS

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Source: California Interagency Watershed Mapping Committe (CALWATER 2.2.1), 2004. CalAtlas (USGS 1x2 Degree Series), 1999.



Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Zone AE- Identifies area inundated by 100-year flooding, BFEs have been determined but are expressed in meters for some communities
- Zone A0- Identifies an alluvial fan inundated by 100-year flooding, average flood depths and velocities have been determined
- Zone X-This code identifies an area inundated by 500-year flooding

FIGURE 6
FEMA 100-YEAR FLOOD ZONES

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Source: SanGIS Flood Zones (FEMA 1997, Updated 2000). USGS 7.5' Topographic Quadrangles - (Otay Mesa, 1975 and Jamul Mountain, 1978)

Legend

- Project Site
- Laydown Area
- 230 kV Transmission Line (Route A and Route B)
- Natural Gas Line
- Modified Route A Natural Gas Line
- Previous Route A Natural Gas Line
- Route B Natural Gas Line
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

FIGURE 7
NATIONAL WETLAND INVENTORY

PIO PICO
ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Source: USFWS, National Wetland Inventory, 2010. DigitalGlobe, 2009..

5.4 DETERMINATION OF USACE JURISDICTION SUBJECT TO SECTION 404 OF THE CWA

Seven (7) drainage features were observed within the study area (Figure 3, Table 2). Each of these drainage features is classified as a non-RPW having a well-defined OHWM with flows that drain within a tributary system to a TNW. Each of these non-RPW drainage features were also determined to have a significant nexus with a TNW. They are described in detail in the following sections. Total jurisdiction and impacts within the project footprint are provided in Table 2.

No temporary impacts or permanent losses of wetland, WoS, or non-wetland WoUS will occur as a result of the project. Placement of the power plant site avoids temporary and permanent impacts to all jurisdictional features. Linear facilities (i.e., gas pipelines) will be trenched within existing paved and/or dirt roads and will avoid all features. Transmission line towers will be positioned outside of any CWA jurisdictional feature and transmission line installation will avoid impacts to jurisdictional features. As a result, no temporary impacts or permanent losses will occur from transmission line construction.

Table 2. Total CWA Jurisdiction and Temporary Impacts/Permanent Losses

Feature number	Total Non-wetland WoUS jurisdiction (acres)	Total WoUS with included wetlands (acres)	Temporary impacts to non-wetland WoUS jurisdiction (acres)	Temporary impacts to wetland WoUS jurisdiction (acres)	Permanent losses to non-wetland WoUS jurisdiction (acres)	Permanent losses to wetland WoUS jurisdiction (acres)
Feature 1	0.58	0.00	0.00	0.00	0.00	0.00
Feature 2	0.35	0.00	0.00	0.00	0.00	0.00
Feature 3	0.40	0.00	0.00	0.00	0.00	0.00
Feature 4	0.04	0.01	0.00	0.00	0.00	0.00
Feature 5	0.98	0.09	0.00	0.00	0.00	0.00
Feature 6	1.35	0.00	0.00	0.00	0.00	0.00
Feature 7	0.45	0.00	0.00	0.00	0.00	0.00
Total	4.15	0.1	0.0*	0.0	0.0	0.0

* Impacts are derived from preliminary engineering design and may be subject to change.

5.4.1 Feature 1

Feature 1 drains ephemeral storm water flows from undeveloped open grasslands, cleared and developed lots, and a portion of the eastern terminus of Otay Mesa Road (Figure 3). It directs flows southeast for approximately 1,730 feet within the study area before passing outside of the study area. Within the study area, the upslope portion of Feature 1 is vegetated with upland non-native grassland that becomes an unvegetated pool within a topographic depression as it crosses Alta Road. Alta Road is an unpaved dirt road and had approximately two inches of standing water present within the pool during the survey (Attachment B, photo 1). Flows spill over from the pool and flow southeast entering Feature 2 beyond the study area. Feature 1 contains an OHWM consisting of primary hydrologic indicators including mud cracks, shelving, and debris deposits. The OHWM generally becomes less conspicuous as it courses down slope and disperses as sheet flow through a vegetated swale into Feature 2.

Feature 1 is vegetated with upland non-native grassland vegetation throughout its length adjacent to Alta Road. Dominant species include non-native grasses including wild oats (*Avena barbata*; NI), ripgut brome (*Bromus diandrus*; NI), and red brome (*Bromus madritensis;* NI). Feature 1 is unvegetated within the earthen pool where is crosses Alta Road.

Although no soil profile analysis was performed within this feature due to a lack of hydrophytic vegetation, USGS soil data indicate that soils within this feature consist of the Diablo Clay series, which is classified as a non-hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, Feature 1 within the study area does not meet the hydrophytic vegetation or hydric soil criteria of a USACE-defined wetland; nonetheless, portions of Feature 1 west of Alta Road are classified as a freshwater emergent wetland by the NWI (Figure 7) (USFWS, 2010). It does, however, contain primary hydrological indicators including an OHWM and is classified as a non-RPW within a tributary system that drains to a TNW. Accordingly, a significant nexus analysis for Feature 1 is presented below.

Feature 1 Significant Nexus Analysis

Physical attributes. Feature 1 is a first-order ephemeral drainage with a total relevant reach length of approximately 3,054 feet, 1,730 feet of which occur within the study area (Figure 3). It has been modified from natural conditions due to upslope development along Otay Mesa Road, as well as from the development of Alta Road and activities associated with the U.S.-Mexico border. Feature 1 is tributary of Feature 3, which flows for 5,483 feet before passing through a culvert into Mexico. Flows appear to then be directed south approximately 1.6 miles to the Tijuana River, which flows west/northwest for 8.9 miles before passing back across the U.S.-Mexico border. Once past the U.S.-Mexico border, flows are directed northwest for 5.3 miles before emptying into the Pacific Ocean, the nearest TNW.

Feature 1 drains a localized, upstream watershed size of approximately 79 acres. The watershed for Feature 1 consists of undeveloped open grasslands, cleared and developed lots, and a portion of the eastern terminus of Otay Mesa Road. Flows within Feature 1 consist of surface storm water runoff draining from undeveloped areas, cleared lots, and roadways.

Because of its relatively long relative reach, its large localized watershed drainage area, and moderate annual precipitation within the region (see Section 5.3), storm water flows entering Feature 1 are considered to be moderate volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. Underlying clay soils within Feature 1 contain a low water capacity and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 1 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well as trash, debris, and sediment that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 1 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 1 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical integrity of the receiving TNW.

Biological attributes. The capacity of Feature 1 to contribute to downstream biological ecosystems is considered to be insignificant due to its upland non-native grassland vegetation and lack of native habitat. Feature 1 does not contain hydrophytic species or wetlands that could positively contribute to downstream ecosystems. In addition, because the majority of Feature 1 is vegetated with non-native grassland, there are negligible functions and values for wildlife resources. As a result, Feature 1 likely does not provide a significant ecological benefit and/or effect on the downstream TNW.

In summary, it is reasonable to conclude that Feature 1 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical and chemical integrity of the receiving waters. As a result, Feature 1 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 1 within the study area, as well as temporary and permanent impacts to Feature 1 is provided in Table 2.

5.4.2 Feature 2

Feature 2 drains ephemeral storm water flows from lands consisting of a developed lot, undeveloped open grasslands, and a portion of the eastern terminus of Otay Mesa Road (Figure 3) (Attachment B, photos 2 and 3). It directs flows southeast for approximately 985 feet within the study area. The upslope portion of Feature 2 originates as a deeply-incised erosion feature formed as a result of concentrated storm water flows draining from the boundary of a developed lot. Flows are channeled across Alta Road and then southeast beyond of the study area. Feature 2 contains an OHWM consisting of primary hydrologic indicators including shelving, sediment deposits, and debris deposits. Although no standing water was present during the survey, evidence of recent flows was apparent as was saturated soils in many parts of the feature.

Feature 2 is vegetated with mule fat/tamarisk scrub hydrophytic vegetation within the upslope portion of the feature west of Alta Road (Attachment A, data form 1). Dominant species include mule fat (*Baccharis salicifolia*; FACW), salt cedar (*Tamarix ramosissima*; FAC), Bermuda grass (*Cynodon dactlyon*; FAC), and hairy chess (*Bromus japonicus*; NI). Downslope of Alta Road, Feature 2 is dominated by non-native grassland species such as wild oats (*Avena barbata*; NI), ripgut brome (*Bromus diandrus*; NI), and red brome (*Bromus madritensis;* NI).

A soil pit examined within Feature 2 did not exhibit characteristics indicative of periodic or prolonged inundation (Attachment A, data form 1). Chroma ranged from 10 YR 3/3 within 0-2 inches and 10 YR 4/3 from 2-16 inches. No redoximorphic concentrations or depletions were present and very little organic material was present. Soil texture consisted of sandy clay throughout the soil profile, which inhibits or prevents surface water percolation; however, it does not appear that flows are present within Feature 1 for a sufficiently long duration to form hydric soils. USGS soil data indicate that soils within this feature consist of the Diablo Clay series, which is not classified as a hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, Feature 2 within the study area does not meet the hydric soil criteria of a USACE-defined wetland; nonetheless, portions of Feature 2 are classified as a freshwater emergent wetland by the NWI (Figure 7) (USFWS, 2010). It does, however, contain primary hydrological indicators including an OHWM and a dominance of hydrophytic vegetation. It is classified as a non-RPW that is part of a tributary system draining to a TNW. Therefore, a significant nexus analysis for Feature 2 is presented below.

Feature 2 Significant Nexus Analysis

Physical attributes. Feature 2 is a first order ephemeral drainage with a total relevant reach length of approximately 985 feet, all of which occurs within the study area (Figure 3). It has been modified from natural conditions due to upslope development along Otay Mesa Road, as well as from the development of Alta Road and development/activities associated with the U.S.-Mexico Border. Feature 2 is tributary Feature 3, which flows for 5,483 feet before passing through a culvert into Mexico. Flows appear to then be directed south approximately 1.6 miles to the Tijuana River, which flows west/northwest for 8.9 miles before passing back across the U.S.-Mexico border. Once past the U.S.-Mexico border, flows are directed northwest for 5.3 miles before emptying into the Pacific Ocean, the nearest TNW.

Feature 2 drains a localized, upstream watershed of approximately 40 acres. The watershed for Feature 2 consists of undeveloped open grasslands, cleared and developed lots, and a portion of the eastern terminus of Otay Mesa Road. Flows within Feature 2 consist of surface storm water runoff from undeveloped areas as well as cleared lots and roadways.

Because of its relatively long relative reach, its moderately-sized localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 2 are considered to be moderate volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 2 contain a relatively low water capacity and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 2 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well trash, debris, and sediment that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 2 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 2 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical integrity of the receiving TNW.

Biological attributes. The capacity of Feature 2 to contribute to downstream biological ecosystems is considered to be significant due to its hydrophytic vegetation dominated by both invasive tamarisk and native mule fat. Feature 2 likely contributes in a negative manner to downstream ecosystems by functioning as a tamarisk seed propagation source, and it also likely functions positively as a seed source for native mule fat and as a filter for some pollutants originating from the upslope developments. Feature 2 also contains functions and values for wildlife resources within its hydrophytic vegetation community. As a result, Feature 2 likely provides a significant ecological benefit to the downstream TNW.

In summary, it is reasonable to conclude that Feature 2 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical, chemical, and biological integrity of the receiving waters. As a result, Feature 2 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 2 within the study area, as well as temporary and permanent impacts to Feature 2 are provided in Table 2.

5.4.3 Feature 3

Feature 3 drains ephemeral storm water flows from lands consisting of undeveloped, non-native grasslands and a portion of Alta Road (Figure 3) (Attachment B, photo 4). It directs flows south for approximately 5,483 feet within the study area. The upslope portion of Feature 3 originates where flows are channeled from an undeveloped open field through a culvert down slope to a topographic depression where pooling occurs within a dirt access road. Approximately six inches of standing water was present within the pool during the survey. Flows exit the pooled area and drain south through a small drainage before converging within Feature 2. Feature 3 contains an OHWM consisting of primary hydrologic indicators including water marks, sediment deposits, and debris deposits.

Feature 3 is vegetated with a dominance of upland, non-native grassland vegetation throughout its length, with the exception of the ponded area and dirt access roads, which are both unvegetated. Dominant species include wild oats (*Avena barbata*; NI), ripgut brome (*Bromus diandrus*; NI), and red brome (*Bromus madritensis;* NI). Several individual salt cedar (*Tamarix ramosissima*; FAC) are also present within this feature.

Although no soil profile analysis was performed within this feature due to its location on private lands, USGS soil data indicate that soils within this feature consist of the Diablo Clay series, which is not classified as a hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, Feature 3 within the study area does not meet the hydrophytic vegetation or hydric soil criteria of a USACE-defined wetland; nonetheless, portions of Feature 3 within the study area are classified as a freshwater emergent wetland by the NWI (Figure 7) (USFWS, 2010). It does, however, contain primary hydrological indicators including an OHWM and is classified as a non-RPW that is part of a tributary system draining to a TNW. Therefore, a significant nexus analysis for Feature 3 is presented below.

Feature 3 Significant Nexus Analysis

Physical attributes. Feature 3 is a first order ephemeral drainage with a total relevant reach of approximately 5,483 feet, 634 feet of which occur within the study area (Figure 3). It has been modified from natural conditions due to upslope development along Alta Road. Feature 3 flows for 5,483 feet before passing through a culvert into Mexico. Flows appear to then be directed south approximately 1.6 miles to the Tijuana River, which flows west/northwest for 8.9 miles before passing back across the U.S.-Mexico border. Once past the U.S.-Mexico border, flows are directed northwest for 5.3 miles before emptying into the Pacific Ocean, the nearest TNW.

Feature 3 drains a localized, upstream watershed size of approximately 133 acres. The watershed for Feature 3 consists of undeveloped open grasslands and a cleared lot. Flows within Feature 3 consist of surface storm water runoff from undeveloped areas as well as cleared lots and Alta Road.

Because of its relatively long relative reach, its large localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 3 are considered to be moderate volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 3 contain a water capacity that is relatively low and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 3 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well debris and sediment that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 3 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 3 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical integrity of the receiving TNW.

Biological attributes. The capacity of Feature 3 to contribute to downstream biological ecosystems is considered to be insignificant due to its upland vegetation and lack of native habitat. Feature 3 does not contain significant hydrophytic species or wetlands that could positively contribute to downstream ecosystems. Furthermore, because the majority of Feature 3 is vegetated with non-native grassland, there are negligible functions and values for wildlife resources. As a result, Feature 3 likely does not provide a significant biological or ecological benefit to the downstream TNW.

In summary, it is reasonable to conclude that Feature 3 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical and chemical integrity of the receiving waters. As a result, Feature 3 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 3 within the study area, as well as temporary and permanent impacts to Feature 3 are provided in Table 2.

5.4.4 Feature 4

Feature 4 drains ephemeral storm water flows from undeveloped open grasslands, roadways, as well as from excess landscape irrigation runoff along Paseo de la Fuente (Figure 3) (Attachment B, photos 5 and 6). The upslope portion of Feature 4 originates as a topographic depression southeast of the intersection of Paseo de la Fuente and Alta Road where It directs flows northwest through a culvert under Alta Road before reappearing and draining into a concrete-lined flood control channel that directs flows west out of the study area. Feature 4 contains an OHWM consisting of primary hydrologic indicators including shelving, sediment and debris deposits, as well as watermarks on culverts. Standing water was present during the survey within the topographic depression southeast of the intersection of Paseo de la Fuente and Alta Road, which appeared to be the result of excess landscape irrigation runoff.

Feature 4 is vegetated with upland non-native grassland, with the exception of the southeast intersection of Paseo de la Fuente and Alta Road, where emergent wetland vegetation is present (Attachment A, data forms 2 and 3). Dominant species within this location include southern cattail (*Typha domingensis*; OBL), arroyo willow (*Salix lasiolepis*; FACW), rabbitfoot grass (*Polypogon monospeliensis*; FACW), and tall umbrella sedge (*Cyperus eragrostis*; FACW).

A soil pit examined within Feature 4 exhibited characteristics indicative of prolonged inundation: chroma of 10 YR 2/2 from 0-14 inches. Although no redoximorphic concentrations or depletions were present and very little accumulated organic material was present, soils contained hydrogen sulfide odor, which is a hydric soil indicator. Soil texture consisted of sandy clay throughout the soil profile, which inhibits or prevents surface water percolation. Nonetheless, USGS soil data indicate that soils within this feature consist of the Diablo Clay series, which is not classified as a hydric soil (USDA-NRCS, 1973) (Figure 4). Localized hydric soil inclusions appear to be the result of recent construction and associated landscape irrigation along Paseo de la Fuente.

In summary, portions of Feature 4 within the study meet the criteria of a USACE-defined wetland. Feature 4 is not classified as a wetland by the NWI (USFWS, 2010). Feature 4 also contains primary hydrological indicators including an OHWM. It is classified as a non-RPW that is part of a tributary system draining to a TNW. Therefore, a significant nexus analysis for Feature 4 is presented below.

Feature 4 Significant Nexus Analysis

Physical attributes. Feature 4 is a first order ephemeral drainage with a total relevant reach length of approximately 1,940 feet, 777 feet of which occur within the study area (Figure 3). Flows are directed west beyond the study area where they are channeled through a concrete-lined flood-control channel before converging with an unnamed blue line drainage that passes through Johnson Canyon into the Otay River. The Otay River directs flows to the west for 11.0 miles before emptying into San Diego Bay, the nearest TNW.

Feature 4 drains a localized, upstream watershed size of approximately 28 acres. The watershed for Feature 4 consists of undeveloped open grasslands and portions of Alta Road and Paseo de la Fuente. Flows within Feature 4 consist of surface storm water runoff, with portions of the feature consisting of saturated soils from landscape runoff.

Because of its relatively long relative reach, its localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 4 are considered to be moderate volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 4 contain a water capacity that is relatively low and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 4 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well trash, debris, and sediment that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 4 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 4 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical integrity of the receiving TNW.

Biological attributes. The capacity of Feature 4 to contribute to downstream biological ecosystems is considered to be negligible due to its upland-dominated vegetation. A portion of Feature 4 does contain a small wetland, although the size of the wetland and quantity of vegetation present is considered negligible compared to the vast downstream wetlands within the Otay River. This wetland is also the result of artificial hydrology from landscape irrigation. This wetland is not likely to function as a significant pollution filter or to have more than a negligible source population of wetland species. Therefore, Feature 4 likely does not provide a significant biological or ecological benefit to the downstream TNW.

In summary, it is reasonable to conclude that Feature 4 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical and chemical integrity of the receiving waters. As a result, Feature 4 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 4 within the study area, as well as temporary and permanent impacts to Feature 4 are provided in Table 2.

5.4.5 Feature 5

Feature 5 is a modified blueline drainage that drains ephemeral storm water flows from undeveloped portions of the western San Ysidro Mountains, open grasslands, as well as storm water and landscape irrigation runoff from the existing power plant and Paseo de la Fuente (Figure 3) (Attachment B, photos 7 and 8). The upslope portion of Feature 5 originates within undeveloped portions of the San Ysidro Mountains and then enters the northeastern study area, where it has been channelized within a constructed earthen channel upslope of Paseo de la Fuente. Portions of the channel banks within this area have been armored with rock riprap. Two small detention basins are also associated with this portion of Feature 5, each of which has been constructed to collect storm water runoff from cleared, earthen lots. Flows from these detention basins are directed into the main channel of Feature 5, where all flows pass through a culvert infall under Paseo de la Fuente and exit the study area to the south. Feature 5 contains an OHWM consisting of primary hydrologic indicators including shelving, sediment deposits, debris deposits, and watermarks. Several inches of standing water was present during the survey just north of the culvert passing under Paseo de la Fuente.

Throughout much of the upslope portion of the study area, Feature 5 is vegetated with non-native grassland with sporadic upland shrubs. As the feature approaches Paseo de la Fuente, hydrophytic shrubs become more dense within the low flow portion of the channel. Just upslope of Paseo de la Fuente, vegetation becomes dominated by hydrophytes, particularly within close proximity to the culvert infall (Attachment A, data forms 4 and 5). Dominant species in the vicinity of the culvert infall include southern cattail (*Typha domingensis*; OBL), curley dock (*Rumex crispus*; FACW), as well as a few scattered willows (*Salix lasiolepis* [FACW] and *S. exigua* [FACW]) and mule fat (*Baccharis salicifolia*; FACW). Large portions of the low flow channel within Feature 5 have been cleared of tamarisk (*Tamarix ramosissima*; FACW), as evidenced by remaining above-ground trunks that have been sheared. In addition, much of the bank has been planted with ornamental landscape species as a result of development.

A soil pit examined within Feature 5 exhibited characteristics indicative of prolonged inundation: chroma of 10 YR 4/2 from 0-16 inches. Although no redoximorphic concentrations or depletions were present and very little accumulated organic material was present, soils contained hydrogen sulfide odor, which is a hydric soil indicator. Soil texture consisted of sandy clay throughout the soil profile, which inhibits or prevents surface water percolation. Nonetheless, soil types within Feature 5 consist of the Diablo Clay and Huerhuero loam series, neither of which is considered a hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, portions of Feature 5 near the culvert infall at Paseo de la Fuente meet the criteria of a USACE-defined wetland. Feature 5 is also classified as a freshwater emergent wetland by the NWI (USFWS, 2010). Feature 5 also contains primary hydrological indicators including a well-defined OHWM throughout its length within the study area. It is classified as a non-RPW that is part of a tributary system draining to a TNW. Therefore, a significant nexus analysis for Feature 5 is presented below.

Feature 5 Significant Nexus Analysis

Physical attributes. Feature 5 is a first order ephemeral drainage with a total relevant reach length of approximately 13,950 feet, 1,850 feet of which occur within the study area (Figure 3). It is identified as a blue-line drainage on the Otay Mesa Topographic Quadrangle Map (USGS, 1975). Flows are directed south beyond the study area where they drain 6,462 feet before passing through a culvert into Mexico. Flows appear to then be directed south approximately 1.6 miles through industrial portions of Mexico to the Tijuana River, which then flows west for 8.9 miles

west/northwest before passing back into the U.S. Once past the U.S.-Mexico border, flows are directed northwest for 5.3 miles before emptying into the Pacific Ocean, the nearest TNW.

Feature 5 drains a localized, upstream watershed size of approximately 737 acres. The watershed for Feature 5 consists of undeveloped open grasslands, cleared and developed lots, roadways, a power plant, and undeveloped rugged terrain within the western San Ysidro Mountains. Flows within Feature 5 consist of surface storm water runoff originating within the San Ysidro Mountains, as well as flows originating from excess landscape irrigation on adjacent developments.

Because of its relatively long relative reach, its large localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 5 are considered to be moderate volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 5 contain a water capacity that is relatively low and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 5 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development, in addition to debris and sediment. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 5 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 5 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical integrity of the receiving TNW.

Biological attributes. The capacity of Feature 5 to contribute to downstream biological ecosystems is considered to be significant due to its wetland characteristics and hydrophytic vegetation, dominated in part by invasive tamarisk. Feature 5 likely negatively contributes to downstream ecosystems by functioning as a tamarisk seed propagation source. Feature 5 also contains functions and values for wildlife resources within its hydrophytic vegetation community. As a result, Feature 5 likely has more than a speculative or insubstantial effect on the downstream TNW.

In summary, it is reasonable to conclude that Feature 5 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical, chemical, and biological integrity of the receiving waters. As a result, Feature 5 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 5 within the study area, as well as temporary and permanent impacts to Feature 5 are provided in Table 2.

5.4.6 Feature 6

Feature 6 is a modified blueline drainage that drains ephemeral storm water flows from undeveloped portions of the western San Ysidro Mountains, open grasslands, unvegetated developed lots, as well as storm water flows from Alta Road (Figure 3) (Attachment B, photos 9 and 10). The upslope portion of Feature 6 originates within undeveloped portions of the San Ysidro Mountains where flows enter the northern study through a recently-constructed flood-control channel. Feature 6 then drains under Alta Road into a large detention basin where flows are directed west beyond the study area. Once beyond the study area, flows are directed though an unmodified natural blueline drainage that drains through Johnson Valley and into the Otay River. Feature 6 contains an OHWM consisting of primary hydrologic indicators including watermarks, sediment deposits, and debris deposits. It is unvegetated

throughout its entirety within the study area. Soil types within Feature 6 are identified as Diablo Clay series, which is not classified as a hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, Feature 6 within the study area does not meet the criteria of a USACE-defined wetland. Nonetheless, it is classified as a freshwater emergent wetland by the NWI (USFWS, 2010). However, Feature 6 does contain primary hydrological indicators including a well-defined OHWM and is classified as a non-RPW that is part of a tributary system draining to a TNW. Therefore, a significant nexus analysis for Feature 6 is presented below.

Feature 6 Significant Nexus Analysis

Physical attributes. Feature 6 is a first order ephemeral drainage with a total relevant reach length of approximately 18,846 feet, 1,770 feet of which occur within the study area (Figure 3). It is identified as a blueline drainage on the Otay Mesa Topographic Quadrangle Map (USGS, 1975). Surface storm water runoff is directed through a constructed, earthen and rock riprap flood-control channel and detention basin before draining south/southwest west beyond the study area. Once beyond the study area, flows are directed for 2.9 miles though a natural blue line drainage that drains through Johnson Valley and into the Otay River. The Otay River directs flows to the west for 11.0 miles before emptying into San Diego Bay, the nearest TNW.

Feature 6 drains a localized, upstream watershed size of approximately 1,267 acres. The watershed for Feature 6 consists of undeveloped mountainous terrain within the western San Ysidro Mountains, undeveloped open grasslands, cleared/developed lots, roadways, and a power plant.

Because of its relatively long reach, its large localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 6 are considered to be high volume, but short duration and low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 6 contain a water capacity that is relatively low and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 6 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well as debris and sediment that may be present as a result of surface water runoff from paved and cleared surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 6 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 6 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of the receiving TNW.

Biological attributes. The capacity of Feature 6 to contribute to downstream biological ecosystems is considered to be significant due to its unmodified channel characteristics down slope of the study area, which contain substantial stands of invasive tamarisk. Feature 6 likely negatively contributes to downstream ecosystems by functioning as a tamarisk seed propagation source. Feature 6 also contains functions and values for wildlife resources within its hydrophytic vegetation community. As a result, Feature 6 likely has more than a speculative or insubstantial effect on the downstream TNW.

In summary, it is reasonable to conclude that Feature 6 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical, chemical, and biological integrity of the receiving waters. As a

result, Feature 6 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 6 within the study area, as well as temporary and permanent impacts to Feature 6 are provided in Table 2.

5.4.7 Feature 7

Feature 7 is a recently constructed, ephemeral storm water detention basin that receives flows from a ground shipping development located along Enrico Fermi Drive (Figure 3) (Attachment B, photo 11). The upslope portion of Feature 7 originates within the development and does not extend upslope of the development. Flows from paved areas within the development drain into the basin, which is located at the southwest corner of the parcel. Flows collect within the basin and the spill over is directed through a vertical pipe drainage and into a constructed storm water system under Enrico Fermi Drive. Flows are then directed underground to the south for approximately 620 feet before exiting the study area. Feature 7 contains an OHWM consisting of primary hydrologic indicators including watermarks and debris deposits. It is dominated with upland herbaceous vegetation including yellow sweetclover (*Meliotis officinalis*, FACU), sow thistle (*Sonchus oleraceus,* NI), and bristly oxtongue (*Picris ecinoides*, FAC). The basin is regularly maintained (i.e., vegetation removed) based upon evidence of vegetation cuttings and the banks contain irrigated ornamental vegetation. The basin appears to be solely constructed to manage storm water runoff from the paved development.

Although no soil profile analysis was performed within this feature due to a lack of hydrophytic vegetation and lack of access (i.e., private property), USGS soil data indicate that soils within this feature consist of the Diablo Clay series, which is classified as a non-hydric soil (USDA-NRCS, 1973) (Figure 4).

In summary, Feature 7 within the study area does not meet the hydrophytic vegetation or hydric soil criteria of a USACE-defined wetland and is not classified as a wetland by the NWI (Figure 7) (USFWS, 2010). It does, however, contain primary hydrological indicators including an OHWM and is classified as a non-RPW within a tributary system that drains to a TNW. Accordingly, a significant nexus analysis for Feature 7 is presented below.

Feature 7 Significant Nexus Analysis

Physical attributes. Feature 7 is a first order ephemeral drainage with a total relevant reach length of approximately 1,356 feet, all of which occur within the study area (Figure 3). It is not identified as a blueline drainage on the Otay Mesa Topographic Quadrangle Map (USGS, 1975). Surface storm water runoff from a ground shipping development is directed through a constructed detention basin before draining south into a storm drain system and beyond the study area. Once beyond the study area, flows are assumed to be directed underground within the storm drain system for 0.5 miles before passing through a culvert into Mexico. The location of the storm drain outfall was not located, but based on topography observed in the field, flows are channeled within the storm drain system to the south under Enrico Fermi Drive. Flows appear to then be directed from the border west and then south for approximately 2.7 miles to the Tijuana River, which flows west/northwest for 6.8 miles before passing back across the U.S.-Mexico border. Once past the U.S.-Mexico border, flows are directed northwest for 5.5 miles before emptying into the Pacific Ocean, the nearest TNW.

Feature 7 drains a localized, upstream watershed size of approximately XX acres. The watershed for Feature 7 consists entirely of a developed, paved area consisting of a ground shipping development.

Because of its relatively short reach, its small localized watershed drainage area, and annual precipitation within the region (see Section 5.3), storm water flows entering Feature 7 are considered to be low volume, short duration, and

low frequency. Flows are seasonal, generally occurring between October and May. However, because of land modification that has resulted in vegetation removal and/or ground disturbance, runoff is rapid. In addition, underlying clay soils within Feature 7 contain a water capacity that is relatively low and the majority of flows within the localized watershed are rapidly channeled to downstream tributaries and ultimately the Pacific Ocean.

Chemical attributes. Chemical pollutants within Feature 7 likely consist of roadway pollutants (i.e., oil, grease, fluids, etc.), as well as debris and sediment that may be present as a result of surface water runoff from paved surfaces associated with upslope development. These chemical pollutants are transferred to the Pacific Ocean as a result of the hydrological connectivity of Feature 7 to the Pacific Ocean. Therefore, the contribution of chemical pollutants from Feature 7 to the receiving water body is considered to have more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of the receiving TNW.

Biological attributes. The capacity of Feature 7 to contribute to downstream biological ecosystems is considered to be insignificant due to its constructed channel characteristics, which do not contain native or hydrophytic vegetation. As a result, Feature 7 contains only minimal functions and values for wildlife resources and likely does not have more than a speculative or insubstantial effect on the downstream TNW.

In summary, it is reasonable to conclude that Feature 7 has a significant nexus with the downstream receiving waters because it likely substantially impacts the physical and chemical integrity of the receiving waters. As a result, Feature 7 is considered to be subject to CWA Section 404 jurisdiction. Total jurisdiction of Feature 7within the study area, as well as temporary and permanent impacts to Feature 7 are provided in Table 2.

5.5 DETERMINATION OF RWQCB JURISDICTION SUBJECT TO SECTION 401 OF THE CWA AND PORTER-COLOGNE

RWQCB jurisdiction subject to Section 401 of the CWA applies to any feature that may involve a discharge of waste into WoUS subject to USACE jurisdiction pursuant to Section 404 of the CWA. Accordingly, all of the seven unnamed features subject to CWA Section 404 jurisdiction are also subject to CWA Section 401 Water Quality Certification Program (Figure 3; Attachment B, photos 1-11). There are no features within the study area subject solely to Porter-Cologne. Total RWQCB jurisdiction subject to CWA Section 401, and impacts to this jurisdiction, is provided in Table 2.

5.6 DETERMINATION OF CDFG JURISDICTION SUBJECT TO SECTION 1600 (ET SEQ.) OF THE CFG CODE

Seven unnamed drainage features within the study area contain a well-defined bed, bank, and channel draining ephemeral flows (Figure 3; Attachment B, photos 1-11). Each of the drainage features are either modified natural drainages or artificial drainages that have acquired the attributes of natural stream courses. Each has functions and values to fish and wildlife resources. Detailed descriptions of each of these drainage features are provided in Section 5.4. Because each of the seven drainage features within the study area possesses a defined bed, bank, and channel supporting habitat for wildlife and other biological resources, they are subject to CDFG jurisdiction pursuant to Section 1600 (et seq.) of the CFG Code. Total CDFG jurisdiction and impacts within the project footprint are provided in Table 3.

No permanent losses of riparian or non-riparian WoS will occur as a result of the project. Placement of the power plant site and associated linears avoids temporary and permanent impacts to all jurisdictional features. Linear facilities (i.e., gas pipelines) will be trenched within existing paved and/or dirt roads. Transmission line towers will be

positioned outside of any CDFG jurisdictional feature and transmission line installation will avoid impacts to jurisdictional features.

Table 3. Total CDFG Jurisdiction and Temporary Impacts/Permanent Losses

Feature number	Non-riparian CDFG jurisdiction (acres)	Riparian CDFG jurisdiction (acres)	Temporary impacts to non-riparian CDFG jurisdiction (acres)	Temporary impacts to riparian CDFG jurisdiction (acres)	Permanent losses to non-riparian CDFG jurisdiction (acres)	Permanent losses to riparian CDFG jurisdiction (acres)
Feature 1	0.58	0.00	0.00	0.00	0.00	0.00
Feature 2	0.35	0.31	0.00	0.00	0.00	0.00
Feature 3	0.40	0.00	0.00	0.00	0.00	0.00
Feature 4	0.05	0.00	0.00	0.00	0.00	0.00
Feature 5	3.06	0.00	0.00	0.00	0.00	0.00
Feature 6	1.35	0.00	0.00	0.00	0.00	0.00
Feature 7	0.45	0.00	0.00	0.00	0.00	0.00
Total	6.25	0.3	0.00	0.0	0.0	0.0

* Impacts are derived from preliminary engineering design and may be subject to change.

6.0 RECOMMENDATIONS

The following compliance implementation guidance is provided as a means of avoiding and minimizing adverse impacts to special aquatic resource areas that occur or have the potential to occur within the project footprint.

1. Prior to undertaking ground-disturbing activities within or immediately adjacent to any aquatic resource areas, Pio Pico Energy Center, LLC should consult with all appropriate responsible resource agencies (e.g., CDFG, USACE, and RWQCB) to verify delineation results and complete any obligatory discretionary permits/authorizations.

2. Develop an informal plan to offset or compensate for impacts to special aquatic resourceareas, should they occur, to ensure rapid and favorable action during the discretionary permitting process.

7.0 LITERATURE CITED

California Interagency Watershed Mapping Committee (IWMC). 2004. USGS 100K Quad Sheet. CalWater The Data- CalWater Version 2.2.1. <URL: http://www.ca.nrcs.usda.gov/features/calwater/#Data>

DigitalGlobe. 2009. Digital Aerial Photography Software. 2009. <URL: http://www.digitalglobe.com/ >

Environmental Laboratory (EL). 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

Environmental Services Division, CDFG (ESD-CDFG). 1994. A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607, California Fish and Game Code. Sacramento, California. January.

Federal Emergency Management Agency (FEMA). 2000. Q3 Flood data 100-Year flood plain map.

Hickman, J.C. (editor) 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California (California Department of Fish and Game. The Resources Agency. Sacramento, CA.

Lichvar, R.W. and J.S. Wakely. (Eds.). 2004. Review of ordinary high water mark indicators for delineating arid streams in the southwestern United States. ERDC/CRREL TR-04-1. U.S. Army Engineer Research and Development Center (ERDC), Cold Regions Research and Engineering Laboratory (CRREL), Hanover, NH. 127p. <URL: http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/ERDC-TR-04-1.pdf

Lichvar, R.W., D.C. Finnegan, M.P. Ericsson, and W. Ochs. 2006. Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of "Waters of the United States" in Arid Southwestern Channels. ERDC/CRREL Technical Report 06-5. 21p. <URL: http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR06-5.pdf >

Lichvar, R.W. and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. U.S. Army Engineer Research and Development Center (ERDC), Cold Regions Research and Engineering Laboratory (CRREL), Hanover, NH. 72p. <URL: www.crrel.usace.army.mil/library/.../ERDC-CRREL-TR-08-12.pdf

Munsell Color. 2000. Munsell Soil Color Charts. Gretag Macbeth: New Windsor, New York.

National Weather Service (NWS). 2010. Historical Weather Data. <URL http://www.weather.gov/climate/xmacis.php?wfo=sgx >.

Reed, P.B. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). US Fish and Wildlife Service Biology Report 88(26.10). 135p.

State Water Resources Control Board (SWRCB). 2001. Effect of *SWANCC V. United States* on the 401 Certification Program. Memorandum January 25, 2001.

State Water Resources Control Board (SWRCB). 2004. Guidance for Regulation of Discharges to "Isolated Waters". Memorandum June 25, 2004.

U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter 05-05. Ordinary High Water Mark Identification. 7 December, 2005. 4p.

U.S. Army Corps of Engineers (USACE). 2007a. U.S. Army Corps of Engineers Jurisdictional Determination (JD) Form Instructional Guidebook. 60p. + Appendices A – H.
<URL: http://www.usace.army.mil/cw/cecwo/reg/cwa_guide/jd_guidebook_051207final.pdf

U.S. Army Corps of Engineers (USACE). 2007b. U.S. Army Corps of Engineers Questions and Answers for *Rapanos* and *Carabell* Decision. 21p.
<URL: http://www.usace.army.mil/cw/cecwo/reg/cwa_guide/rapanos_qa_06-05-07.pdf

U.S. Army Corps of Engineers and U.S. Environmental Protection Agency (USACE). 2008a. Memorandum Re: CWA Jurisdiction Following U.S. Supreme Court discussion in *Rapanos v. United States*. 12p.

U.S. Army Corps of Engineers (USACE). 2008b. Interim regional supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). J. S. Wakeley, R.W. Lichvar, and C. V. Noble (Eds.). ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. <URL: http://www.usace.army.mil/CECW/Documents/cecwo/reg/trel08-28.pdf>

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 1973. Soil Survey of the San Diego Area, California.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2007. Soil Survey Geographic (SSURGO) Database. California 638 Soil survey. <URL: http://SoilDataMart.nrcs.usda.gov >

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. G.W. Hurt and L.M. Vasilas (eds.). USDA,NRCS, in cooperation with the National Technical Committee for Hydric Soils. 47p.
<URL: ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v6_0.pdf >

U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS). 2010. National Wetlands Inventory-Wetlands and Deepwater Habitats of the Conterminous United States. Vector digital data: CONUS_wet_poly. Division of Habitat and Resource Conservation, Washington, D.C.
<URL: http://wetlandsfws.er.usgs.gov/NWI/download.html >

U.S. Geographic Survey (USGS). 1975. 7.5 minute quadrangle map of Otay Mesa, California.

Wetland Training Institute, Inc. (WTI). 2010. Pocket Guide to Hydric Soil Field Indicators. Based on: Field Indicators of Hydric Soils in the United States v. 7.0.

ATTACHMENT A

USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Pio Pico Energy Center, Otay Mesa | City/County: Chula Vista/San Diego | Sampling Date: 6 Dec 2010

Applicant/Owner: Pio Pico Energy Center, LLC | State: CA | Sampling Point: 1 (Feature 2)

Investigator(s): G. Hoisington | Section, Township, Range: Section 30, T 18 S, R 1 W

Landform (hillslope, terrace, etc.): mesa | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRR): C | Lat: 507587 m E | Long: 3602873 m N | Datum: UTM 11 S

Soil Map Unit Name: Diablo Clay | NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☐	No	☒	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **Feature does not have hydric soil indicators, but does have meet criteria for hydrophytic vegetation and hydrology.**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft diameter)			
1. *Baccharis salicifolia*	5	yes	FAC
2.			
3.			
4.			
5.			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Cynodon dactylon*	80	yes	FAC
2. *Bromus japonicus*	15	no	NI
3. *Lactuca serriola*	4	no	FAC
4.			
5.			
6.			
7.			
8.			
50% = 49, 20% = 20	99	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft diameter)			
1. *n/a*			
2.			
50% = , 20% =		= Total Cover	
% Bare Ground in Herb Stratum 1	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: .

Project Site: Pio Pico

SOIL

Sampling Point: 1 (Feature 2)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 3/3	100	--	--	--	--	sandy clay	
2-5	10YR 4/3	100	--	--	--	--	sandy clay	
5-16	10 YR 4/3	100	--	--	--	--	sandy clay	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (Inches): _____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☒ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Pio Pico Energy Center, Otay Mesa | City/County: Chula Vista/San Diego | Sampling Date: 6 Dec 2010
Applicant/Owner: Pio Pico Energy Center, LLC | State: CA | Sampling Point: 2 (Feature 4)
Investigator(s): G. Hoisington | Section, Township, Range: Section 30, T 18 S, R 1 W
Landform (hillslope, terrace, etc.): mesa | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): C | Lat: 507612 m E | Long: 3603716 m N | Datum: UTM 11 S
Soil Map Unit Name: Diablo Clay | NWI classification: Non-wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐		
Hydric Soil Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **Paired wetland point with Sample point 3**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft diameter)			
1. *Salix lasiolepis*	5	yes	OBL
2.			
3.			
4.			
5.			
50% = 2.5, 20% = 1	5	= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Typha domingensis*	25	yes	OBL
2. *Polypogon monospeliensis*	20	yes	FACW
3. *Cyperus eragrostis*	20	yes	FAC
4. *Conyzia canadensis*	5	no	NI
5. *Lactuca serriola*	5	no	FAC
6. *Lolium multiflorum*	5	no	FACW
7.			
8.			
50% = 40, 20% = 16	80	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft diameter)			
1. *n/a*			
2.			
50% = , 20% =		= Total Cover	
% Bare Ground in Herb Stratum 20	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: .

Project Site: Pio Pico, Otay Mesa

SOIL Sampling Point: 2 (Feature 4)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 2/2	100	--	--	--	--	sandy clay	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (Inches): _____

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks: Hydric soils appear to be in early stage of development due to recent construction of the surrounding roads and associated landscape vegetation and irrigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	6
Water Table Present?	Yes	☐	No	☐	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes	☐	No	☐	Depth (inches):	_____

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Pio Pico Energy Center, Otay Mesa | City/County: Chula Vista/San Diego | Sampling Date: 6 Dec 2010
Applicant/Owner: Pio Pico Energy Center, LLC | State: CA | Sampling Point: 3 (Feature 4)
Investigator(s): G. Hoisington | Section, Township, Range: Section 30, T 18 S, R 1 W
Landform (hillslope, terrace, etc.): mesa | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): C | Lat: 507612 m E | Long: 3603718 m N | Datum: UTM 11 S
Soil Map Unit Name: Diablo Clay | NWI classification: Non-wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **Paired upland point with Sample point 3**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft diameter)			
1. *N/A*			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Malva parvifolia*	5	no	NI
2. *Trifolium repens*	10	no	FACU
3. *Salsola tragus*	20	yes	NI
4. *Conyzia canadensis*	15	yes	FAC
5. *Gnaphalium canescens*	15	yes	NI
6. *Baccharis salicifolia*	5	no	FACW
7.			
8.			
50% = 35, 20% = 14	70	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft diameter)			
1. *n/a*			
2.			
50% = , 20% =		= Total Cover	
% Bare Ground in Herb Stratum 30	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	0	x1 =	0
FACW species	1	x2 =	2
FAC species	1	x3 =	3
FACU species	1	x4 =	4
UPL species	3	x5 =	15
Column Totals:	6 (A)		24 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: .

Project Site: Pio Pico, Otay Mesa

SOIL Sampling Point: 3 (Feature 4 up)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 4/3	100	--	--	--	--	sandy clay	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (Inches): ____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: No hydric soil indictors present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	____
Water Table Present?	Yes	☐	No	☒	Depth (inches):	____
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Pio Pico Energy Center, Otay Mesa | City/County: Chula Vista/San Diego | Sampling Date: 6 Dec 2010

Applicant/Owner: Pio Pico Energy Center, LLC | State: CA | Sampling Point: 4 (Feature 5)

Investigator(s): G. Hoisington | Section, Township, Range: Section 30, T 18 S, R 1 W

Landform (hillslope, terrace, etc.): mesa | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRR): C | Lat: 508063 m E | Long: 3603695 m N | Datum: UTM 11 S

Soil Map Unit Name: Diablo Clay, Huerhuero loam | NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☒	No	☐	**Is the Sampled Area within a Wetland?** **Yes** ☒ **No** ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **Paired wetland point with Sample point 3**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft diameter)			
1. *N/A*			
2.			
3.			
4.			
5.			
50% = , 20% =		= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Typha domingensis*	80	yes	OBL
2. *Rumex crispuss*	10	no	FACW
3.			
4.			
5.			
6.			
7.			
8.			
50% = 45, 20% = 18	90	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft diameter)			
1. *n/a*			
2.			
50% = , 20% =		= Total Cover	
% Bare Ground in Herb Stratum 30	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: .

Project Site: Pio Pico, Otay Mesa

SOIL Sampling Point: 4 (Feature 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 4/2	100	--	--	--	--	sandy clay	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (Inches): _____

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☒	No	☐	Depth (inches):	2
Water Table Present?	Yes	☐	No	☒	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Pio Pico Energy Center, Otay Mesa | City/County: Chula Vista/San Diego | Sampling Date: 6 Dec 2010

Applicant/Owner: Pio Pico Energy Center, LLC | State: CA | Sampling Point: 5 (Feature 5)

Investigator(s): G. Hoisington | Section, Township, Range: Section 30, T 18 S, R 1 W

Landform (hillslope, terrace, etc.): mesa | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRR): C | Lat: 508065 m E | Long: 3603691 m N | Datum: UTM 11 S

Soil Map Unit Name: Diablo Clay, Huerhuero loam | NWI classification: Non-wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **Paired uptland point with Sample point 4**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
50% = , 20% =		= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft diameter)			
1. *Artemesia californica*	5	yes	NI
2. *Sonchus oleraceus*	10	yes	NI
3. *Isocoma menzesii*	3	no	NI
4. *Cortaderia selloana*	2	no	NI
5.			
50% = 10, 20% = 4	20	= Total Cover	
Herb Stratum (Plot size: 10 ft diameter)			
1. *Trifolium repens*	60	yes	FACU
2. *Picris ecinoides*	10	no	FAC
3.			
4.			
5.			
6.			
7.			
8.			
50% = 35, 20% = 14	70	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft diameter)			
1. *n/a*			
2.			
50% = , 20% =		= Total Cover	
% Bare Ground in Herb Stratum 30	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	0	x1 =	0
FACW species	0	x2 =	0
FAC species	1	x3 =	3
FACU species	1	x4 =	4
UPL species	4	x5 =	20
Column Totals:	6 (A)		27 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks: .

Project Site: Pio Pico, Otay Mesa

SOIL Sampling Point: 5 (Feature 5 up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10 YR 4/4	100	--	--	--	--	sandy clay	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (Inches): ____

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	____
Water Table Present?	Yes	☐	No	☒	Depth (inches):	____
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	____

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ATTACHMENT B

Photograph Log

	Feature ID: Feature 1 (photo 1) Photo Date: 6 December 2010 Direction: South Comment: Unvegetated portion of Feature 1 as it crosses Alta Road.
	Feature ID: Feature 2 (photo 2) Photo Date: 6 December 2010 Direction: Southeast Comment: Upslope origin of Feature 2 facing towards Alta Road.
	Feature ID: Feature 2 (photo 3) Photo Date: 6 December 2010 Direction: South Comment: Feature 2 as it crosses Alta Road.

Feature ID: Feature 3 (photo 4)

Photo Date: 6 December 2010

Direction: East

Comment: Feature 3 from Alta Road.

Feature ID: Feature 4 (photo 5)

Photo Date: 6 December 2010

Direction: Southeast

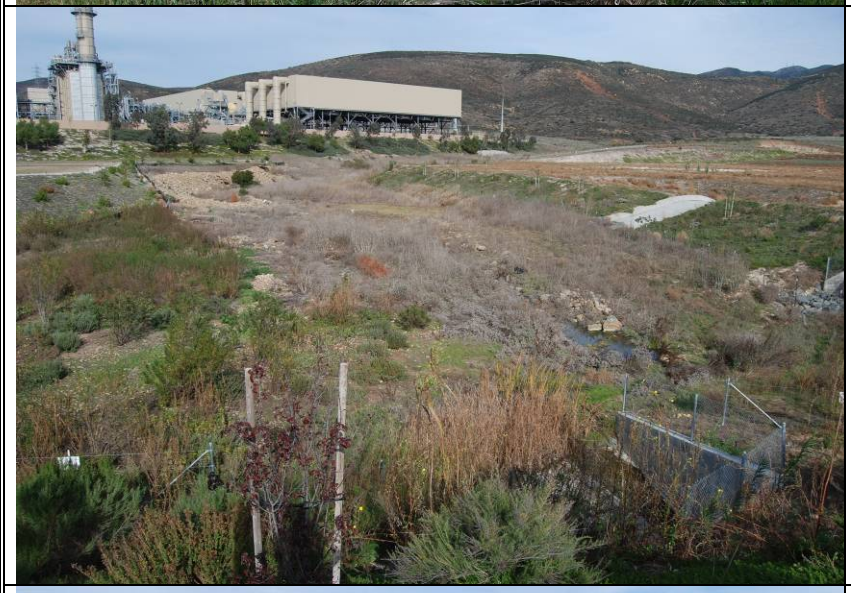
Comment: Feature 4 wetland at the southeast corner of the intersection of Alta Road and Paseo De La Fuente Road.

Feature ID: Feature 4 (photo 6)

Photo Date: 6 December 2010

Direction: West

Comment: Feature 4 flood-control channel west of Alta Road.

	Feature ID: Feature 5 (photo 7) Photo Date: 6 December 2010 Direction: Northeast Comment: Feature 5 facing upslope from the edge of the study area.
	Feature ID: Feature 5 (photo 8) Photo Date: 6 December 2010 Direction: Northeast Comment: Feature 5 facing upslope from Paseo De La Fuente Road.
	Feature ID: Feature 6 (photo 9) Photo Date: 6 December 2010 Direction: East Comment: Feature 6 facing upslope (east) from Alta Road.

	Feature ID: Feature 6 (photo 10) Photo Date: 6 December 2010 Direction: West Comment: Feature 6 facing downslope (west) from Alta Road.
	Feature ID: Feature 7 (photo 11) Photo Date: 18 May 2011 Direction: South Comment: Feature 7 facing downslope (south) along Enrico Fermi Drive toward Airway Road.

APPENDIX J-3
California Natural Diversity Database (CNDDB)
Biogeographic Data Reports

NOTE: The CNDDB Biogeographic Data Reports for the AFC Refinement have not changed from the February 2011 AFC, and therefore, are not included in this AFC Refinement. Refer to Appendix J-3 of the February 2011 AFC for the project CNDDB Biogeographic Data Reports.

APPENDIX K
ADDENDUM TO THE CULTURAL RESOURCES ASSESSMENT REPORT

June 1, 2011

Mr. David Jenkins
Pio Pico Energy Center, LLC
Three Charles River Place
63 Kendrick Street
Needham, MA 02494

Subject: Confidential Filing: Pio Pico Energy Center (PPEC) Addendum to the February 2011 AFC Cultural Resources Assessment Report

Dear Mr. Jenkins:

The Pio Pico Energy Center (PPEC) Application for Certification (AFC) was filed in February 2011, and was accepted as data adequate in April 2011. PPEC, LLC is proposing a refinement to the previously submitted AFC for minor modifications to a previously proposed gas line route. The Modified Gas Line Route A extends approximately 2,375 feet south along Alta Road, turns west on Otay Mesa Road for approximately 2,650 feet, then turns south on Enrico Fermi Drive for approximately 2,650 feet to Airway Road at which point it would connect to an existing SDG&E natural gas pipeline (see Figure 1 and 2). Since the Modified Gas Line Route A follows the same segments along Alta Road and Otay Mesa Road as analyzed in the February 2011 AFC for Route A and Route B natural gas lines, this Addendum to the February 2011 AFC Cultural Resources Assessment Report (Addendum) will only analyze the additional segment along Enrico Fermi Drive. Figures 1 and 2 of this Addendum depict the project location and proposed refinement.

ARCHAOLOGICAL AND HISTORIC ARCHITECTURE SURVEY METHODOLOGY

The delineation of the archaeological and historic architecture survey areas was performed in accordance with the CEC Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C) (CEC 2007).

The archaeological and historic architecture survey areas previously identified for the project site, laydown area, and project linears, excluding the portion of the Modified Route A Gas Line along Enrico Fermi Drive, are contained in Section 5.7.1.2 of the AFC (February 2011).

Archaeological Survey Area

The archaeological survey area assessed in this Addendum includes the segment of Modified Route A Gas Line along Enrico Fermi Drive, plus an additional 50-foot buffer on either side (see Figure 3, Survey Areas [AERIAL] and Figure 4, Survey Areas [USGS]). Since the segment of the Modified Route A Gas Line along Enrico Fermi Drive is located within the road right-of-way and access to the parcels within the 50-foot buffer was not available, an archaeological survey was not conducted for this assessment. Prior to project construction, an intensive pedestrian survey must be completed in the areas where right of entry

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

was not authorized at the time of this assessment. This data shall be provided as addenda to this document once access is granted in these areas.

Historic Architecture

The historic architecture survey area identified for this Addendum includes the segment of Modified Route A Gas Line along Enrico Fermi Drive, plus a parcel on both sides past the underground gas line route segment (see Figure 3, Survey Areas [AERIAL] and Figure 4, Survey Areas [USGS]). Per the California Energy Commission (CEC) Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C), a proposed underground natural gas line is not considered an "above-ground linear facility," and therefore the historic architecture survey did not extend a half-mile past the gas line. Rather, investigators performed a historic architecture survey for the parcels adjacent to the gas line corridor. Of note, the historic architecture survey occurred from public vantage points, since site access and right of entry were not available at the time of the survey for the privately-owned properties. In areas where view of the property was obstructed (e.g., tree overgrowth, private roads), investigators utilized available information to study the property. For the most part, the survey did not consider properties set back from the edge/boundary of their parcel and large rural properties were not identified beyond the area reasonably subject to effect by the project.

RECORD SEARCH RESULTS

On November 16, 2010, Mr. David M. Caterino (Coordinator) and Mr. Nick Doose, of the South Coastal Information Center (SCIC), performed a records search at the SCIC at San Diego State University for all relevant previously recorded cultural resources and previous investigations completed for the project site, laydown area, and a one-mile search radius, as well as those within the transmission and natural gas line corridors, and a quarter-mile search area on either side of the linear corridors. The results of this records search are provided in Section 5.7.1.11 of the AFC (February 2011).

On May 5, 2011, Mr. Nick Doose performed a supplemental records search at the SCIC at San Diego State University. The SCIC is the California Historical Resource Information System (CHRIS) cultural resources database repository for San Diego and other counties in the region. Mr. Doose searched all relevant previously recorded cultural resources and previous investigations completed for the segment of Modified Route A Gas Line along Enrico Fermi Drive and a quarter-mile search area on either side. The following information was reviewed by the SCIC: location maps for all previously recorded trinomial and primary prehistoric and historic archaeological sites and isolates; site record forms and updates for all cultural resources previously identified; previous investigation boundaries; and National Archaeological Database (NADB) citations for associated reports, historic maps, and historic addresses.

According to the SCIC, there is one previously conducted cultural resource investigation and one previously recorded cultural resources site within one-quarter mile of the segment of Modified Route A Gas Line along Enrico Fermi Drive, excluding cultural resource investigations and previously recorded cultural resources sites previously identified as part of the November 16, 2010 records search. The previously conducted investigation (NADB 1129574) and previously recorded cultural resource (CA-SDI-12884) are located approximately one-quarter mile west–southwest of the Route A Gas Line along

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

Enrico Fermi Drive. The investigation, NADB 1129574, was completed in 2003 and completed archaeological testing for CA-SDI-12884, which was originally recorded in 1991 by Huey and Campell. In 1991, the site was recorded as a light lithic scatter consisting of metavolcanic tools and debitage. The investigation, NADB 1129574, recommended the site as not eligible or significant, as a result of the archaeological testing. The records search radius and the results of the records search are depicted in Figures 5A through 5D and Attachment C of this supplemental cultural resources assessment.

NATIVE AMERICAN CONTACT

The California Native American Heritage Commission (NAHC) was contacted on November 16, 2010 to request a search of the Native American Sacred Lands File (SLF) to aid in determining the presence of Native American sacred sites within the project area. The results of the search request are provided in Section 5.7.1.9 of the AFC (February 2011).

On May 4, 2011, URS requested an additional search of the Native American SLF for the Modified Route A Gas Line segment along Enrico Fermi Drive. A list of Native American contacts that may have knowledge of known cultural resources or sacred sites within the project area was also requested.

The NAHC responded on May 11, 2011, indicating their records search of the SLF failed to identify the presence of Native American cultural resources in the immediate project area. In addition to the response letter, the NAHC also provided a Native American contact list. Each contact on the list was sent a notification of the proposed undertaking by mail on May 19, 2011 with a request that they respond with information regarding any known cultural resources or sacred sites within the project area. To date, URS has not received any written response regarding the project. Sample of correspondence letters between URS, on behalf of Pio Pico Energy Center, LLC and affected parties, including the NAHC are included in Attachment D of this supplemental cultural resources assessment.

KEY PERSONNEL QUALIFICATIONS

The key cultural resources personnel who conducted and/or supervised the field survey and prepared the AFC and cultural resources assessment are:

- Rachael Nixon, MA, RPA (URS Principal Investigator for this project)
- Jeremy Hollins, MA (URS Architectural Historian)
- Joel Levanetz (URS Architectural Historian)

Ms. Nixon and Mr. Hollins meet the professional standards of the Secretary of Interior Standards and Guidelines for Archaeology and Historic Preservation, National Parks Service, 1983. In addition, Ms. Nixon has been accredited by the Register of Professional Archaeologist (RPA). Other contributors to the cultural resources assessment include URS Architectural Historian Joel Levanetz. Qualifications of the primary individuals contributing to the cultural resources assessment are provided in Attachment E of this supplemental cultural resources assessment.

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

ARCHAEOLOGICAL FIELD SURVEY

The results for the previously conducted archaeological field survey of the project site, laydown area, and project linears are provided in Section 5.7.1.12 of the AFC (February 2011). Photographs depicting the archaeological survey area are included in Attachment B of this supplemental cultural resources assessment.

A supplemental archaeological field survey was not conducted for the segment of Modified Route A Gas Line along Enrico Fermi Drive since the gas line is contained within a road right-of-way and access to the parcels within the 50-foot buffer on either side of the gas line was not available.

Prior to project construction, an intensive pedestrian survey must be completed in the areas where Right of Entry was not authorized at the time of this assessment. This data shall be provided as addenda to this document once access is granted in these areas.

HISTORIC ARCHITECTURE FIELD SURVEY

On December 1, 2010, an intensive historic architecture survey was conducted to account for the properties that appeared to be older than 45 years (1966 or earlier) within the historic architecture survey area, which included the project site, laydown area, and project linears, plus an additional half-mile around the project site, laydown area and transmission line routes, and parcels adjacent on both sides of the underground gas line routes. The results of this survey are provided in Section 5.7.1.12 of the AFC (February 2011).

On May 9, 2011, a supplemental historic architecture survey was conducted by Mr. Joel Levanetz to account for the properties that appeared to be older than 45 years (1966 or earlier) within the supplemental historic architecture survey area, which included the segment of Modified Route A Gas Line along Enrico Fermi Drive and parcels adjacent on both sides of the gas line route segment.

Per the CEC Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C), a proposed underground natural gas line is not considered an “above-ground linear facility,” and therefore the historic architecture survey did not extend a half-mile past the gas lines. Rather, investigators performed a historic architecture survey for the parcels adjacent to the gas line corridor. Of note, the historic architecture survey occurred from public vantage points, since site access and right-of-entry were not available at the time of the survey for the privately-owned properties on either site of the gas line route. In areas where view of the property were obstructed (e.g., tree overgrowth, private roads), investigators utilized available information to study the property. In general, the survey did not consider properties set back from the edge/boundary of their parcel and large rural properties were not identified beyond the area reasonably subject to effect by the project.

The guidelines set forth in CCR Section 15064.5(a), and the criteria outlined in PRC Section 5024.1 were used to evaluate properties that appeared to be older than 45 years within the historic architecture survey area. Following survey completion, properties that appeared to be older than 45 years were recorded and

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

evaluated on the appropriate Department of Parks and Recreation (DPR) 523 series forms per the criterion of the CRHR and as historical resources for purposes of CEQA. Properties that did not appear to be older than 45 years or were known not to be older than 45 years were not recorded. Photographs depicting the historic architecture survey area are included in Attachment B of this supplemental cultural resources assessment

As part of the historic architecture survey, the County of San Diego Department of Planning and Land Use, the San Diego History Center, San Diego County Archaeological Society, Save our Heritage Organisation, and the Chula Vista Heritage Museum were contacted on May 13 and 19, 2011 to identify cultural resources within a quarter-mile radius of the Modified Gas Line Route A, pursuant to ordinance or recognized by a local historical society or museum. On June 2, 2011, Ms. Donna Golden of the Chula Vista Heritage Museum responded via email she did not know of any cultural resources within a quarter-mile radius of the Modified Gas Line Route A. To date, no other responses have been received. Copies of correspondence with these agencies and groups are included in Attachment C of this supplemental cultural resources assessment.

Historic Architecture Survey Results

As a result of the historic architecture survey, Enrico Fermi Drive was identified as an unrecorded historic property and the segment within the study area has been recorded on the appropriate DPR 523 series forms and recommended as not eligible for the CRHR and as historical resources for purposes of CEQA. The following is a summary of the segment Enrico Fermi Drive, which has been recorded and evaluated on the appropriate DPR 523 series forms and included in Attachment B of this supplemental cultural resources assessment. The results of the survey are also depicted on Figures 6 and 7 of this supplemental cultural resources assessment.

Segment of Enrico Fermi Drive

This segment of Enrico Fermi Drive extends approximately a 2,925 feet south from Otay Mesa Road to Airway Road and generally features two lanes, asphalt paving material, sidewalk on the east side, and concrete curb on the west side. At the intersection of Otay Mesa Road and Enrico Fermi Drive, the north bound lane turns into a left turn lane and a right turn lane. At the intersection of Airway Road and Enrico Fermi Drive, the northbound lane is two merging lanes and the southbound lane becomes two lanes and a left turn pocket. Two vacant, undeveloped parcels (Assessor Parcel Number [APN] 646-130-4200 and APN 646-130-2700) are located west of this segment of Enrico Fermi Drive. A developed parcel (APN 648-070-0900) used as a truck lot for commercial shipping (IMEX Transport) is located to the east.

To facilitate historical research, the following historic aerial photographs, available from NETR Online and the San Diego History Center were reviewed: 1953, 1964, 1968, 1971, 1974, 1978, 1981, 1982, 1989, 2003, and 2005. Prior to 1964, this segment of Enrico Fermi Road appeared as undeveloped or unimproved trail not used for pedestrian or vehicle circulation (per the 1953 aerial photograph). By the 1964 aerial photograph, this segment of Enrico Fermi Road appears as a widened unpaved lane, used as an arterial for circulation. By 1982, the lane was further widened but remained unpaved. Between 1989 and 2003 (per the aerials), this segment of Enrico Fermi Drive was paved as a two-lane built-up roadway.

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

As indicated in the more recent aerial images, it appears Enrico Fermi Drive was either resurfaced or reconstructed between 2005 and the present.

This segment of Enrico Fermi Drive did not appear on any of the historic topographic maps provided by the SCIC. The historic topographic maps were from 1769-1885, 1872, 1903, and 1955. Review of the Thomas Guides revealed that the segment of Enrico Fermi Drive did not appear as a documented and named road until sometime between 1989 and 1992.

Adjacent to this segment of Enrico Fermi Drive are three parcels. There are two parcels to the west (APN 646-130-4200 and 646-130-2700) of the road and the one large parcel to the east (APN 648-070-0900). These parcels are related features to the larger roadway. By 1964, they first appear on historic aerials as agricultural fields. These parcels appear to have been tilled extensively and feature a network of circulation paths extending through the agricultural fields. By 1968, APN 648-070-0900 to the east was no longer in use as an agricultural field and no longer featured any of the previous circulation paths. In the 1981 aerial, all three parcels had been returned to fallow land and none of the paths used during the decades of cultivation remained.

The 2009 East Otay Mesa Specific Plan Amendment, characterized the general area as, "…a few scattered single-family residences, a State Truck Inspection facility, a 150-foot wide Border Enforcement Zone located immediately adjacent to and paralleling the border, and an auto storage/auction yard" (County of San Diego 2009). Since the specific amendment was issued in 2009, construction has been completed on several industrial subdivisions in the area. Although minor improvements such as modern drainage systems, street lights and traffic signals have been added to APNs 646-130-4200 and 646-130-2700, APN 648-070-0900 to the east of Enrico Fermi Drive has been heavily developed and improved within the last three years. The development and improvements include construction of a two and half-story industrial warehouse, several loading docks, and a surface parking lot. Currently, the site is used by the San Diego County Sheriff's Department as a satellite office and as a shipping station for IMEX Transport, Inc.

Upon review of the site survey and historical research, the segment of Enrico Fermi Drive in the survey area does not appear to meet the criteria of eligibility for inclusion on the CRHR or be eligible as a historical resource for purposes of CEQA. Initial research has yielded no information indicating an association with significant historic events or people (Criteria 1 and 2 of the CRHR), nor does it significantly embody the distinctive characteristics of an architectural style, type or period, or represent the work of a master (Criterion 3 of the CRHR), or have the potential to yield important information (Criterion 4 of the CRHR). Overall, the road was consistently improved over the past 45 years. It is not a distinctive example of a purposefully engineered road, an aesthetic route, a cultural route, or a combination thereof. It does not have a specific or important association with any of the area's historic people or events, such as the early farming practices in Otay Mesa, the Navy airfield, or the establishment of detention facilities, nature reserves, industrial parks and facilities, or power generating facilities that define Otay Mesa's history. As such, the road does not appear to be eligible for listing to the CRHR or considered a historical resource for purposes of CEQA.

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

For a property to qualify for listing in the CRHR or be considered a historical resource for purposes of CEQA, besides meeting one of the Criteria, it must also retain a significant amount of its historic integrity. Enrico Fermi Drive does not appear to be eligible to qualify for listing in the CRHR or be considered a historical resource for purposes of CEQA, and therefore an integrity analysis is not warranted.

CONCLUSION

In summary, the cultural resources assessment conducted for this Addendum identified no cultural resources eligible for listing on the CRHR and did not identify historical resources for purposes of CEQA within the archaeological or historic architecture survey area for the segment of Modified Route A Gas Line along Enrico Fermi Drive. One historic architecture property, a segment of Enrico Fermi Drive, was identified within the survey area. The property was recorded on the appropriate DPR 523 series forms and recommended as not eligible for listing on the CRHR and as a historical resource for purposes of CEQA.

Overall, the project is not expected to impact significant or unique cultural resources. However, buried cultural resources that have not been previously identified could be encountered during the project construction phase, and additional unknown subsurface archaeological deposits and/or features, may be encountered during ground-disturbing activities. Significant cultural resources impacted by the project would require mitigation, which may include data recovery.

The project is not anticipated to impact significant cultural resources; however, mitigation measures have been provided in Section 5.7.4.1 of the AFC (February 2011) that would reduce potential impacts to cultural resources to a less than significant level in the event that cultural resources are identified within the project boundaries during construction. With implementation of mitigation measures, no significant impacts to cultural resources are anticipated for the construction, operation, and maintenance of the proposed project.

Sincerely,

URS CORPORATION

Attachments: Figures
Attachment A – DPR Forms
Attachment B – Survey Photographs
Attachment C – Records Search Results
Attachment D – Native American Contacts
Attachment E – Resumes

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

REFERENCES:

In addition to those presented in Section 5.7.8 of the AFC (February 2011), the following references were used:

California Department of Transportation District 11. Otay Mesa East Port of Entry / State Route 11: Presidential Permit Application. November 2007. Accessed May 2011.

County of San Diego: Department of Planning and Land Use. East Otay Mesa Business Park Specific Plan Amendment. April 2009. Accessed May 2011.

County of San Diego: Offices of County Assessor/Recorder/County Clerk. Available Public Records. Accessed May 2011.

Historic Topographic Maps, San Diego County: Historic Roads and Trails 1769-1885, Wheeler and Co. San Diego County 1872, USGS Cuyamaca 1903, USGS Otay Mesa 1955. Accessed May 2011.

NETR Online. Historic Aerials: 1953, 1964, 1968, 1971, 1981, 1989, 2003, 2005. HistoricAerials.com. Accessed May 2011.

San Diego County Aerial Photo Map Books: 1974, 1978, 1982. San Diego History Center Archives. Accessed May 2011.

Thomas Guide San Diego County: 1987, 1989, 1992. San Diego History Center Archives. Accessed May 2011

URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.9292
Fax: 858.812.9293

The Appendix K figures are confidential and are not appropriate for public distribution.
Copies have been provided to the California Energy Commission under separate cover.

The Appendix K Attachment A, DPR Forms, is confidential and is not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

The Appendix K Attachment B, Survey Photographs, is confidential and is not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

The Appendix K Attachment C, Records Search Results, is confidential and is not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

The Appendix K Attachment D, Native American Contacts, is confidential and is not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

The Appendix K Attachment E, Resumes, is confidential and is not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

APPENDIX L
PALEONTOLOGICAL RESOURCES

Appendix L is confidential and not appropriate for public distribution. Copies have been provided to the California Energy Commission under separate cover.

APPENDIX N
ROADWAY 24-HR ADT COUNTS

Prepared by NDS/ATD

VOLUME

Enrico Fermi Dr S/o Otay Mesa Rd

Day: Tuesday
Date: 5/17/2011

City: San Diego
Project #: CA11_4143_001

DAILY TOTALS	NB	SB	EB	WB	Total
	1,095	767	0	0	1,862

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		0				0		12:00	22		13				35	
00:15	1		1				2		12:15	17		18				35	
00:30	2		1				3		12:30	18		15				33	
00:45	0	3	0	2			0	5	12:45	17	74	17	63			34	137
01:00	1		0				1		13:00	12		16				28	
01:15	0		0				0		13:15	13		13				26	
01:30	0		0				0		13:30	15		10				25	
01:45	0	1	0				0	1	13:45	14	54	16	55			30	109
02:00	0		0				0		14:00	19		11				30	
02:15	0		1				1		14:15	19		21				40	
02:30	0		0				0		14:30	20		20				40	
02:45	0		0	1			0	1	14:45	14	72	17	69			31	141
03:00	1		0				1		15:00	13		18				31	
03:15	0		1				1		15:15	12		14				26	
03:30	0		0				0		15:30	10		13				23	
03:45	0	1	0	1			0	2	15:45	13	48	12	57			25	105
04:00	1		0				1		16:00	20		14				34	
04:15	0		0				0		16:15	28		15				43	
04:30	0		0				0		16:30	24		15				39	
04:45	0	1	1	1			1	2	16:45	31	103	18	62			49	165
05:00	3		2				5		17:00	28		22				50	
05:15	0		2				2		17:15	23		16				39	
05:30	1		1				2		17:30	24		18				42	
05:45	3	7	2	7			5	14	17:45	22	97	11	67			33	164
06:00	4		3				7		18:00	15		12				27	
06:15	14		4				18		18:15	10		2				12	
06:30	15		8				23		18:30	17		8				25	
06:45	33	66	11	26			44	92	18:45	8	50	6	28			14	78
07:00	24		16				40		19:00	9		2				11	
07:15	21		13				34		19:15	9		0				9	
07:30	29		16				45		19:30	7		1				8	
07:45	25	99	25	70			50	169	19:45	8	33	0	3			8	36
08:00	18		17				35		20:00	3		3				6	
08:15	21		13				34		20:15	2		1				3	
08:30	25		18				43		20:30	4		1				5	
08:45	16	80	12	60			28	140	20:45	1	10	0	5			1	15
09:00	14		14				28		21:00	1		1				2	
09:15	25		9				34		21:15	1		1				2	
09:30	33		13				46		21:30	0		0				0	
09:45	29	101	12	48			41	149	21:45	0	2	0	2			0	4
10:00	18		15				33		22:00	1		0				1	
10:15	29		15				44		22:15	0		0				0	
10:30	28		12				40		22:30	0		0				0	
10:45	25	100	17	59			42	159	22:45	0	1	0				0	1
11:00	25		21				46		23:00	1		0				1	
11:15	22		20				42		23:15	0		1				1	
11:30	20		19				39		23:30	0		0				0	
11:45	24	91	20	80			44	171	23:45	0	1	0	1			0	2
TOTALS		550		355				905	TOTALS		545		412				957
SPLIT %		60.8%		39.2%				48.6%	SPLIT %		56.9%		43.1%				51.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,095	767	0	0	1,862

AM Peak Hour	09:30	11:00			10:15	PM Peak Hour	16:15	14:15			16:15
AM Pk Volume	109	80			172	PM Pk Volume	111	76			181
Pk Hr Factor	0.826	0.952			0.935	Pk Hr Factor	0.895	0.905			0.905
7 - 9 Volume	179	130	0	0	309	4 - 6 Volume	200	129	0	0	329
7 - 9 Peak Hour	07:00	07:45			07:00	4 - 6 Peak Hour	16:15	16:45			16:15
7 - 9 Pk Volume	99	73	0	0	169	4 - 6 Pk Volume	111	74	0	0	181
Pk Hr Factor	0.853	0.730	0.000	0.000	0.845	Pk Hr Factor	0.895	0.841	0.000	0.000	0.905