

TABLE OF CONTENTS

5.13 VISUAL RESOURCES..... 5.13-1

5.13.1 Affected Environment..... 5.13-1

5.13.2 Environmental Consequences..... 5.13-15

5.13.3 Cumulative Impacts 5.13-25

5.13.4 Mitigation Measures and Conditions of Certification 5.13-26

5.13.5 Laws, Ordinances, Regulations, and Standards 5.13-27

5.13.6 Involved Agencies and Agency Contacts 5.13-32

5.13.7 Permits Required and Permit Schedule..... 5.13-32

5.13.8 References 5.13-32

LIST OF TABLES

Table 5.13-1 Visual Impact Significance Matrix – Sensitive Viewing Areas..... 5.13-16

Table 5.13-2 Visual Impact Susceptibility – Sensitive Viewing Areas..... 5.13-17

Table 5.13-3 Visual Impact Severity – Sensitive Viewing Areas 5.13-19

Table 5.13-4 Major Component Design Characteristics..... 5.13-20

Table 5.13-5 Visual Impact Significance – Sensitive Viewing Areas..... 5.13-22

Table 5.13-6 Heat and Mass Balance of WSAC..... 5.13-24

Table 5.13-7 Summary of Laws, Ordinances, Regulations, and Standards..... 5.13-29

Table 5.13-8 Agency Contact List for Laws, Ordinances, Regulations, and Standards 5.13-32

LIST OF FIGURES

Figure 5.13-1 Sensitive Visual Resources Visual Sphere Of Influence (VSOI) Map

Figure 5.13-2 Aerial of Project Vicinity

Figure 5.13-3 Key Observation Points

Figure 5.13-4 Character Photos of Project Area (Figure 1 of 6)

Figure 5.13-5 Character Photos of Project Area (Figure 2 of 6)

Figure 5.13-6 Character Photos of Project Area (Figure 3 of 6)

Figure 5.13-7 Character Photos of Project Area (Figure 4 of 6)

Figure 5.13-8 Character Photos of Project Area (Figure 5 of 6)

Figure 5.13-9 Character Photos of Project Area (Figure 6 of 6)

Figure 5.13-10 Existing View of Project from KOP #1

Figure 5.13-11 Simulated View of Project from KOP #1

Figure 5.13-12 Existing View of Project from KOP #2

Figure 5.13-13 Simulated View of Project from KOP #2

Figure 5.13-14 Existing View of Project from KOP #3

Figure 5.13-15 Simulated View of Project from KOP #3

Figure 5.13-16 Existing View of Project from KOP #4

Figure 5.13-17 Simulated View of Project from KOP #4

5.13 VISUAL RESOURCES

This section discusses the potential for the construction, operation, and maintenance of Pio Pico Energy Center (PPEC) to cause significant impacts to aesthetic values within the project vicinity. This section addresses the inventory of existing visual resources of the affected environment and the assessment of the environmental consequences of PPEC on visual resources of that inventory. This section also lists the applicable laws, ordinances, regulations, and standards (LORS) pertaining to the aesthetic effects of PPEC.

The visual resource analysis was conducted in conformance with California Energy Commission (CEC) guidelines for the inventory and assessment of visual impacts for an Application for Certification (AFC). The CEC guidelines, in turn, comply with the California Environmental Quality Act (CEQA) documentation requirements (summarized in Section 5.13.2, Environmental Consequences). The study methods used (described in more detail in the inventory and impact assessment sections below) were based upon those established by the Bureau of Land Management (BLM) Visual Resource Management Inventory and Contrast Rating System (BLM, 1986), the Federal Highway Administration (FHWA) Visual Impact Assessment (FHWA, 1981), and U.S. Forest Service (USFS) Visual Management System (USFS, 1974, 1995), as well as previous methodologies used in other CEC studies (e.g., AFC for San Joaquin Valley Energy Center Power Plant Project [01-AFC-22] and other energy-related projects). Additionally, the methodology has been tailored to meet the specific issues and regulatory requirements associated with PPEC.

5.13.1 Affected Environment

This section describes the inventory of visual resources within the vicinity of PPEC. A description of the regional landscape setting, the project's anticipated visual sphere of influence (VSOI), and the inventory methods and results are included.

5.13.1.1 Project Area/Regional Landscape Setting

Project Site

PPEC consists of the project site, linears, and a temporary laydown area (Figure 3.3-1, Facility Plot Plan and Figure 3.3-3, Potential Linears). The project site is located in an unincorporated area of San Diego County known as Otay Mesa. It 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 is 6.00 acres of an adjacent parcel to the south (APN 648-040-46) (Figure 3.3-2, Project Location). The existing setting within one-mile of the project site and potential transmission line routes are presented on Figure 3.3-4. The project affects the following areas:

- Plant site – 9.99 acres.
- Temporary laydown and parking area – 6.00 acres, on an adjacent parcel that is contiguous to the project site.

- 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. Route A would extend approximately 8,000 feet south along Alta Road to near the U.S.–Mexico border, at which point it would connect to the existing SDG&E natural gas pipeline. 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.
- Sewer pipeline – A short connection will be made to an existing 12-inch sewer main along Calzada de la Fuente along the north project site boundary or to an existing 15-inch sewer main along Alta Road, along the west project site boundary.
- Stormwater pipeline – A short connection will be made from a detention pond located at the northwest corner of the project site to an existing 30-inch stormwater pipeline located along Calzada de la Fuente, adjacent to the project site.
- Power line – Two possible routes are provided for a 230kV transmission line that will connect the project into the existing 230kV Otay Mesa switchyard. Route A would begin as an overhead power line along Calzada de la Fuente, extend approximately 1,700 feet east where it would then be routed underground for approximately 400 feet into the Otay Mesa switchyard (total length of Route A would be approximately 2,100 feet). Route B would begin as an overhead power line from the eastern edge of the project site, run south approximately 550 feet, then turn east along the northern border of the parcels with APN 648-040-48 and APN 648-040-43 for 1,400 feet, and finally turn north for approximately 700 feet into the Otay Mesa switchyard (total length of Route B would be approximately 2,650 feet). The power line will be owned and maintained by the Applicant.
- Water supply pipelines – The project will make a short connection to the potable service system, either at an existing 12-inch main along Calzada de la Fuente, or at an existing 24-inch main along Alta Road. Upon the Otay Water District (OWD)'s completion of the planned Otay Mesa area recycled water system, the project will make a connection to an existing 8-inch recycled water main along Calzada de la Fuente or a new recycled water main to be constructed in Alta Road.

These features are illustrated on Figure 3.3-1, Facility Plot Plan and Figure 3.3-3, Potential Linears.

The site topography as of December 2010 is provided on Figure 3.4-1, 2010 Site Topography. The industrial park developer will grade the property in first quarter 2011 as described in the 2009-2010 County of San Diego Grading Permit 2700-1555. This planned soil removal and grading of the property was already planned for prior to the inception of this project and will occur regardless of the submittal of this AFC or its eventual approval. Site elevation for purposes of this project will be approximately 635 feet above mean sea level (msl). This will establish the baseline conditions that this AFC is founded upon. The baseline site topography is shown on Figure 3.4-2, Baseline Site Topography.

Surrounding Project Area

Open Space/Parks/Recreational Areas

Aside from the Otay Mesa Generating Project (OMGP) immediately east of the project site and the industrialized area to the southwest, undeveloped open space or park lands surround the PPEC site to the northwest, east, and south (See Figures 5.13-1, Sensitive Visual Resources VSOI Map; 5.13-2, Aerial of Project Vicinity; and 5.13-3, Key Observation Points). Some of these open space and park areas are:

- BLM Otay Mountain Wilderness Area
- Otay River Valley (proposed Otay Valley Regional Park [OVRP] Expansion)
- Existing and proposed City of Chula Vista and San Diego County trails

The BLM Otay Mountain Wilderness area is approximately 1.5 miles east of the PPEC site at its closest point. The wilderness area is public land administered by the BLM, covers approximately 16,893 acres and offers recreation activities, such as hiking, hunting, fishing, horseback riding, and camping. According to Donna Chirello at the BLM Palm Springs South Coast Field Office in California, no designated campgrounds were identified within five miles of the project site; although, camping is permitted in undesignated sites within the wilderness area. It is important to note, however, that the BLM does not advise camping in this area due to the close proximity to the U.S.–Mexico border and the multitude of U.S. Border Patrol officers patrolling the area.

The existing Otay Valley Regional Park (OVRP) is located just east of Interstate 805 (I-805), approximately seven miles northwest of the PPEC site. The park is currently open Monday through Friday from 9:30 a.m. to 5:00 p.m. and Saturday, Sunday, and holidays from 9:30 a.m. to sunset. Plans have been proposed to extend the OVRP eastward past SR-125 into the Otay River Valley. This OVRP expansion would extend the park to the undeveloped area north of Richard J. Donovan Correctional Facility and one mile northeast of the project site. The OVRP Expansion, if constructed, would represent one of the major open space areas within the southern area of San Diego County, linking south San Diego Bay with the Otay Lakes.

Two main trail systems are either proposed to extend or are existing near the project area (see Figures 5.13-2, Aerial of Project Vicinity, and 5.13-3, Key Observation Points): 1. the Otay Mountain Truck Trail, and 2. the OVRP Trail.

1. The **Otay Mountain Truck Trail** is an existing trail that extends approximately 17 miles along the ridgeline of the San Ysidro Mountains and is largely used by recreational off-road vehicles as well as the U.S. Border Patrol to traverse the Otay Mountain terrain; however, hikers and mountain bikers use the trail as well. The trail originates just north of the project site and extends southeast into the Otay Mountain Wilderness Area.
2. The **Otay Valley Regional Park Trail System** is located just east of I-805, approximately 7 miles northwest of the project site. Currently, the trail system runs from the existing OVRP's western most boundary (just west of I-5), 1.5 miles east to I-805. The plans proposed to extend the OVRP eastward through the Otay River Valley would include a more extensive

trail system. This expanded trail system would consist of trails connecting OVRP to the San Ysidro Mountains/ BLM Otay Mountain Wilderness Area to the southeast as outlined in the *Otay Valley Regional Park Concept Plan*.

The nearest water feature to the project site is the Lower Otay Reservoir located approximately 2.5 miles north of the project site (see Figure 5.13-2, Aerial of Project Vicinity). The Lower Otay Reservoir is the dominant water feature in the region with 1,100 surface acres and 25 miles of shoreline. Recreational uses of the reservoir include boating, fishing, and barbecue/picnic areas.

Other water features in the surrounding area include the Otay River, which runs through the Otay River Valley extending approximately 13 miles, from the Lower Otay Lakes Reservoir to the lower end of South San Diego Bay and Salt Creek. For a large part of the year, the water levels of Salt Creek and the Otay River south of the Lower Otay Reservoir in the vicinity of the project site are below ground (a.k.a., groundwater); therefore, recreational uses along the river consist of off-roading (where permitted), hiking, and mountain biking along the network of trails discussed above.

Development

A significant portion of the land within the Otay Mesa area is used for industrial development. As shown on Figures 5.13-1, Sensitive Visual Resources VSOI Map; 5.13-2, Aerial of Project Vicinity; and 5.13-4 through 5.13-9, Character Photos of Project Area, significant cultural modifications within the surrounding project area include:

- Warehouses and manufacturing facilities located on either side of SR-905 between Otay Mesa Road and the U.S. - Mexico border.
- Residential developments located along Otay Mesa Road, approximately 4,700 feet west of the project site (at their closest point).
- A cluster of buildings at the previous Kuebler Ranch, 0.4 miles north of the project site.
- OMGP, a 590MW natural gas-fired power plant, located immediately east of the project site.
- Otay Mesa Port-of-Entry (at the U.S.–Mexico border) located approximately two miles to the southwest of the project site.
- SR-125 approximately 2.0 miles west of the project site.
- Richard J. Donovan Correctional Facility located approximately 4,000 feet northwest of the project site.
- San Diego County Correctional Facility Complex, which includes the George Bailey Detention Facility and the East Mesa Detention Facilities, is located approximately 4,800 feet north of the project site.
- Brown Field Airport located approximately three miles west of the project site.

The PPEC project site is located on undeveloped land in an industrial/commercial development area zoned for heavy industrial uses in accordance with the San Diego County East Otay Mesa Specific Plan. The three existing residences to the west of the project site are single-story ranch-style homes located in an area zoned as technology business park. The northern undeveloped canyon area between the project site and the East Mesa Detention Facility is zoned as conservation/limited which would allow uses such as outdoor participant sports, campgrounds and resorts. The area to the east of the project site is zoned for rural residential, however, there are currently no residences located in this area.

The OMGP is a 590MW natural gas-fired power facility that began operation in 2009. The plant is located on a 15-acre site immediately adjacent to the PPEC project site. The plant includes two combustion turbine generators, heat recovery steam generators, air cooled condensers and steam turbine generators. In addition, the plant includes a 230kV switchyard with a 0.1-mile connection to the existing 230kV Miguel-Tijuana transmission line located to the east.

The southern portion of SR-125 (Southbay Expressway) is a toll road that runs south from Chula Vista to SR-905 connecting businesses across the South Bay to Otay Mesa and the U.S–Mexico Border. The road was completed in 2007 and includes a nearly 0.75-mile-long and 75-foot-wide, four-lane bridge that is approximately 200 feet tall and spans the Otay River Valley.

The Richard J. Donovan Correctional Facility is a private federal adult correctional facility located on 780 acres to the northwest of the project site. The facility houses approximately 4,770 inmates and employs an additional 1,353 people. The San Diego County Correctional Facility Complex covers approximately 1,200 acres on a mesa to the north of the PPEC site. The complex includes the George Bailey Detention Facility, a San Diego County maximum security facility with approximately 1,500 inmates (and an average of 1,200 visitors/week) and the East Mesa Detention Facilities, which include adult and juvenile facilities with approximately 1,000 inmates/staff.

Kuebler Ranch is located approximately 0.4 mile north of the PPEC site. The ranch contains several buildings including a restaurant and a large shed. The area surrounding the ranch is undergoing grading and other construction activities, therefore the ranch cannot be accessed by anyone other than the construction crews. As a result, the restaurant is currently not in operation (as of December 2010); however, there are plans to re-open in spring of 2011.

Brown Field Airport is owned and operated by the City of San Diego. It is a general aviation airport used by local residents with small planes and is also a port-of-entry for private aircraft coming into the United States through Mexico. Brown Field Airport is also heavily used by military and law enforcement agencies and is classified as a “reliever airport” by the Federal Aviation Administration (FAA). The predominant flow of air traffic associated with Brown Field is north-south along the coast; however, runway alignments are east-west. Airport operations currently support an average of approximately 277 flights per day. Although aircraft using the Brown Field Airport may fly over the project site, according to the Brown Field Airport Land Use Compatibility Plan, the PPEC site is not within a flight activity zone or area of influence.

Landform

Otay Mesa is characterized as a broad wide mesa, bordered by Otay River Valley to the north and the San Ysidro Mountains to the east. The landform within the project area consists of rolling hillsides that have been altered by years of dry farming and flat mesas that are deeply dissected by a series of tributaries and canyons, which drain to the Otay River Valley, including, Johnson, and O'Neal Canyons. The project site sits at the base of the San Ysidro Mountains which rise to a maximum elevation of 3,478 feet (Otay Mountain) approximately 4.5 miles to the east of the project site. The Otay Mountain Wilderness area has several miles of dirt roads and trails used by recreationalists and U.S. Border Patrol traversing the area. Development in the area generally congregates on the mesa to the south and west of the project site. Although existing topography allows for open, expansive views of Otay Mesa to the south and west of the project site, the San Ysidro Mountain range blocks distant views from the project site to the east.

5.13.1.2 Visual Sphere of Influence**Determination of VSOI and Preparation of VSOI Map**

The VSOI for PPEC (see Figure 5.13-1, Sensitive Visual Resources VSOI Map) represents the area within which the project could be seen and potentially result in significant impacts to visual resources. The furthest distance at which potentially significant visual impacts could occur has been identified as five miles. This conservative distance was based primarily on the project description regarding the potential visibility of major project components, e.g., exhaust stacks, variable bleed valve stacks, combustion turbines, and transmission poles from sensitive viewing areas (see Section 3.0, Facility Description, and Figure 3.1-3, Site Arrangement, for a layout of project components). In addition, the distance was based upon the guidelines established in the USFS Visual Management System (USFS 1974; 1995). Based upon USFS distance definitions, PPEC was reviewed for sensitive resources within the following view ranges:

- **Foreground**: 0 to 0.5 mile from the observer's position. At this distance, the observer can view details of trees, shrubs, wildflowers, and animals.
- **Mid-ground**: 0.5 to 5 miles from the observer's position. At this distance, the observer can see forest stands, natural openings, masses of shrubs, and rock outcrops.
- **Background**: 5 miles to horizon from the observer's position. At this distance, the observer can view mountain peaks, ridgelines, and patterns of forest stands and openings.

The VSOI boundary was based on a five-mile distance limit to account for local viewing conditions. Computer viewshed analyses were conducted (using ten-meter-grid cell resolution, generated from 1:24,000 National Elevation Dataset [NED] data from the USGS [United States Geological Survey]) to map the boundaries of the VSOI within the five-mile limit. USGS NED files were analyzed with ArcView 9.3.1-based geographical information system (GIS) using the spatial analysis extension. The combined NED was used to run viewshed analyses in Universal Transverse Mercator (UTM), Zone 11, North American Datum of 1983 (NAD83).

For PPEC, the centroid of the 9.99-acre site was used (at six feet above the 2010 grade) to run an existing viewshed map. Next, a centroid of the facility site's tallest structure, a turbine stack, the perimeter/fence line for the entire project site, the transmission poles along the proposed transmission line route, and a vertical observer offset of six feet were input into the viewshed model. The results represent a "typical" viewshed for the project area.

When utilizing the VSOI in the field, the photo survey takes into account the visibility of existing surrounding development (existing roadways/highways, OMGP with approximately 130-foot-tall stacks, recreation facilities, transmission system/network, correctional/detention facilities, residential, school and commercial land uses within five miles surrounding the project), as well as the visibility of project facilities (e.g., the most visible components). Other variables affecting potential visibility of the project include orientation of the viewer, duration of view, atmospheric conditions, lighting (daylight versus nighttime), and visual absorption capability (VAC). VAC is defined as the extent to which the complexity of the landscape can absorb new elements without changing the overall visual character of the area.

The VSOI was mapped to identify the maximum potential area for significant impacts of PPEC in views from visually sensitive areas. Within the VSOI, varying levels of project visibility have been identified. The highest level of project visibility exists when the viewer is adjacent to the PPEC site, is a permanent stationary viewer, and there is no screening. Conversely, the lowest level of visibility exists, for example, when the viewer is located at greater distances from the site, the viewer is traveling at a high rate of speed, and the viewer is in partially to fully screened conditions.

5.13.1.3 Visual Study Inventory Components

The following sections detail the visual study inventory components used in the assessment of potential impacts. Three primary components that were inventoried include: 1) an evaluation of scenic attractiveness; 2) consideration of Existing Scenic Integrity Levels (ESILs); and 3) the identification of sensitive viewing areas.

Scenic Attractiveness

When evaluating scenic attractiveness, both natural and the manmade components within the VSOI were considered as they relate to either adding to or detracting from the overall landscape character within a specific setting. Scenic attractiveness levels are established by evaluating the distinctiveness and diversity of a particular landscape setting in relation to the following elements:

- Landform
- Vegetation
- Water
- Color
- Effects of adjacent scenery

- Scarcity of the landscape
- Cultural modifications

The inventory and evaluation of the above elements assist with the characterization of scenic attractiveness within the VSOI. In general, landscapes are characterized by Classes A through C:

- Class A: Areas have outstanding diversity or interest; characteristic features of landform, water, and vegetation are distinctive or unique in relation to the surrounding region. These areas contain considerable variety in form, line, color, and texture.
- Class B: Areas have above-average diversity or interest, providing some variety in form, line, color, and texture. The natural features are not considered rare in the surrounding region but provide adequate visual diversity to be considered of value.
- Class C: Areas have minimal diversity or interest; representative natural features have limited variation in form, line, color, or texture in the context of the surrounding region. Discordant cultural modifications (e.g., detention facilities, generating facilities, transmission lines, and other cultural modifications) can be highly noticeable, which can reduce the inherent value of the natural setting.

Existing Scenic Integrity Levels

The ESILs of a specific landscape setting can be defined as the extent to which natural features have been modified by human actions to the point of degrading the natural setting. The following ESIL criteria were used to evaluate degrees of modifications:

- High: The landscape character appears intact. Deviations are present but repeat form, line, color, texture, and patterns common to the landscape character so completely and at such a scale that they are not evident.
- Moderate: The landscape character appears slightly altered. Noticeable deviations remain visually subordinate to the landscape character being viewed.
- Low: The landscape character appears heavily altered. Deviations strongly dominate the landscape character. Deviations do not borrow from attributes such as size, shape, edge effects, vegetative type changes, or architectural styles within or outside the landscape being viewed.

Viewer Sensitivity and Sensitive Viewing Area

Viewer Sensitivity: Viewer sensitivity is a measure of the degree of concern for change in the visual character of a landscape. Viewer sensitivity considers type of use, user attitude, volume of use, adjacent land use, visual quality, and special classifications. While conducting this study, no attempt was made to model varying levels of viewer concern with change in their landscape. Because of the difficulty in inventorying for every individual's sensitivity level, it was determined that all viewers may have a high level of concern related to changes occurring in

landscapes within the VSOI. Generally, a viewer's concern level is associated with, but not limited to, the following factors:

- Viewing location, orientation of view, and duration of view;
- Activity in which the viewer may be engaged (e.g., water-related recreation activities, bird-watching);
- Visual acuity related to the intensity of visual detail within a landscape setting;
- State of mind or attitude;
- Preconceived expectations related to scenic quality; and
- Inherent values related to scenic quality and familiarity within specific landscape settings.

Three levels of viewer sensitivity (high, moderate, and low) were used to describe the sensitivity of viewers within the project study area. High-sensitivity viewpoints identified in the project study area predominantly include residences. Moderate-sensitivity viewers identified in the project study area consist of existing primary area roadway travelers along Alta Road (in particular, employees of Richard J. Donovan Correctional Facility and San Diego County Correctional Facility Complex) and recreationalists. Low-sensitivity viewpoints were identified as industrial areas and are not evaluated in detail for this study because these are considered to be a compatible use with the proposed facility and, therefore, would not result in significant visual impacts.

Sensitive Viewing Areas. After discussions with CEC visual staff, a review of surrounding land uses, and a field review of the PPEC site, it was determined that sensitive viewing areas within the VSOI consisted primarily of recreational views from Kuebler Ranch, recreational views from within the Proposed OVRP Expansion (in particular the Off-Highway Vehicle [OHV] trail areas), commuter/traveler views from employees of the Richard J. Donovan Correctional Facility and San Diego County Correctional Facility Complex (traveling to work on Alta Road), and recreational views from select areas within the BLM Otay Mountain Wilderness area (specifically the Otay Mountain Truck Trail). It was determined that views from the closest residences were largely obscured by the topography.

Levels of Impact. Levels of potential impact on sensitive viewing areas were established through an analysis of the following two primary components:

- Impact susceptibility: The degree to which a sensitive viewpoint would be impacted by changes within its viewshed.
- Impact severity: The degree of change to the landscape created within a specific viewshed.

5.13.1.4 Inventory Results

Scenic Attractiveness

The VSOI for the project area was characterized as Class C and Class B for scenic attractiveness. No landscapes were considered to have distinctive characteristics as defined for Class A levels. Landscapes within the VSOI identified as Class B include the canyon slopes and mountainous terrain, as well as the open space areas to the west and northwest of the PPEC site, which are largely undeveloped. These areas possess a higher degree of scenic attractiveness because of the elevations in topography, which allow for open expansive views of the mesas and mountains in the area. Class B landscapes in the project area include: the areas within the Otay Mountain Wilderness Area, and the canyon slopes of the Otay River Valley (Proposed OVRP Expansion). Low elevation areas to the south and southwest of the project site allow for open distant views reaching to the U.S.–Mexico border, however the Otay Mountain Wilderness Area and the mesas to the north block many distant views from the east and north. (see Figure 5.13-1, Sensitive Visual Resources VSOI Map). Landscapes within the VSOI identified as Class C, or as landscapes containing discordant cultural modifications (e.g., detention facilities, generating facilities, transmission lines, and other highly noticeable cultural modifications), in large part are situated atop the mesas in the surrounding area. As listed above, these cultural modifications include, but are not limited to, the existing OMGP, residential developments, the 230kV transmission line system, SR-125, San Diego County Correctional Facility Complex, Richard J. Donovan Correctional Facility, and Brown Field Airport.

Existing Scenic Integrity Levels

An inventory of the ESILs within the VSOI was taken, and varying cultural modifications were documented. Most landscapes inventoried within the VSOI can be classified as retaining primarily low to moderate ESILs because of the presence and type of manmade development, including the existing OMGP, residential developments, SR-125, SR-905, San Diego County Correctional Facility Complex, Richard J. Donovan Correctional Facility, and Brown Field Airport, that characterize the area within five miles surrounding the PPEC site. Furthermore, a large 230kV transmission line corridor that supports electricity transmission to/from the Miguel Substation also traverses the landscape within the VSOI.

Although the park and open space areas in the project area may be considered to have moderate ESILs, the open and expansive views within the project area, made available by the mountains canyons, are interrupted by residential, industrial, and municipal developments.

Sensitive Viewing Areas

Sensitive viewing areas were identified and inventoried within the five-mile radius of the PPEC site. The identification of sensitive viewing areas within the VSOI was conducted through review of existing land use data, agency consultation, and during field reviews. The following is a representative list of sensitive viewing areas that were considered during the inventory:

- Residential areas (e.g., the closest residences surrounding the site).
- Parks, recreation areas, wildlife areas, visitor centers, or areas used for camping, picnicking, bicycling, (e.g., OVRP, and Otay Mountain Wilderness area) or other recreational activities.

- Travel routes, including major roads or highways used primarily by local residents, workers, and commuters along Otay Mesa Road, SR-905 and SR-125, as well as aircrafts using the Brown Field Airport.

The OMGP, commuters along Alta Road and viewers at KOP #3 maintain foreground views (within 0.5 mile) of the project site. Mid-ground views to the project site exist from the southeasternmost portion of the proposed OVRP Expansion (primarily by OHV recreationalists) and the Otay Mountain Truck Trail to the east. Various locations in the surrounding hillsides and mountains (3.5 to 5.0 miles and beyond) may have background views to the project site. Beyond the mapped VSOI, PPEC would either not be visible because of topography/screening or of such a small size in the background field of view that significant impacts would not be expected.

The nearest residence with potential direct views to the project site is located on Otay Mesa Road, approximately 4,700 feet to the west of the project site. The residence is located adjacent to two other residences in a slightly lower elevation area than the project site; therefore views of the project site are partially obstructed by the terrain. During a field survey conducted in December, 2010, it was determined that although the turbine stacks which are part of the OMGP (located directly east of the project site and are approximately the same height of the proposed PPEC stacks) are visible from the residence, this residence would not be considered a sensitive viewing area largely because the PPEC development is expected to be a lower height than the existing OMGP. No other designated residential areas are located near the project site with more direct and/or unobstructed views to the project site.

The viewshed model run for PPEC suggested that views to the project site from SR-125 were available only in one location approximately 3.8 miles from the project site. However, during the field survey, it was determined that due to the area's natural topography, no views or largely obstructed views to the project site can be anticipated from this location.

Although the Richard J. Donovan Correctional Facility and San Diego County Correctional Facility Complex are located within one mile of the PPEC site and viewers from these locations would have direct/unobstructed views to the project site, views from these types of facilities are not considered sensitive because they are not representative of sensitive viewing areas (as identified above). Therefore, in coordination with CEC staff, the Richard J. Donovan Correctional Facility and the San Diego County Correctional Facility Complex were not identified as a sensitive viewing area in relation to the project.

Field surveys also focused on the visibility of the project site from the adjacent recreation and open space areas, including the Otay Mountain Truck Trail, the Proposed OVRP Expansion and the Kuebler Ranch.

As shown on Figure 5.13-2, Aerial of Project Vicinity, the Otay Mountain Wilderness Area extends as close as approximately 1.5 miles east of the PPEC site; however, no designated trails or camping areas are near this location. Further, field surveys concluded that in general, limited accessibility exists along the westernmost boundary of the Otay Mountain Wilderness Area. The Otay Mountain Truck Trail (see KOP#1 in Figure 5.13-3, Key Observation Points), provides access into the Otay Mountain Wilderness Area east of the project site. This trail is used by hikers, mountain bikers, off-road vehicles, and the U.S. Border Patrol. Because this road is

curvilinear, views of the project site are available only at certain points and elevations (see Figure 5.13-1, Sensitive Visual Resources VSOI Map). Recreational users are more likely to access the Wilderness Area from this trail than from any other area along the western boundary, therefore, views to the project site from the Otay Mountain Truck Trail can be considered as representative views from the wilderness area because of the quantity of likely viewers.

In the southeast portion of the proposed OVRP Expansion (see KOP#2 in Figure 5.13-3, Key Observation Points), an OHV track area maintains mid-ground unobstructed views to the PPEC site. Further, a proposed trail corridor extending southeast from the OVRP through Johnson Canyon would commence near northwestern boundary of the project site. The view from this OHV area (see Figure 5.13-6, Character Photos of Project Area) in the southeastern portion of the proposed OVRP Expansion represents an important recreational user view to the project site.

Kuebler Ranch (see KOP#3 in Figure 5.13-2, Aerial of Project Vicinity) is located approximately 0.4 mile north of the PPEC site and maintains mid-ground views to the project site. For the most part, diners sitting out on the restaurant's two patios have direct/unobstructed views of the project site; however, in certain locations, there is some shielding from several large trees adjacent to the restaurant. It is important to note that restaurant is currently closed due to grading and other construction activities in the vicinity, however, it is proposed to re-open in spring of 2011.

Traffic flow was examined for Alta Road because it serves as the primary access route for employees and visitors of the two prison facilities in the area: Richard J. Donovan Correctional Facility and San Diego County Correctional Facility Complex located northeast and north, respectively, of the project site. According to the San Diego Association of Government (SANDAG), the intersection of Alta and Otay Mesa Roads (approximately 0.5 miles south of the project site), has an approximate average weekly traffic volume of 5,900 vehicles.

Character photos of the areas surrounding the PPEC site (see Figures 5.13-4 through 5.13-9, Character Photos of Project Area) are intended to show sensitive viewing areas and sensitive visual resources within the surrounding project area. Some of the locations depicted in the character photos do not have views to the project, but they have been included to help identify potentially sensitive visual resources within the region. These photos also help the reader understand the general visual character of the surrounding area and the land uses within the region.

The results of the viewshed analysis and the field photo survey indicated that most sensitive viewing areas within the VSOI were from recreation areas to the northwest and east, Kuebler Ranch to the north, and along Alta Road (commuters traveling to the Richard J. Donovan Correctional Facility and San Diego County Correctional Facility Complex).

Key Observation Points

Key observation points (KOPs) are viewing locations chosen to be representative of the most visually sensitive areas that would view the project. Inventory of KOPs included three components: 1) identification and photo-documentation of viewing areas and potential KOPs; 2) classification of visual sensitivity of KOPs; and 3) description of PPEC visibility from KOPs. KOPs were identified based on review of available land use data, field inspection, and discussion

with CEC staff responsible for the evaluation of visual resources, as well as local agency staff from entities in the project vicinity.

Visibility determines how the project would be seen from a particular viewing area or KOP. An inventory of project visibility documented the distance from the viewpoint to the project. Perception of details (e.g., form, line, color, and texture) diminishes with increasing distance. The distance zones were: foreground (0 to 0.5 mile), mid-ground (0.5 to 5.0 miles), and background (beyond five miles). In addition, the inventory evaluated if views were open, partially screened (filtered), or screened (e.g., presence of hillside terrain, vegetation, and/or buildings).

Four sensitive viewing areas were identified as representative of viewers who would be most susceptible to visual impact within their viewshed as a result of PPEC. A brief characterization of these areas follows:

Sensitive Viewing Area and Key Observation Point No. 1

This image was taken from the Otay Mountain Truck Trail, approximately 0.6 miles from the eastern side of the project site (Figure 5.13-10, Existing View of Project from KOP #1; see also Figures 5.13-1, Sensitive Visual Resources VSOI Map, and 5.13-3, Key Observation Points, for KOP location). The Otay Mountain Truck Trail was chosen as a KOP because it has an elevated viewing position, has various locations with unobstructed/direct views to the project site and can be considered as maintaining “a representative view from the Otay Mountain Wilderness area” due to access and quantity of viewers. This view represents one of the recreational views to the project with the greatest potential for impacts. This view has a moderate/low viewing duration of the project due to the curvilinear path of the trail as well as the topography in the area that allows only certain points and elevations along the trail to have views of the project site. Further, in general, recreationists are more focused on the activity they are participating in rather than the adjacent scenery.

Although the topography may obstruct some views of the project, the proposed facility will, in large part, be clearly visible from this location. The project site, in the absence of on-site perimeter screening, would be visible due to the elevated position of this location in relation to the project area, as well as the open viewing conditions to the project site.

It should be noted that the viewshed has already been modified with the presence of the Richard J. Donovan Correctional Facility, industrial complexes, OMGP and transmission corridor and associated structures in the vicinity. The ESIL from this area can be characterized as low and the scenic quality as Class C

Sensitive Viewing Area and Key Observation Point No. 2

This image was taken from a proposed expansion area of the OVRP near an OHV track/trail, approximately 1 mile from the northwestern perimeter of the PPEC site (Figure 5.13-12, Existing View of Project from KOP #2; see also Figures 5.13-1, Sensitive Visual Resources VSOI Map, and 5.13-3, Aerial of Project Vicinity with Key Observation Points, for KOP location). KOP#2 was chosen as a representative KOP because it is the closest recreational area and has largely unobstructed/direct/foreground views to the project site. This view represents “worst-case”

recreational views to the project site. No information about the current or expected usage of this area is available.

Although topography may obstruct some views to the project site, in the absence of new off-site vegetation screening and on-site perimeter screening, because of the elevated position of this location in relation to the PPEC site, the proposed facility would be highly visible from this location.

It should be noted that the viewshed has already been modified with the presence of the OMGP, large transmission corridor and associated structures in the immediate vicinity. However, given the open viewing conditions into the undeveloped Johnson Canyon, the ESIL from this area can be characterized as low/moderate and the scenic quality as Class B.

Sensitive Viewing Area and Key Observation Point No. 3

This image was taken from the Kuebler Ranch located approximately 0.4 miles north of the PPEC site. (Figure 5.13-14, Existing View of Project from KOP #3; see also Figures 5.13-1, Sensitive Visual Resources VSOI Map, and 5.13-3, Aerial of Project Vicinity with Key Observation Points, for KOP location). Kuebler Ranch was selected as a KOP because of the proximity to the project site, the elevated viewing position and the direct/unobstructed views of the project site from this location. In addition, the location is considered an important recreational view from the diners at the restaurant. As of December 2010, the restaurant was non-operational due to the construction activities occurring in the surrounding area; however, the restaurant will likely re-open in spring of 2011.

Although existing vegetation at the restaurant may obstruct some views to the project site, in the absence of new off-site vegetation screening and on-site perimeter screening, because of the elevated position of this location in relation to the PPEC site, the proposed facility would be highly visible from this location.

It should be noted that the viewshed has already been modified in a large part by the presence of the Richard J. Donovan Correctional Facility, the OMGP, the large transmission corridor and associated structures in the immediate vicinity. Therefore the ESIL from this area can be characterized as low and the scenic quality as Class C.

Sensitive Viewing Area and Key Observation Point No. 4

This image was taken at the intersection of Alta Road and Paseo de la Fuente directly across the street from the proposed project site. (Figure 5.13-16, Existing View of Project from KOP #4; see also Figures 5.13-1, Sensitive Visual Resources VSOI Map, and 5.13-3, Key Observation Points, for KOP location). This location was selected as a KOP because it is the most unobstructed/direct foreground view of the project while traveling on Alta Road. This view represents the “worst-case” traveler/commuter view. The majority of the travelers along Alta Road are employees of the Richard J. Donovan Correctional Facility and the San Diego County Correctional Facility Complex both located within one mile of the project site. Project lighting added to the area will be visible from this KOP location. This view is consistent with short viewing durations (i.e., from travelers focusing on the road and the relatively short time period in which travelers are passing the project site). The project, in the absence of on-site perimeter

screening, would be highly visible due to its proximity to Alta Road and the height of project features (100-foot-tall stacks).

It should be noted that the viewshed has already been modified in a large part by the presence of the Richard J. Donovan Correctional Facility, the OMGP, the large transmission corridor and associated structures in the immediate vicinity. Therefore the ESIL from this area can be characterized as low and the scenic quality as Class C.

5.13.2 Environmental Consequences

5.13.2.1 Significance Criteria and Assessment Methodology

The visual resources study included the assessment of impacts on scenic attractiveness and sensitive viewing areas within the VSOI related to the construction, operation, maintenance, and long-term presence of PPEC.

The consideration of significant visual impacts was based predominantly on the requirements of CEQA. Appendix G of the CEQA Guidelines states that potential impacts to visual resources would be significant if a proposed project results in:

- A substantial adverse effect on a scenic vista.
- Substantial damage of scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings;
- Substantial degradation of the existing visual character or quality of the site and its surroundings; or
- Creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Additionally, the CEC requires that consideration be given to the following:

- Compliance with LORS.
- Level of viewshed alteration and ground form manipulation.
- Regional effects to visual resources.
- Magnitude of impact related to light and glare.
- Magnitude of back-light scatter during nighttime hours.
- Level of sunlight reduction or increase in shadows in areas used by the public.

The matrix presented in Table 5.13-1 aids in the assessment of visual impact significance. Using Table 5.13-1, the findings of visual impact susceptibility and visual impact severity in Tables 5.13-2 and 5.13-3, respectively, are combined to determine overall project impact.

TABLE 5.13-1
VISUAL IMPACT SIGNIFICANCE MATRIX – SENSITIVE VIEWING AREAS

Visual Impact Severity	High Susceptibility	Moderate Susceptibility	Low susceptibility
High Impact Severity	Significant	Less Than Significant	Less Than Significant
Moderate Impact Severity	Less Than Significant	Less Than Significant	Less Than Significant
Low Impact Severity	Less Than Significant	Less Than Significant	No Impact

5.13.2.2 Visual Simulations

A comparison of existing views with visual simulations, depicted in Figures 5.13-10 through 5.13-17, aided in verifying project-related impacts. The simulations serve to present a representative sample of the existing landscape settings contained within the VSOI, as well as an illustration of how PPEC may look from specific sensitive viewing locations.

To obtain a high degree of visual accuracy in the visual simulations, computer-aided design (CAD) equipment, GIS, and the use of global positioning systems (GPS) allow for life-size computer modeling. This translates to using real-world scale and coordinates to locate facilities, other site data, and the actual camera locations corresponding to three-dimensional (3D) simulation viewpoints.

A GIS site map is imported as a background reference, and CAD drawings of proposed facilities are placed on top of the GIS project site map. GPS locations of sensitive viewing areas are also input into GIS. The GPS camera positioning information is then referenced to the 3D data set. The 3D massing models of both the proposed plant and all ancillary facilities are generated in real-world coordinates, scaled, and input into GIS.

An electronic camera lens matches the camera lens that was actually used in the field. A Nikon 6.1-megapixel digital camera set to take a 19.2-millimeter (mm) lens image was used consistently throughout the process. This lens setting selection allows for viewing of the computer-generated model in the same way that PPEC would be viewed in the field.

Next, the photograph is imported into the 3D database and loaded as an environment within which the view of the 3D model is generated. To generate the correct view relative to the actual photograph, the electronic camera is placed at a location (within the computer) from where the photograph was taken. From there, the 3D wire frame model is displayed on top of the existing photo so that proper alignment, scale, angle, and distance can be verified. When all lines of the wire frame model exactly match the photograph, the camera target position is confirmed.

It should be noted that final simulations were created using CAD files obtained from Kiewit Power Engineers (the project engineer) to remain consistent with general PPEC development engineering. Once field KOP location photos and coordinates for photo locations were gathered, these were incorporated into the final simulation production. The processes described above relate to general simulation construction and are included for reader understanding of the procedures.

The visual simulations developed for the project have been designed to be viewed 10 inches from the viewer's eye. This distance will portray the most realistic life-size image from the location of the sensitive viewing area.

Assessing Visual Impact Susceptibility on Sensitive Viewing Areas

Visual impact susceptibility is the degree to which a sensitive viewpoint would be impacted by changes in its viewshed. Following the identification of the four most sensitive viewing areas within the VSOL, the degree of impact on each area was determined through the analysis of the following components:

- Existing Scenic Integrity Level – The degree of existing disturbance within the natural setting.
- Viewer Sensitivity – All identified viewers with foreground views were considered high-sensitivity viewers.
- Project Visibility – An assessment of the viewing angle, potential screening, lighting conditions, and time of day.
- Viewer Exposure – An assessment of the distance from the proposed project, number of viewers, and duration of views.

Table 5.13-2 illustrates the level of visual impact susceptibility anticipated for each sensitive viewing area based on an evaluation of the factors described above.

**TABLE 5.13-2
VISUAL IMPACT SUSCEPTIBILITY – SENSITIVE VIEWING AREAS**

Viewing Areas	Existing Scenic Integrity Level	Viewer Sensitivity	Project Visibility	Viewer Exposure	Visual Impact Susceptibility
Sensitive Viewing Area and KOP No. 1 (Figure 5.13-10, see also Figures 5.13-1 and 5.13-3 for KOP location) – From Otay Mountain Truck Trail approximately 0.6 miles northeast of the project site.	Low	Low	Moderate	Low	Low
Sensitive Viewing Area and KOP No. 2 (Figure 5.13-12, see also Figures 5.13-1 and 5.13-3 for KOP location) – From the proposed Otay Valley Regional Park Expansion approximately 1 mile northwest of the project site.	Low/Moderate	Moderate	Moderate	Low	Low
Sensitive Viewing Area and KOP No. 3 (Figure 5.13-14, see also Figures 5.13-1 and 5.13-3 for KOP location) – From Kuebler Ranch looking southwest to the project site.	Low	Low	Moderate	Low	Low
Sensitive Viewing Area and KOP No. 4 (Figure 5.13-16, see also Figures 5.13-1 and 5.13-3 for KOP location) – From the intersection of Alta Road and Paseo de la Fuente.	Low	Low	High	Low	Low

KOP=Key Observation Point

Assessing Visual Impact Severity on Sensitive Viewers

The severity of the impact (high to low) on sensitive viewers was assigned a severity level proportionate to the amount of anticipated change to the landscape created within a specific viewshed. The primary criteria for project impacts include:

- The degree of project contrast (e.g., form, line, color, and texture)
- Scale and spatial dominance
- Extent of view blockage/screening (topographic and/or vegetative) and night lighting

Table 5.13-3 describes levels designated to each variable above as they relate to the degree of visual impact severity anticipated on representative sensitive viewing areas.

**TABLE 5.13-3
VISUAL IMPACT SEVERITY – SENSITIVE VIEWING AREAS**

Viewing Areas	Form Contrast	Line Contrast	Color Contrast	Texture Contrast	Scale Dominance	Spatial Dominance	View Blockage/Night Lighting	Visual Impact Severity
Sensitive Viewing Area and KOP No. 1 (Figure 5.13-10, see also Figures 5.13-1 and 5.13-3 for KOP location) – From Otay Mountain Truck Trail approximately 0.6 miles northeast of the project site.	Low	Moderate	Low	Low	Moderate	Low	Low	Low
Sensitive Viewing Area and KOP No. 2 (Figure 5.13-12, see also Figures 5.13-1 and 5.13-3 for KOP location) – From the proposed Otay Valley Regional Park Expansion approximately 1 mile northwest of the project site.	Moderate	Moderate	Low	Moderate	Moderate	Low	Moderate	Moderate
Sensitive Viewing Area and KOP No. 3 (Figure 5.13-14, see also Figures 5.13-1 and 5.13-3 for KOP location) – From the Kuebler Ranch looking southwest to the project site	Low	Moderate	Low	Low/ Moderate	Moderate	Moderate	Low/	Low
Sensitive Viewing Area and KOP No. 4 (Figure 5.13-16, see also Figures 5.13-1 and 5.13-2 for KOP location) – From the intersection of Alta Road and Paseo de La Fuente	Moderate	Moderate	Low	Low/ Moderate	High	High	Low	Low

The final evaluation conducted in the impact assessment was the assignment of potential impact levels on representative sensitive viewing areas by combining viewer susceptibility and impact severity levels at key and characteristic viewing locations.

5.13.2.3 Visual Impact Assessment Results

This section discusses the affected visual resources for PPEC. A description of the potential impacts on scenic attractiveness and on sensitive viewers is provided. A detailed description of PPEC is in Section 3.0. Table 5.13-4, provided below, includes design characteristics of some of the more prominent project features (due to height/size) related to the visual impact assessment.

Following are some of the more important and/or larger project features related to the visual impact assessment:

- Three (3) 100-foot-tall exhaust stacks.
- Three (3) variable bleed vents with silencers proposed at 53-feet-tall.
- Three (3) 35-foot-tall hot selective catalytic reduction (SCR).
- Twelve (12) 22-foot-tall wet cooling components.
- Nine (9) 15-foot-tall dry cooling components. Visible plumes are not likely to occur and are more fully discussed below, as well as in Section 5.2, Air Quality.
- A 32-foot-tall raw water storage tank and a 30-foot-tall demineralized water storage tank.
- Up to five (5) transmission poles extending from the western boundary of the PPEC site will allow for project interconnection to the existing 230kV switchyard east of the PPEC site (see Figure 5.13-2, Aerial of Project Vicinity).
- Adjacent 6.00 acre temporary laydown area.
- Security gate access to the project site.

**TABLE 5.13-4
MAJOR COMPONENT DESIGN CHARACTERISTICS**

Component	Height (feet)	Size (feet)	Materials/Color
Combustion Turbines Generators (3)	40	130 x 30	Steel; grey
Intercooler Heat Exchangers (3)	13.5	44 x 15	Steel; grey
Exhaust Stacks (3)	100	14.5 DIA	Steel; grey
Variable Bleed Vents, with Silencers (3)	53	12 wide	Steel; grey
Hot Selective Catalytic Reduction	35	70 x 25	Steel; grey
Wet Cooling Components (12)	22	26 x 14	Galvanized steel; grey
Dry Cooling Components (9)	15	47 x 14	Galvanized steel; grey
Raw Water Storage Tank	30	54 DIA	Steel; grey
Demineralized Water Storage Tank	30	38 DIA	Steel; grey

Component	Height (feet)	Size (feet)	Materials/Color
Wastewater Collection Tank	24	26 DIA	Steel; grey
Gas Compressor Enclosure (3)	15	50 x 17	Steel; grey
Transmission Line Steel Pole, In Line	90	--	Galvanized steel, grey

Direct Impacts

The following sections describe direct impacts related to PPEC.

Visual Impact Significance on Scenic Attractiveness

Although topographic features within the VSOI, namely the Otay Mountains, mesas to the north of the project site and the Johnson and O'Neal canyon slopes, largely block mid-ground and distant views to PPEC from the north, and east, given the height of project structures (100 feet), PPEC would be highly visible from a few adjacent locations (within 0.5 mile) in the area. Given that, in large part, the immediately adjacent locations are park uses, potentially significant impacts on scenic attractiveness would be expected. However, because of the degree of existing modification and landscape degradation in the project vicinity, e.g., OMGP 590 MW natural gas fired plant on 15 acres, 230kV transmission system corridor to the east, SR-125 and SR-905, Richard J. Donovan Correctional Facility, San Diego County Correctional Facility Complex (inclusive of the George Bailey and East Mesa Detention Facilities), three residences to the west, and Brown Field Airport, potential impacts to the area's scenic attractiveness are reduced.

Landscapes inventoried within the VSOI are classified as retaining primarily low to moderate ESILs. Although PPEC would change the existing character of the project site, significant impacts to the scenic attractiveness of the overall VSOI identified for the project are not anticipated. Therefore, less than significant impacts would occur relative to existing scenic attractiveness within the project VSOI.

Visual Impact Significance on Sensitive Viewing Areas

Tables 5.13-2, 5.13-3, and 5.13-5 illustrate the visual impact susceptibility, visual impact severity, and resultant visual impact significance on sensitive viewing areas, respectively. It is anticipated that this recreational area has very low usage. Recreational views along the Otay Mountain Truck Trail within the Otay Mesa Wilderness Area are not anticipated to be impacted by the proposed project. As mentioned previously, existing views from park users are currently degraded due to the exiting development that surrounds this area (namely the OMGP).

Additionally, according to the Otay Valley Regional Park Concept Plan, through a collaborative effort between the County of San Diego and the Cities of Chula Vista and San Diego, the existing OVRP and park trail (located just east of I-805) is proposed for expansion. The proposed expansion would extend the OVRP and trail eastward through the Otay River Valley, to the land surrounding both the Lower and Upper Otay Lakes (see Figure 5.13-2, Aerial of Project Vicinity).

The PPEC project would be consistent with the adjacent industrial land uses (OMGP, transmission system, airport, and detention facilities) within the area. The construction, operation, maintenance, and long-term presence of PPEC would not create potentially significant visual impacts to identified sensitive viewers within the region (see Table 5.13-5 below).

**TABLE 5.13-5
VISUAL IMPACT SIGNIFICANCE – SENSITIVE VIEWING AREAS**

Viewing Areas	Visual Impact Susceptibility	Visual Impact Severity	Visual Impact Significance
Sensitive Viewing Area and KOP No. 1 (Figure 5.13-10 and 5.13-11) – From Otay Mountain Truck Trail approximately 0.6 miles northeast of the project site.	Low	Low	No Impact
Sensitive Viewing Area and KOP No. 2 (Figure 5.13-12 and 5.13-13) – From the proposed Otay Valley Regional Park Expansion approximately 1 mile northwest of the project site.	Moderate	Moderate	Less than Significant
Sensitive Viewing Area and KOP No. 3 (Figure 5.13-14 and 5.13-15) – From the Kuebler Ranch looking southwest to the project site.	Low	Low	Less than Significant
Sensitive Viewing Area and KOP No. 4 (Figure 5.13-16 and 5.13-17) – From the intersection of Alta Road and Paseo de la Fuente.	Low	Low	Less than Significant

KOP=Key Observation Point

5.13.2.4 Transmission Line

PPEC will construct one new transmission line that will connect the facility to the existing 230kV switchyard. There are two proposed transmission line routes.

Route A consists of an overhead power line extending 1,700 feet east along Calzada de la Fuente and then routed underground for approximately 400 feet into the existing 230 kV Otay Mesa switchyard (total length of Route A would be approximately 2,100 feet). Route B would begin as an overhead power line from the eastern edge of the project site, run south approximately 550 feet, then turn east along the northern border of APN 648-040-48 and APN 648-040-43 for 1,400 feet, and finally turn north for approximately 700 feet into the Otay Mesa switchyard (total length of Route B would be approximately 2,650 feet). Structures and conductors associated with these new lines will be selected to minimize sun reflectivity. Minimal transmission lines will be necessary for this project and because both proposed routes run on either side of the OMGP, views of the transmission line are subordinate to the existing plant. Therefore, no visual impacts associated with the transmission line are anticipated.

5.13.2.5 Lighting and Glare

To prevent glint/glare impacts from PPEC, project components, structures, and walls will be painted in natural shades of beige, brown, and green to the extent feasible. Less-than-significant impacts associated with glint/glare are anticipated.

Adequate lighting will be provided for operation, safety, and security around PPEC, specifically in the following areas:

- Interior of buildings, such as office, control, and maintenance areas

- Building exterior entrances
- Platforms and walkways
- Transformer and switchyard areas
- Plant roads
- Parking areas
- Entrance gate
- Cooling system equipment

The lighting system is intended to provide personnel with illumination for safe plant operation under normal conditions, means of egress under emergency conditions, and emergency lighting to perform manual operations during a power outage of the normal power source. The proposed lighting system would be designed and installed to meet Occupational Safety and Health Administration (OSHA) minimum standards, to offer maximum illumination of operating work areas while minimizing offsite illumination. Lighting will be directed on site to avoid backscatter and will be shielded from public view to the extent practicable. Switches or motion detectors will control lighting in areas not normally accessed as part of routine operation or to ensure safety of personnel and property so as not to add needless light pollution to the project area.

Under certain conditions during construction-related activities, slightly higher amounts of backscatter lighting may be apparent to viewers immediately adjacent to the project site. This condition is due to providing for safety of construction workers during this phase of the project. Upon completion of construction, lighting at the project site will be substantially reduced and less noticeable to surrounding viewers; therefore, visual impacts related to lighting for construction activities would be temporary and are considered less than significant.

Currently, little nighttime lighting is produced within the VSOI. Nighttime lighting consists mainly of safety lighting for the OMGP, and security lighting for the San Diego County Correctional Facility Complex and Richard J. Donovan Correctional Facility. Although PPEC may slightly add to existing lighting, the project would not significantly increase the existing night lighting in the project area. Overall, the addition of PPEC is not anticipated to create significant night lighting impacts from backscatter light and/or night lighting that a nearby viewer may experience when looking toward the site.

FAA Advisory Circular 70/7460-1K requires that all airspace obstructions over 200 feet in height or in close proximity to an airfield have obstruction lighting. The tallest structure proposed on the project site is 100 feet high (exhaust stacks). Further, because the transmission poles are below the 200-foot limit and the closest airfield to the project site is Brown Field Airport (approximately three miles west of the site), the structures on site and the project transmission poles will not require obstruction lighting. Lighting design for PPEC would be consistent with CEC lighting requirements and local LORS.

5.13.2.6 Visible Plumes

Based on proposed technology for the PPEC facility, potential visible plumes may rarely occur from the cooling system and/or exhaust stack. The cooling system selected for PPEC is a partial dry-cooling system (PDCS), which uses a hybrid of evaporative and dry-cooling technologies to minimize water use. During lower ambient temperatures, the evaporative system ramps down and most of the process cooling is provided via dry cooling; therefore, the likelihood of a visible moisture plume is greatly reduced. Additionally, because PPEC is a peaking plant it is less likely to be operating during lower ambient temperatures (i.e., the turbines will run more frequently in summer than the winter). Table 5.13-6 presents the heat and mass balance of the PDCS at various ambient temperatures. Turbine vendor data/GE exhaust stack parameters and meteorological data are provided in Section 5.2 and Appendix G.

**TABLE 5.13-6
HEAT AND MASS BALANCE OF WSAC**

Case Description	Winter	Spring/Fall	Summer
Ambient Temperature (°F)	59	70	80
Relative Humidity, %	60	57	41
Heat Rejection, per turbine (MMBtu/hr)	33.8	44.9	55.0
Exhaust Temperature (°F)	85	85	85
Percent Dry Cooling	71%	63%	56%
Moisture content (mass fraction water)	0.0078	0.0065	0.0064
Exhaust mass flow rate (MMlb/hr/turbine)	4.6	4.6	4.6

WSAC = wet surface air cooler; °F = degrees Fahrenheit; MMBtu/hr = million British thermal units per hour; MMlb/hr = million pounds per hour

The turbine stack exhaust temperatures are very high because PPEC uses simple-cycle turbines. Exhaust temperatures range from approximately 750 - 850 degrees Fahrenheit, which minimizes the formation of visible moisture plumes. The frequency of plumes from project stacks is anticipated to be low if not virtually non-existent. Because of the very low frequency expected, plume dimensions cannot be measured.

5.13.2.7 Construction-Related Impacts

The construction period is expected to last approximately 16 months. The average monthly and peak monthly workforce will be approximately 148 and 284, respectively, of construction craft people, supervisory, support, and construction management personnel on site during construction.

Mobile trailers or similar suitable facilities (e.g., modular offices) will be used as construction offices for owner, contractor, and subcontractor personnel. Construction parking areas will be within existing site boundaries of the designated temporary laydown area on the east side of the plant site. These areas will provide adequate parking space for construction personnel and visitors during construction. Areas within the temporary laydown areas will be used as off-load and staging areas (see Figure 3.3-1). These areas will be restored to pre-project status or better when construction is complete.

Impacts associated with the construction of PPEC and ancillary facilities may include impacts associated with fugitive dust plumes, night lighting, and presence of construction equipment. These impacts were considered temporary and insignificant.

Project site preparation includes site grading to accommodate the project on the existing landscape; however, major cuts and fills are not anticipated. Excavation work will consist of the removal, storage, and/or disposal of earth, sand, gravel, vegetation, organic matter, loose rock, and debris to the lines and grades necessary for construction. See also Section 3.6.11, Earthwork, for more information relating to earthwork.

During the PPEC construction period, construction activities and construction materials, equipment, trucks, temporary structures, and vehicles on the project site and construction laydown area would be visible to surrounding areas; however, not more so than identified for project structures, once construction of the facility has been completed. Because the PPEC site and laydown areas are located directly adjacent to an existing generating plant, such construction activities at the project site and within the laydown areas will not contrast significantly with the existing natural character of the project site. In addition, construction activities would be conducted within a 16-month period; therefore, visual impacts are considered temporary and, thus, less than significant.

Impacts associated with the construction of PPEC and ancillary facilities may include impacts associated with fugitive dust, night lighting, and presence of construction equipment. Construction activities will be conducted in a manner that minimizes (visible) dust emissions. These impacts were considered temporary and less than significant.

5.13.3 Cumulative Impacts

Section 5.18, Cumulative Impacts and specifically Table 5.18-1 describe in detail the potential reasonably foreseeable future projects under consideration. As described in Section 5.18, it is important to note however, that the current economic downturn has generally slowed economic growth, and has resulted in delayed development. As a result, while the identified pending projects have active permitting status, the actual project permitting and/or construction timeframes occur further in the future than previously planned, and it is possible that fewer projects than identified will be developed during the PPEC construction timeframe.

The areas within the immediate project vicinity are generally characterized by large-scale industrial developments as well as open space park lands and canyons with development lining the ridgelines. Additionally, as discussed in Section 5.9, the proposed PPEC is located within an area designated for heavy industrial uses, and would be consistent with the industrial nature of the surrounding similarly assigned Specific Plan heavy industrial land use designations.

The VSOI has already experienced a significant amount of cultural modifications. The modification to the proposed detention facilities are adjacent to large-scale detention complexes; the proposed aggregate quarry has not yet been approved and is similar in use to the Rock Mountain Quarry currently existing in the Otay Valley (see Figure 5.13-2, Aerial of Project Vicinity); the interim wholesale nursery is not likely to require grading or the construction of a structure; and the proposed PPEC is a power facility located adjacent to a similar industrial use

(OMGP). Additionally, the topography in the area provides shielding of the areas with higher degrees of development from areas of open space.

When considered together, these projects are not anticipated to create cumulatively significant visual impacts within the VSOI. No significant cumulative impacts have been identified as a result of the construction, operation, maintenance, or long-term presence of PPEC.

5.13.4 Mitigation Measures and Conditions of Certification

Inherently, PPEC is like most new electrical power plant projects, in that some degree of visual impacts mitigation is required.

PPEC includes features that reduce visual impacts from the construction and operation of the facility. Additionally, the location of the project inherently provides mitigation based upon the visual character of the immediate viewshed. Therefore, impacts to visual resources are expected to be less than significant. However, the following suggested visual resources mitigation measures and proposed conditions of certification are expected to further reduce visual impacts to less-than-significant levels:

Visual Resources-1: The project owner shall prepare a Lighting Plan for Compliance Project Manager (CPM) and CEC visual resources staff review and approval. The Lighting Plan shall include the following components:

- External lighting shall incorporate commercially available fixture hoods and shielding that direct light downward or toward the area to be illuminated.
- Light fixtures shall not cause obtrusive spill light beyond the project boundary.
- All lighting shall be of minimum necessary brightness consistent with operational safety and security.
- Direct lighting shall not illuminate the nighttime sky.

Verification: The project owner shall submit the proposed Lighting Plan to the CPM for review and approval at least 60 days prior project ground disturbance.

Visual Resources-2: To reduce potential glint/glare from PPEC, the project owner shall use nonreflective or matted steel and metal for project structures and components.

Verification: The project owner shall prepare and submit a surface treatment plan to the CPM prior to project ground disturbance showing that the project design uses nonreflective or matted steel or metal where feasible and note any instances where such metals or steel are not planned to be used for structures and components.

With implementation of Mitigation Measures Visual Resources-1 and Visual Resources-2, the project's less than significant impacts may be further reduced.

Therefore, with incorporation of the above-listed mitigation measures and further coordination with the County of San Diego, visual resources impacts identified for the proposed PPEC project would be reduced to less than significant.

5.13.5 Laws, Ordinances, Regulations, and Standards

Applicable visual resources LORS are summarized in Table 5.13-7 and described below. Table 5.13-7 provides a list of local LORS, as well as the AFC section number in which the project's conformance/applicability to these LORS is discussed during construction and operation phases. Agency contacts are provided in Table 5.13-8.

5.13.5.1 Federal and State

PPEC is located on property under the jurisdiction of the County of San Diego; however, BLM public lands (Otay Mountain Wilderness Area) have mid-ground views to the project site. Therefore, visual resource management (VRM) guidelines were considered for this project. VRM methodology categorizes impacts based upon changes to scenic quality, sensitivity levels, and distance zones. These are all discussed in detail in Section 5.13.1. Overall, PPEC is consistent with all federal aesthetic LORS.

State-designated scenic highways or highways eligible for designation were not identified within the VSOI. Further, no other area managed by the state for which PPEC would be required to adhere to aesthetic LORS was identified. Therefore, compliance with state aesthetic LORS is inapplicable.

5.13.5.2 Local

PPEC is located on unincorporated land under the jurisdiction of the County of San Diego (County). The San Diego County General Plan has a lighting requirement outlined relating to the preservation of scenic resources. These local LORS, and the project's conformance to these LORS, are summarized in Table 5.13-7.

PPEC design elements have been incorporated into the project description that will be effective in minimizing visual impacts (see Facility Description, Section 3.0). Based on the inventory of scenic attractiveness and ESILs, areas retaining high scenic value were not identified within the VSOI. Therefore, compliance with local aesthetic LORS will be maintained.

The project is located within the area regulated by the *East Otay Mesa Specific Plan (Plan)*. As described in detail below in Table 5.13-7, in order to comply with the Plan, PPEC would need to incorporate the landscaping development standards from the Plan into project design. Were it not for the CEC's jurisdiction under the Warren-Alquist Act, a landscaping plan would be developed in concert with the County during the site plan approval process. An initial application containing conceptual site plan is expected to be followed by a Landscape Documentation Package (pursuant to Sections 86.701 through 86.729 of the San Diego County Code). In lieu of this process, PPEC will work with both the County and the CEC to develop a landscaping plan in compliance with the Plan as the PPEC moves throughout regulatory review. It should be noted that the construction and operation of the PPEC is not expected to significantly impact visual resources.

Additionally, the development and implementation of a landscaping plan is not expected to reduce impacts to visual resources, rather landscaping is being proposed in order to comply with all LORS and is not require for mitigation under CEQA. Impacts, albeit less than significant, from PPEC are related to the scale and dominance of the proposed project. Implementation of a landscaping plan is not anticipated to reduce those less than significant impacts.

**TABLE 5.13-7
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS**

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Federal					
	Visual Resource Manual	To manage public lands in a manner that will protect the quality of the scenic (visual) values of these lands.	Section 5.13.2.3 Section 5.13.2.3 Section 5.13.4	Bureau of Land Management (BLM)	1
	Federal Aviation Administration Guidelines for marking and lighting structures Advisory Circular 70/7460-1K	Requires the Federal Aviation Administration standards for marking and lighting structures, such as buildings, chimneys, antenna towers, cooling towers, storage tanks, supporting structures of overhead wires, etc.	Section 5.13.2.3	Federal Aviation Administration	N/A
State					
	Application for Certification Requirements	Rules of Practice and Procedure and Power Plant Site Certification Regulations, Appendix B.	Section 5.13	California Energy Commission	2
	California Environmental Quality Act (CEQA) (Public Resources Code, Sections 21000-21177 and California Code of Regulations, Sections 15000-15387)	Provides a framework for addressing impacts to visual resources and requires the mitigation of all impacts to less-than-significant levels.	Section 5.13.2.2 Table 5.13-2 Section 5.13.2.2 Table 5.13-3 Section 5.13.2.3 Table 5.13-5	California Energy Commission	2
	State Scenic Highway Requirements	Requirements are applicable to state-designated scenic highways. There are none in the project area.	Section 5.13.1.4.3	California Department of Transportation (Caltrans)	N/A
Local					
	County of San Diego General Plan	LU-2.7 Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.	Section 5.13.2.3 Section 5.13.4	County of San Diego Planning Department	3
	County of San Diego General Plan	LU-6.7 Require projects with open space to design contiguous open space areas that protect wildlife habitat and corridors; preserve scenic vistas and areas; and connect with existing or planned recreational opportunities.	Section 5.13.2.3	County of San Diego Planning Department	3
	County of San Diego General Plan	LU-12.4 Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas.	Section 5.13.4	County of San Diego Planning Department	3

SECTION 5.0

ENVIRONMENTAL INFORMATION

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
County of San Diego General Plan		COS-11.1 Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.	Section 5.13.2.1	County of San Diego Planning Department	3
County of San Diego General Plan		COS-11.2 Promote the connection of regionally significant natural features, designated historic landmarks, and points of regional historic, visual, and cultural interest via designated scenic corridors, such as scenic highways and regional trails.	Section 5.13.2.1	County of San Diego Planning Department	3
County of San Diego General Plan		COS-11.3 Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following: <ul style="list-style-type: none"> ■ Creative site planning ■ Integration of natural features into the project ■ Appropriate scale, materials, and design to complement the surrounding natural landscape ■ Minimal disturbance of topography ■ Clustering of development so as to preserve a balance of open space vistas, natural features, and community character. ■ Creation of contiguous open space networks 	Section 5.13.2 Section 5.13.2.3	County of San Diego Planning Department	3
County of San Diego General Plan		COS-11.5 Coordinate with the California Public Utilities Commission, power companies, and other public agencies to avoid siting energy generation, transmission facilities, and other public improvements in locations that impact visually sensitive areas, whenever feasible. Require the design of public improvements within visually sensitive areas to blend into the landscape.	Section 5.13.2.3	County of San Diego Planning Department	3
County of San Diego General Plan		COS-11.7 Require new development to place utilities underground and encourage “undergrounding” in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.	Section 5.13.2.3	County of San Diego Planning Department	3
County of San Diego General Plan		COS-12.2 Require development to preserve the physical features by being located down and away from ridgelines so that structures are not silhouetted against the sky.	Section 5.13.2.3	County of San Diego Planning Department	3

SECTION 5.0

ENVIRONMENTAL INFORMATION

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
County of San Diego General Plan		COS-13.1 Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.	Section 5.13.2.3	County of San Diego Planning Department	3
County of San Diego General Plan		Lighting that is unshielded or so directed as to focus the beams directly upon adjacent residential property is prohibited at all times.	Section 5.13.2.3	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Policy UD-1 Encourage the preservation and enhancement of visually prominent land forms and areas of special scenic beauty, particularly the San Ysidro Mountain foothills and valley walls of Johnson and O'Neal Canyons.	Section 5.13.2.3	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Policy UD-5 Promote high quality design of buildings and landscaping on private property throughout East Otay Mesa to create a strong identity and image of high quality urban design for the area.	Section 5.13.5.2	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		General Lighting: All lighting shall comply with the County Light Pollution Code (County Code § 59.101 et seq.)	Section 5.13.2.5	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Building Lighting: Building illumination and architectural lighting shall be indirect in character (no light source visible).	Section 5.13.4	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Lighting shall be directed away from areas designated as Conservation/Limited Use Area or permanent open space area and away from the Otay Valley Regional Park.	Section 5.13.2.5	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Building Setback Landscaping: On-site trees shall be small canopy size, planted in groupings of a minimum 11 trees per group and spaced every 100-feet or fraction thereof, or as directed by the local fire district, and shall be compatible with on-site landscaping of adjacent developed properties.	Section 5.13.4	County of San Diego Planning Department	3
East Otay Mesa Specific Plan		Screening: Groups of evergreen shrubs should be planted along property line setbacks to screen parking areas, storage and similar unattractive views. Side and rear yard setbacks should be planted with large-scale	Section 5.13.2.5	County of San Diego Planning Department	3

5.13.6 Involved Agencies and Agency Contacts

Table 5.13-8 below identifies involved agencies and their contact information.

**TABLE 5.13-8
AGENCY CONTACT LIST FOR LAWS, ORDINANCES, REGULATIONS,
AND STANDARDS**

Agency	Contact Information
Federal	
Bureau of Land Management Palm Springs South Coast Field Office 1201 Bird Center Drive Palm Springs CA 92262	Donna Chirello Public Contact Representative (760) 833-7100
State	
California Energy Commission Environmental Protection Office Siting, Transmission, Environmental Protection Division 1516 9th Street, MS 40 Sacramento, CA 95814-5504	Melissa Mourkas Planner II (916) 654-5107
Local	
County of San Diego Department of Planning and Land Use 5201 Ruffin Rd, Suite B San Diego, CA	Daniella Rosenberg Environmental Planner III (858) 694-3829

5.13.7 Permits Required and Permit Schedule

No permits are required pertaining to visual resources.

5.13.8 References

Bureau of Land Management. 1986. Visual Resource Management Inventory and Contrast Rating System.

Bureau of Land Management. Website:

http://www.blm.gov/ca/pa/wilderness/wa/areas/otay_mountain.html. Accessed December 2010.

California Department of Corrections and Rehabilitation. Website:

<http://www.cdcr.ca.gov/Visitors/Facilities/>. Accessed December, 2010.

California Department of Transportation Website – California Scenic Highway System: List of Eligible and Officially Designated Routes.

California Department of Transportation, District 11. State Route-11 Transportation Concept Summary. Adopted September 2008.

California Department of Transportation, District 11. State Route 11 and the Otay Mesa Port of Entry Draft Tier II Environmental Impact Report/Environmental Impact Statement. November 2010.

California Energy Commission, Systems Assessment and Facilities Siting Division, Environmental Protection Office, personal correspondence. 2010.
<http://www.parks.ca.gov/pages/1324/files/April%2009%20CRTC%20CRHT%20report.pdf> Accessed March 1, 2010

City of Chula Vista. City of Chula Vista General Plan. December 13, 2005

City of Chula Vista. City of Chula Vista Greenbelt Master Plan. September 16, 2003.

City of Chula Vista. Otay Valley Regional Park Concept Plan. Adopted 2001 SANDAG Average Daily Traffic Volumes. Website:
http://www.sandag.org/resources/demographics_and_other_data/transportation/adtv/index.asp. Accessed January 2011.

City of San Diego. City of San Diego General Plan. Adopted March 10, 2008

County of San Diego Department of Parks and Recreation. Otay Valley Regional Park Design Standards & Guidelines. October 2005.

County of San Diego. County of San Diego General Plan. Amended December 10, 2003

County of San Diego. East Otay Mesa Specific Plan. Amended September 15, 2010

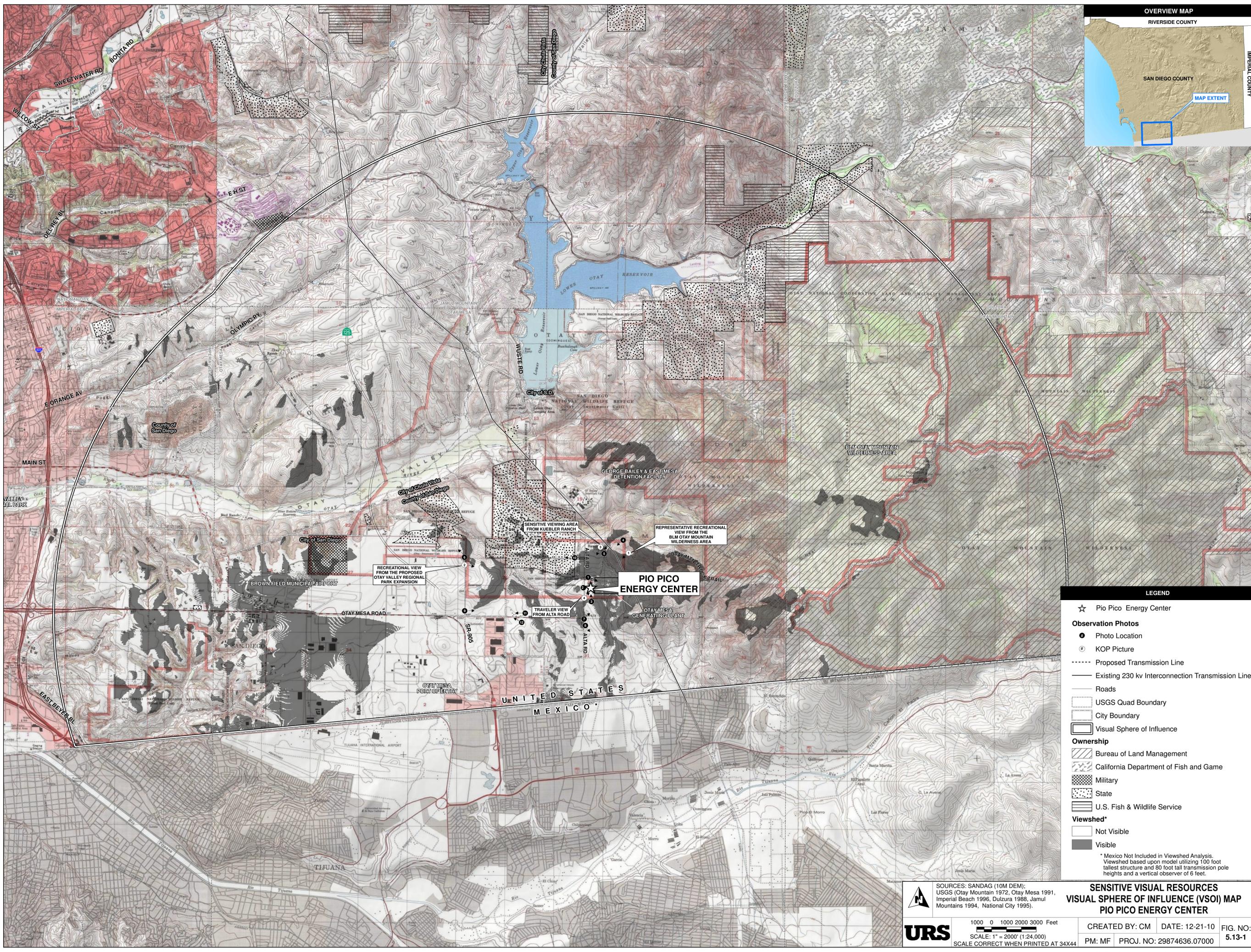
Federal Highway Administration (FHWA). 1981.

KSDM Brown Field Municipal Airport San Diego, California USA. Website:
<http://www.airnav.com/airport/KSDM>. Accessed December, 2010.

San Diego County Juvenile Halls. Website: http://www.co.san-diego.ca.us/probation/juvenile_halls.html. Accessed December, 2010

San Diego County Regional Airport Authority. Airport Land Use Compatibility Plan Brown Field San Diego, California. Amended October 2004.

San Diego County Sheriff's Department. Website:
<http://www.sdsheeriff.net/detentionfacilities.html>. Accessed December, 2010.



LEGEND

- ☆ Pio Pico Energy Center
- Observation Photos**
- Photo Location
- ⊙ KOP Picture
- Proposed Transmission Line
- Existing 230 kv Interconnection Transmission Line
- Roads
- USGS Quad Boundary
- City Boundary
- Visual Sphere of Influence
- Ownership**
- ▨ Bureau of Land Management
- ▨ California Department of Fish and Game
- ▨ Military
- ▨ State
- ▨ U.S. Fish & Wildlife Service
- Viewshed***
- Not Visible
- ▨ Visible

* Mexico Not Included in Viewshed Analysis. Viewshed based upon model utilizing 100 foot tallest structure and 80 foot tall transmission pole heights and a vertical observer of 6 feet.

SOURCES: SANDAG (10M DEM); USGS (Otay Mountain 1972, Otay Mesa 1991, Imperial Beach 1996, Dulzura 1988, Jamul Mountains 1994, National City 1995).

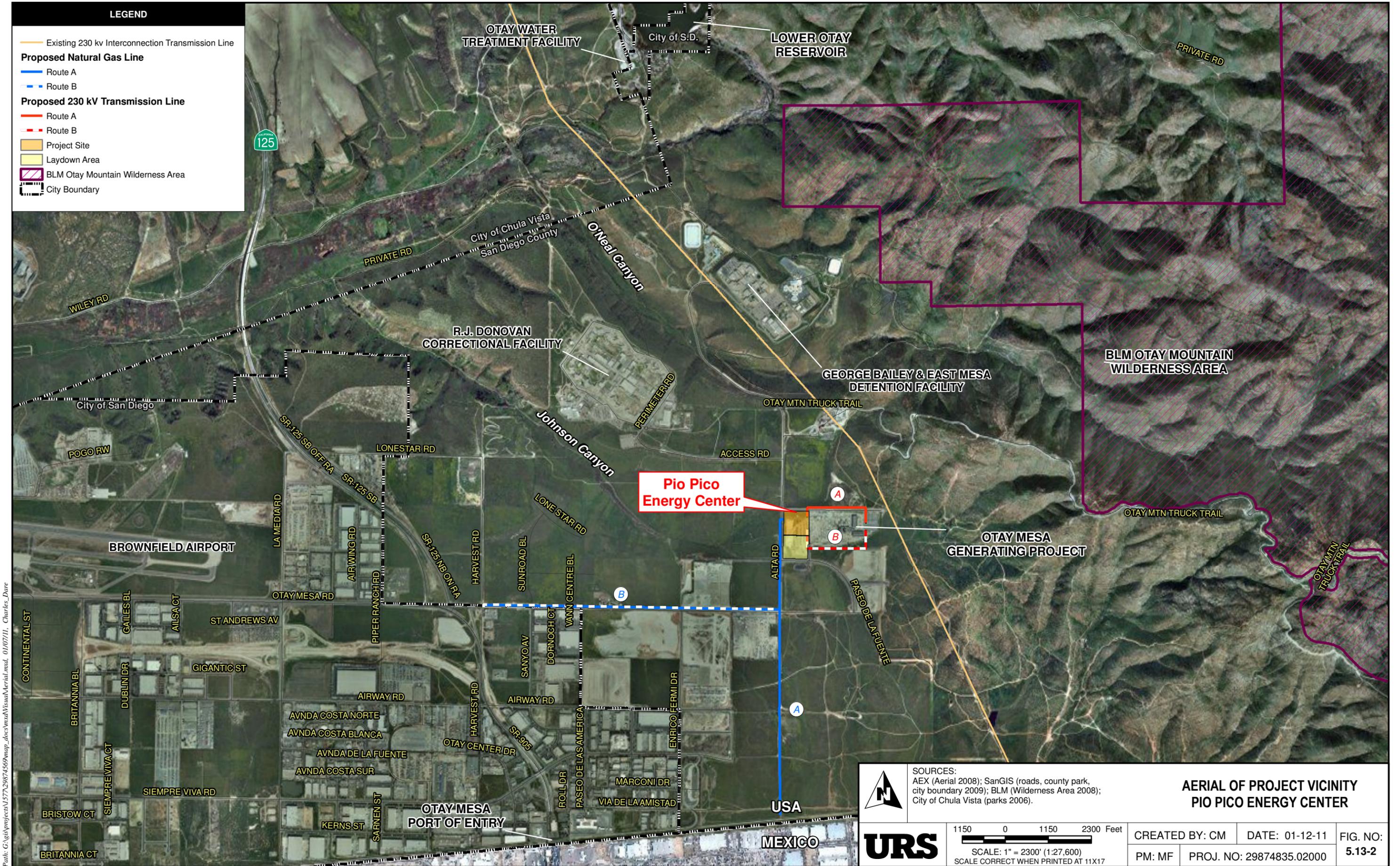
SENSITIVE VISUAL RESOURCES VISUAL SPHERE OF INFLUENCE (VSOI) MAP PIO PICO ENERGY CENTER

1000 0 1000 2000 3000 Feet
 SCALE: 1" = 2000' (1:24,000)
 SCALE CORRECT WHEN PRINTED AT 34X44

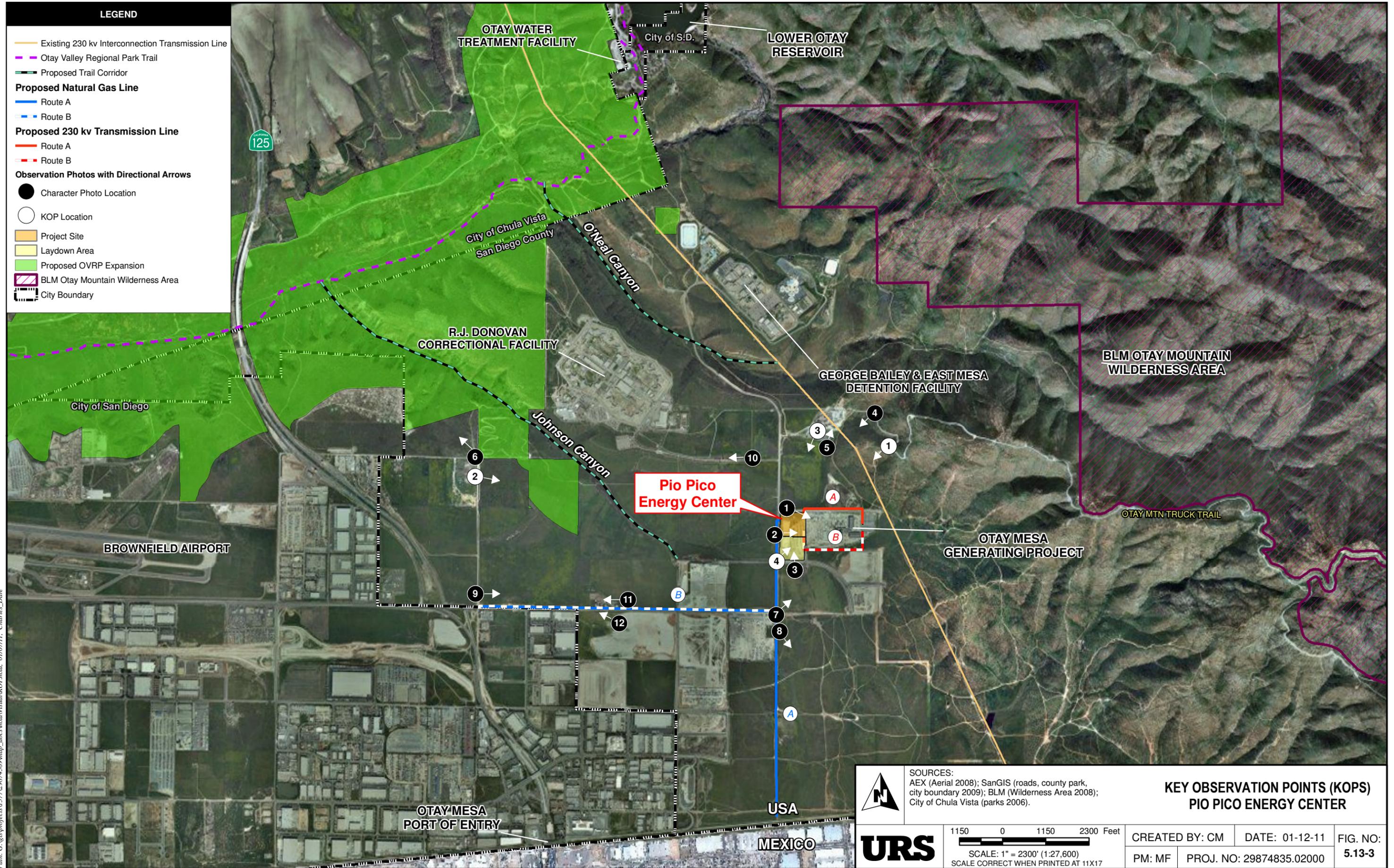
CREATED BY: CM DATE: 12-21-10 FIG. NO: 5.13-1
 PM: MF PROJ. NO: 29874636.07000

URS

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LEGEND

- Existing 230 kv Interconnection Transmission Line
- - - Otay Valley Regional Park Trail
- - - Proposed Trail Corridor
- Proposed Natural Gas Line**
- Route A
- - - Route B
- Proposed 230 kv Transmission Line**
- Route A
- - - Route B
- Observation Photos with Directional Arrows**
- Character Photo Location
- KOP Location
- Project Site
- Laydown Area
- Proposed OVRP Expansion
- BLM Otay Mountain Wilderness Area
- City Boundary



SOURCES:
 AEX (Aerial 2008); SanGIS (roads, county park, city boundary 2009); BLM (Wilderness Area 2008); City of Chula Vista (parks 2006).



1150 0 1150 2300 Feet
 SCALE: 1" = 2300' (1:27,600)
 SCALE CORRECT WHEN PRINTED AT 11X17

**KEY OBSERVATION POINTS (KOPS)
 PIO PICO ENERGY CENTER**

CREATED BY: CM	DATE: 01-12-11	FIG. NO:
PM: MF	PROJ. NO: 29874835.02000	5.13-3



Photo Location 1: View of Otay Mesa Generating Project
(adjacent to the proposed project site)



Photo Location 2: View of the Proposed PPEC project site

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 1 OF 6)**



NO SCALE

CREATED BY: AH

DATE: 1-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-4



Photo Location 3: View of Otay Mesa Generating Project
(adjacent to project site)



Photo Location 4: View of Kuebler Ranch
(taken from the Otay Mountain Truck Trail approximately 0.6 miles north of the project site)

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 2 OF 6)**

URS

NO SCALE

CREATED BY: AH

DATE: 1-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874636.07000

5.13-5



Photo Location 5: View of the restaurant at Kuebler Ranch
(approximately 0.4 miles north of project site)



Photo Location 6: View of OHV users at the proposed Otay Valley Regional Park Expansion
(approximately 1 mile northeast of project site)

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 3 OF 6)**

URS

NO SCALE

CREATED BY: AH

DATE: 1-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-6



Photo Location 7: View of Project Site from Intersection of Alta Road and Otay Mesa Road (approximately 0.5 miles south of project site)



Photo Location 8: View of Tijuana and the International Border (approximately 2 miles south of project site)

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 4 OF 6)**

URS

NO SCALE

CREATED BY: AH

DATE: 1-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-7



Photo Location 9: View of Project Site from Harvest Road.
(shows typical character of vegetation in Otay Mesa region)



Photo Location 10: View of the entrance and access road to the Richard J. Donovan Correctional Facility
(located approximately 0.5 mile northwest of project site)

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 5 OF 6)**



NO SCALE

CREATED BY: AH

DATE: 1-6-10

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-8



Photo Location 11: View of Nearest Residence to Project Site
(approximately 1 mile west of project site)



Photo Location 12: View of Otay Mesa Road Facing West.

**CHARACTER PHOTOS OF PROJECT AREA
PIO PICO ENERGY CENTER
(FIGURE 6 OF 6)**

URS

NO SCALE

CREATED BY: AH

DATE: 11-6-10

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-9



KOP 1: Existing view from Otay Mountain Truck Trail looking southwest towards project site (approximately 0.6 miles northeast of project)

**EXISTING VIEW OF PROJECT FROM KOP #1
PIO PICO ENERGY CENTER**



NO SCALE

CREATED BY: AH

DATE: 01-06-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-10



KOP 1: Simulated view from Otay Mountain Truck Trail looking southwest towards project site (approximately 0.6 miles northeast of project). This photo is meant to be a representative view from the Otay Mountain Wilderness Area.

**SIMULATED VIEW OF PROJECT FROM KOP #1
PIO PICO ENERGY CENTER**



NO SCALE

CREATED BY: AH

DATE: 01-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-11



KOP 2: Existing view from off-highway vehicle track area at the Proposed Otay Valley Regional Park Expansion looking southeast toward the project site.

**EXISTING VIEW OF PROJECT FROM KOP #2
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-06-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-12



KOP 2: Simulated view from off-highway vehicle track area at the Proposed Otay Valley Regional Park Expansion looking southeast toward project site. This photo is meant to represent “worst case” views from recreational park users.

**SIMULATED VIEW OF PROJECT FROM KOP #2
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-13



KOP 3: Existing view from Kuebler Ranch, looking southwest toward project site.

**EXISTING VIEW OF PROJECT FROM KOP #3
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-06-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-14



KOP 3: Simulated view from Kuebler Ranch, looking southwest toward project site. This photo is meant to represent the view from diners at the restaurant.

**SIMULATED VIEW OF PROJECT FROM KOP #3
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-15



KOP 4: Existing view for northbound travelers on Alta Road (commuters to Richard J. Donovan Correction Facility and East Mesa Detention Center), looking northwest toward project site.

**EXISTING VIEW OF PROJECT FROM KOP #4
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-06-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-16



KOP 4: Simulated view for northbound travelers on Alta Road (commuters to Richard J. Donovan Correction Facility and East Mesa Detention Center), looking northwest toward project site. This photo is meant to represent the “worst-case” traveler /commuter view from Alta Road.

**SIMULATED VIEW OF PROJECT FROM KOP #4
PIO PICO ENERGY CENTER**

URS

NO SCALE

CREATED BY: AH

DATE: 01-6-11

FIG. NO:

PM: MF

PROJ. NO: 29874835.02000

5.13-17

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **VISUAL** Project: Pio Pico Energy Center Technical Staff: _____
 Project Manager: _____ Docket: _____ Technical Senior: _____

Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Sections 5.13.1, 5.13.2, 5.13.3, and 5.13.4		
Appendix B (g) (6) (A)	Descriptions of the existing visual setting of the vicinity of the proposed project site and the proposed routes for any project-related linear facilities. Include:	Section 5.13.1		
Appendix B (g) (6) (A) (i)	Topographic maps at a scale of 1:24,000 that depict directions from which the project would be seen, the view areas most sensitive to the potential visual impacts of the project and the locations where photographs were taken for (g)(6)(C); and	Figures 5.13-1, 5.13-2, and 5.13-3		
Appendix B (g) (6) (A) (ii)	Description of the existing visual properties of the topography, vegetation, and any modifications to the landscape as a result of human activities including existing water vapor plumes, above-ground electrical transmission lines, and nighttime lighting levels in the project viewshed.	Section 5.13.1		
Appendix B (g) (6) (B)	An assessment of the visual quality of those areas that would be affected by the proposed project. For projects proposed to be located within the coastal zone, the assessment should also describe how the proposed project would be sited to protect views to and along the ocean and scenic coastal areas, would minimize the alteration of natural land forms, would be visually compatible with the character of surrounding areas.	Sections 5.13.1 and 5.13.2		
Appendix B (g) (6) (C)	In consultation with Energy Commission staff, identify: i) any designated scenic roadways or scenic corridors and any visually sensitive areas that would be affected by the proposed project, including recreational and residential areas; and	Figures 5.13-1 and 5.13-3 Section 5.13.1.4		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **VISUAL** Project: Pio Pico Energy Center Technical Staff: _____

Project Manager: _____ Docket: _____ Technical Senior: _____

	<p>ii) the locations of the key observation points to represent the most critical viewing locations from which to conduct detailed analyses of the visual impacts of the proposed project. Indicate the approximate number of people using each of these sensitive areas and the estimated number of residences with views of the project. Also identify any major public roadways and trails of local importance that would be visually impacted by the project and indicate the types of travelers (e.g., local residents, recreationists, workers, commuters, etc.) and the approximate number of vehicles, bicyclists, and/or hikers per day.</p>			
<p>Appendix B (g) (6) (D)</p>	<p>A table providing the dimensions (height, length, and width, or diameter) and proposed color(s), materials, finishes, patterns, and other proposed design characteristics of each major component visible from off the project site, including any project-related electrical transmission line and/or offsite aboveground pipelines and metering stations.</p>	<p>Section 5.13.2.3 Table 5.13-4</p>		
<p>Appendix B (g) (6) (E)</p>	<p>Provide the cooling tower and heat recovery steam generator (HRSG) exhaust design parameters that affect visible plume formation. For the cooling tower, data shall include heat rejection rate, exhaust temperature, exhaust mass flow rate, liquid to gas mass flow ratio, and, if the tower is plume-abated, moisture content (percent by weight) or plume-abated fogging curve(s). The parameters shall account for a range of ambient conditions (temperature and relative humidity) and proposed operating scenarios, such as duct firing and shutting down individual cells. For the heat recovery steam generator exhausts, data shall include moisture content (percent by weight), exhaust mass flow rate, and exhaust temperature. The parameters must correspond to full-load operating conditions at specified ambient conditions, and shall account for proposed operating scenarios, such as power augmentation (i.e., evaporative coolers, inlet foggers, or steam</p>	<p>Section 5.13.2.6 Section 5.2.4 Appendix G</p>		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **VISUAL** Project: Pio Pico Energy Center Technical Staff: _____

Project Manager: _____ Docket: _____ Technical Senior: _____

	injection) and duct firing, or proposed HRSG visible plume abatement, such as the use of an economizer bypass. For simple-cycle projects, provide analogous data for the exhaust stack(s).			
Appendix B (g) (6) (F)	Provide: i) full-page color photographic reproductions of the existing site, and ii) full-page color simulations of the proposed project at life-size scale when the picture is held 10 inches from the viewer's eyes, including any project-related electrical transmission lines, in the existing setting from each key observation point. If any landscaping is proposed to comply with zoning requirements or to mitigate visual impacts, include the landscaping in simulation(s) representing sensitive area views, depicting the landscaping five years after installation; and estimate the expected time until maturity is reached.	Figures 5.13-10 through 5.13-17		
Appendix B (g) (6) (G)	An assessment of the visual impacts of the project, including light, glare, and any modeling of visible plumes. Include a description of the method and identify any computer model used to assess the impacts. Provide an estimate of the expected frequency and dimensions (height, length, and width) of the visible cooling tower and/or exhaust stack plumes. Provide the supporting assumptions, meteorological data, parameters, and calculations used operating.	Section 5.13.2 Section 5.2.4 Appendix G		
Appendix B (g) (6) (H)	If any landscaping is proposed to reduce the visual impacts of the project, provide a conceptual landscaping plan at a 1:40 scale (1"=40'). Include information on the type of plant species proposed, their size, quantity, and spacing at planting, expected heights at 5 years and maturity, and expected growth rates.	Not Applicable: Landscaping is not proposed to reduce visual impacts (See also Discussion in Section 5.13.5.2		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **VISUAL** Project: Pio Pico Energy Center Technical Staff: _____

Project Manager: _____ Docket: _____ Technical Senior: _____

<p>Appendix B (i) (1) (A)</p>	<p>Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and</p>	<p>Section 5.13.5 Table 5.13-7</p>		
<p>Appendix B (i) (1) (B)</p>	<p>Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.</p>	<p>Section 5.13.7</p>		
<p>Appendix B (i) (2)</p>	<p>The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.</p>	<p>Section 5.13.6 Table 5.13-8</p>		
<p>Appendix B (i) (3)</p>	<p>A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.</p>	<p>Section 5.13.7</p>		