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## 6.11 VISUAL RESOURCES

This section presents an evaluation of the potential effects on scenic quality and sensitive viewers that would result from the construction, operation, and maintenance of the Project. Included is a discussion of the following major components:

- Compliance with CEC requirements and policies related to visual resources, as outlined in CEC Title 20 Appendix B, Siting Regulations, as well as Appendix G of the CEQA.
- Inventory of the landscape character (i.e., scenic attractiveness), existing scenic integrity levels (ESILs), and sensitive viewing areas within the visual sphere of influence (VSOI).
- Assessment of impacts on scenic attractiveness (in the absence of a viewer) and sensitive viewing areas.
- Compliance with applicable LORS associated with the management of visual resources.

The inventory and impact assessment methodology was conducted in compliance with guidelines established by the CEC relating to the inventory and assessment of visual impacts for inclusion in the Application for Certification (AFC) process (which is still appropriate for this SPPE). Further, the visual resources study was conducted using tenants of the U.S. Department of the Interior (DOI), BLM Visual Resource Management (VRM) Inventory and Contrast Rating System (BLM Manual 8410-1 1986). Additionally, in an effort to describe the existing visual setting, the USDA Forest Service Scenery Management System (USDA Handbook 701 1996) was used. Finally, Federal Highway Administration (FHWA) Visual Impact Assessment Methodology was used for this Project. Each methodology has been tailored, where appropriate, to meet the specific issues and regulatory requirements associated with this Project.

### 6.11.1 Affected Environment

This SPPE Application is for the construction and operation of the ECGS Unit 3 Repower Project. The Project will be owned and operated by IID (“the Applicant”) and will utilize the existing staffing at the ECGS. IID is an irrigation district established under Division 11 of the California water code, Sections 20500 et seq., that provides electrical power, non-potable water, and farm drainage services to the lower southeastern portion of the California desert, primarily in Imperial County. ECGS Unit 3 will continue to serve the growing electrical load demands of the region.

The Project consists of replacing the existing CE boiler with a GE Frame 7EA dry low NO<sub>x</sub> CTG and HRSG to supply steam to the existing Westinghouse STG. The generator output from the Unit 3 Repower Project will be stepped-up to transmission voltage and interconnected to the existing IID El Centro Switching Station also located within the ECGS Site.

Most of the existing ECGS systems will continue to be used with only minor modifications. Systems that will continue to be used include the STG, cooling system, water treatment system, water supply system, control room, fire system, ammonia system, site access during operations, and electrical El Centro Switching Station.

The Project consists of two major project areas:

- Project Site – new Unit 3 CTG/HRSBG, minor modifications to the existing Unit 3 cooling tower, replacement of the Unit 3 condenser, minor modifications to Unit 3 STG, the 92 kV electrical interconnection and modifications to the existing gas interconnection facilities.
- Temporary Construction Area – construction parking, construction trailers, and construction laydown area.

The total Project disturbance will be 12.5 acres, all of which is within the ECGS Site.

This section describes the inventory of visual resources within the Project vicinity. A description of the regional landscape setting, the anticipated VSOI of the Project, and the inventory methods and results are included.

#### *6.11.1.1 Regional Landscape Setting*

The Project Site is located within the ECGS Site at 485 East Villa Avenue, El Centro, California. The property is located near the intersection of East Villa Avenue and Dogwood Road in the northeast corner of the City of El Centro. The property is about 2.5 miles north of Interstate 8, which travels east to west through Imperial County, just south of the City of El Centro. Most of the landscape can be characterized as agricultural lands supported by irrigation systems that draw water from the Colorado River. Historically, the Imperial Valley has been a leading agricultural area in California stretching from the Salton Sea in the north to the International Border with Mexico in the south. The primary crops grown in the area are fruits, vegetables, wheat, and alfalfa.

The topography of the area around the City of El Centro including the Project Site is generally flat terrain, allowing for open, distant views of the mountain ranges predominantly to the west of the valley.

The Coyote Mountains, part of the Carrizo Badlands, are located approximately 35 miles to the west of the Project and are visible in the distance. There are large expanses of open area within Imperial County, with nearly 50% of the land undeveloped or under federal ownership. In general, the area is comprised of a patchwork of agricultural lands, industrial facilities, and semi-urban developed areas. The City of El Centro, located immediately southwest of the Project, is a population hub in the region with about 39,000 inhabitants, covering a 9.6 square mile area. Land uses within the City of El Centro range from industrial facilities to commercial, residential, and park areas. Along Main Street lies the original town settlement, while newer commercial development has spread out along Imperial Boulevard/Highway 86.

The predominant plant community within the Project study area can be classified as cultivated/ruderal, or those plants associated with agricultural practices. “Ruderal” refers to the type of vegetation that grows in response to human disturbance (along roadsides and in canal riparian/levee areas). Plant species include cheeseweed, shepherds purse, salt cedar, Bermuda grass, and other opportunistic plants. Rainfall, roughly 3 inches annually, as well as the valley’s location in the desert, supports drought-tolerant vegetation including desert scrub, creosote bush, salt bush, and tamarisk. The Salton Sea, the largest inland body of water in California, lies about 25 miles north of the Project and the Alamo River flows from the Salton Sea, approximately 7 miles east of the Project Site.

The predominant cultural modification within the Project study area is the existing ECGS with its associated exhaust stacks and transmission lines. South of the Project Site, along Commercial Avenue, is an industrial area as well as a railroad corridor which travels through the industrial district and continues west of the Project. Transmission lines also traverse the landscape within the area.

### *6.11.1.2 Visual Sphere of Influence*

The inventory of visual resources is conducted within a specified geographical VSOI surrounding the Project Site. This is the area within which potential impacts from the long-term presence of the Project could range from significant to no impact. Levels of potential impact on sensitive viewing areas are 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 the viewshed.
- Impact severity – The degree of change to the landscape created within a specific viewshed.

The VSOI was determined to be a 5-mile radius from the Project Site (Figure 6.11-1, Visual Sphere of Influence) and was determined by using USDA methodology. The distance established for the VSOI was refined based on information gathered during a site visit to the ECGS and a review of the Project description regarding the potential visibility of major Project components (e.g., exhaust stack, etc.) from sensitive viewing areas. Once the VSOI was determined and the Project description refined to include assumed heights and locations of facilities, a viewshed analysis was conducted.

More specifically, the viewshed analysis was developed using USGS 7.5-Minute Digital Elevation Models (DEMs). DEMs in their inherent Spatial Data Transfer Standard (SDTS) format were converted to USGS DEM grid files and imported into an ArcGIS 9.1 GIS using the Spatial Analyst extension. Once in GIS, the DEMs were “mosaicked.” From the combined DEM, a triangulated irregular network (TIN) was created. This TIN was used to run viewshed analyses in relation to the Project Site components in UTM, Zone 11, spatial measurement units of Meters, Clarke 1866 Spheroid, NAD 83 (UTM 83). For this Project, the centroid of the Project Site was used (at 6 feet above existing grade) to run an “existing” viewshed map. Next, a centroid of the Project Site’s tallest structure, a CTG stack at a height of 100 feet was input and the viewshed model was re-run.

The factors used to conduct this analysis included the following:

- The viewer is 6 feet tall
- Stack height is 100 feet tall

Views of the Project discussed in this visual analysis could occur at varying distances and within varying viewing environments defined below:

- Foreground – 0 to 0.5 mile
- Middleground – 0.5 to 3 miles
- Background – 3 to 5 miles

These distances are based upon those described in the USDA Handbook. Using the 5-mile distance limit, the VSOI boundary was further refined to account for local viewing conditions, primarily developmental screening. Character photos of the areas surrounding the Project Site (shown in Figure 6.11-2A and Figure 6.11-2B, Character Photos – Areas Surrounding the Project) show the general landscape character and typical developmental and screening in the area. The results of the viewshed analysis indicated that most sensitive viewing areas within the VSOI were adjacent to the Project Site (see Figure 6.11-3, Visually Sensitive Areas, Photo Locations and Key Observation Points). The ECGS Site is relatively flat, with the exception of the existing ECGS, which includes a steam turbine building, three boilers, three stacks, and associated El Centro Switching Station transmission lines. Most of the development in the City of El Centro is located southwest of the Project and does not have a view of the Project Site because it is screened by existing development.

### *6.11.1.3 Visual Study Inventory Components*

The following sections describe the visual study inventory components used to assess potential impacts. Three components that were inventoried include (1) an evaluation of scenic attractiveness, (2) consideration of ESILs, and (3) the identification of sensitive viewing areas.

#### *Scenic Attractiveness*

When evaluating scenic attractiveness, both natural and man-made 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

In general, landscapes are characterized by three levels – 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 fairly unique. Class C areas have minimal diversity or interest where representative natural features have limited variation in form, line, color, or texture in the context of the surrounding region. Discordant cultural modifications (e.g., geothermal plants,

transmission lines, and pipelines) can be highly noticeable and can reduce the inherent value of the natural setting.

Scenic Attractiveness Classification Evaluation Forms are developed for areas within the VSOI. The values underlined in the scenic attractiveness rating box on the forms illustrate the assigned values (H – high, M – moderate, L – low) for each natural feature (e.g., landform, vegetation, water, etc.) or negative/positive cultural modification. The combined value of these elements is used to determine in which class the landscape should be characterized. The VRM system is designed to separate the existing landscape and a project into their features and elements and to compare each part to the other to identify parts that are incompatible (BLM 1986). The outcome of this process is VRM classes, and the following is a summary of the VRM classes:

**Class I** – The objective of this class is to preserve the existing character of the landscape. Changes to the landscape character should not be evident.

**Class II** – The objective of this class is to retain the existing character of the landscape. Changes to the landscape character may attract slight attention but should be subordinate to the visual setting.

**Class III** – The objective of this class is to partially retain the existing character of the landscape. Changes to the landscape character may begin to attract attention but should not dominate the visual setting.

**Class IV** – The objective of this class is to allow for activities that modify the existing character of the landscape. Changes to the landscape character may attract attention and dominate the visual setting. However, these activities should minimize changes to the landscape where possible.

### *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. An inventory of the ESILs within the VSOI was conducted and varying cultural modifications were documented. Varying cultural modifications included, but is not limited to, the existing ECGS with associated exhaust stacks, transmission lines, and related industrial facilities. 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. Most areas within the VSOI were classified as retaining low existing scenic integrity.

### *Viewer Sensitivity and Sensitive Viewing Areas*

#### Viewer Sensitivity

While conducting this study, no attempt was made to model for varying levels of viewer concern of change within their landscape. Because of the difficulty in inventorying for every individual's sensitivity level, it was assumed that all viewers may have a high level of concern related to changes occurring in landscapes within the VSOI. A viewer's concern level may be associated with the following factors:

- Viewing location, orientation, and duration
- Activity in which the viewer is 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
- Inherent values related to scenic quality and familiarity within specific landscape settings

#### Sensitive Viewing Areas

Sensitive viewing areas are identified and inventoried within the defined VSOI. The identification of sensitive viewing areas within the VSOI is conducted through review of existing land use data, viewshed models, planning documents, agency consultation, and during field reviews.

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.

Visibility determines how the Project would be seen from a particular viewing area or key observation point (KOP). The inventory of Project visibility documented the distance from the viewpoint to the Project. Perception of details (i.e., form, line, color, and texture) diminishes with increasing distance. As defined previously, the distance zones were: foreground (0 to 0.5 mile), middleground (0.5 to 3 miles), and background (beyond 3 miles). In addition, the inventory evaluated if views were open, partially screened (filtered), or screened (i.e., presence of hillside terrain, vegetation, and/or buildings).

Other variables affecting potential visibility of a 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.

KOPs are viewing locations chosen to be representative of the most visually sensitive areas that would view the Project. The inventory of KOPs includes three components: (1) identification and photo documentation of viewing areas and potential KOPs, (2) classification of visual sensitivity of KOPs, and (3) description of Project Site visibility from KOPs. KOPs are identified based on review of available land use data, field inspection, and discussion with CEC staff responsible for the evaluation of visual resources.

#### *6.11.1.4 Inventory Results*

##### *Scenic Attractiveness*

The VSOI is composed primarily of Class C landscapes due to the absence of distinctive natural amenities (e.g., diverse and distinctive natural elements) and the high degree of human modifications present within the VSOI.

The VSOI for the Project study area was characterized at the C level for scenic attractiveness. No landscapes were considered to have distinctive characteristics as defined for Class A levels. Most landscapes within the VSOI were identified as Class C or as landscapes lacking significant natural amenities.

Within the VSOI, agricultural lands add to the general continuity of the visual setting. Checkerboard parcels of an assortment of crops add to the distinctiveness of the rural setting and openness of the landscape. Background views of the large mountain ranges in the west add variety within the background-viewing threshold.

Limited natural vegetation occurs in areas not used for agricultural purposes. Specifically, the Project Site is flanked by an uncultivated parcel to the west, an industrial area to the south, and cultivated agricultural parcels to the north and east.

Scenic Attractiveness Classification Evaluation Forms (Figures 6.11-4 through 6.11-6, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #1, #2, #3) were developed for areas within the VSOI. The values underlined in the scenic attractiveness rating box on the forms illustrate the assigned values (H – high, M – moderate, L – low) for each natural feature (e.g., landform, vegetation, water, etc.) or negative/positive cultural modification. The combined value of these elements is used to determine in which class the landscape should be characterized.

##### *Existing Scenic Integrity Levels*

Most landscapes inventoried within the VSOI can be classified as retaining primarily moderate or low ESILs. The predominant VSOI landscape is flat, agricultural land transected by irrigation canals, which retains a moderate scenic integrity when not marked with negative cultural modification. Within the VSOI lie three communities: The City of El Centro is the largest community, followed by Imperial to the north and the small community of Heber to the south. The areas retaining low ESIL are associated with these population centers. Specifically, low scenic integrity is created by the following cultural modifications: the County Airport and City of El Centro Wastewater Treatment Plant (WWTP), both located between the City of El Centro and Imperial. Other cultural modifications within the VSOI include Imperial Valley College to the northeast, a fairground just south of Imperial, and a cemetery at the western edge of the City of El Centro.

Areas immediately adjacent to the Project Site were identified as having low ESIL because of the existing ECGS, transmission lines, and nearby industrial area.

### *Sensitive Viewing Areas and Key Observation Points*

Three levels of viewer sensitivity (high, moderate, and low) were used to describe the sensitivity of viewers within the study area. High-sensitivity viewpoints identified in the study area included existing and future residences. Moderate-sensitivity viewers identified in the study area consisted of commercial areas, as well as existing and future primary (major arterial) roads. Low-sensitivity viewers include industrial areas and were not evaluated in detail for this study because these are considered to be a compatible use with the facility, and therefore would not result in significant visual impacts.

The highest level of Project visibility exists when the viewer is adjacent to the Project and there is no screening. Conversely, the lowest level of visibility exists when the viewer is located at greater distances from the Project and in partial to fully screened conditions.

The following is a representative list of sensitive viewing areas that were considered during the inventory:

- Residential areas (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs).
- Parks, recreation areas, wildlife areas, visitor's centers; or areas used for camping, picnicking, bicycling, or other recreational activities. While, some of these areas are present within the VSOI, none have a view of the Project Site because they are screened by existing development and generally at too great of a distance to view the Project.
- Travel routes – Major roads or highways used primarily by origin/destination travelers and designated scenic roads (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs).

During field surveys conducted within the VSOI by CEC and consultant staff, it was estimated that several detached homes and several mobile homes are nearby and may have views of the Project Site. The nearest residents to the Project Site are located approximately 0.5 mile to the west (on North 3<sup>rd</sup> Street), approximately 0.5 mile northeast of the Project Site (off East Villa Avenue), and distant residences roughly 1 mile northwest of the Project Site (on Cross Road). No roads within the VSOI are designated as federal, state, or county scenic highways or travel routes subject to aesthetic management goals or objectives.

Additionally, traffic flow was examined for major and secondary travel routes within the VSOI. ADT counts are approximately 35,000 vpd at the Dogwood Road on/off ramp of Interstate 8 (although there are no views of the Project from Interstate 8). Along secondary travel routes, average daily road counts are as follows:

- Dogwood Road (south of East Villa Avenue) – 10,549 vpd
- Dogwood Road (north of East Villa Avenue) – 7,758 vpd
- East Villa Avenue (west of Dogwood Road) – 1,155 vpd

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

**Sensitive Viewing Area and Key Observation Point #1**

KOP #1 (Figure 6.11-4, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #1) is from a residence roughly 2,600 feet to the west of the Project Site. The photo from this location is representative of residential views closest to the Project. Specifically, there are approximately 16 detached homes located along North 3<sup>rd</sup> Avenue which runs north/south along the western boundary of the an empty parcel owned by IID west of the ECGS Site. The back yards of these homes abut the fenced perimeter of this empty 58-acre property. While some residences are partially or completely screened from view by existing mature vegetation, this photo illustrates a typical unobscured view of the Project Site and therefore was chosen as a KOP. Residents at this location have a long viewing duration; however, the Project has low impact severity because it is easily absorbed by the cultural modification of the existing ECGS. The Project, in the absence of screening, would be visible because of the flat, open viewing conditions. The ESIL from this area can be characterized as Class C (Figure 6.11-4, Scenic Attractiveness Evaluation Form for Sensitive View and KOP#1).

**Sensitive Viewing Area and Key Observation Point #2**

KOP #2 (Figure 6.11-5, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #2) is from a relatively new development, “Victoria Ranch” off Cross Road at the northern edge of the City of El Centro (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs). The Project Site is located 1 mile southeast of these newer residences. The Project would be visible in the distance from the houses. This photo was taken at the edge of the residential development closest to the Project and acts as a KOP representing these residential viewers (Figure 6.11-3). View duration from this location is long yet there will be low overall impact severity because the Project is within a previously modified viewshed and is located at great distance from this KOP. The Project, in the absence of screening, would be moderately visible in the distance because of the flat, open viewing conditions. The ESIL from this area can be characterized as Class C (Figure 6.11-5, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #2).

**Sensitive Viewing Area and Key Observation Point #3**

KOP#3 (Figure 6.11-6, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #3) is from an assortment of mobile homes and detached residences which run along an irrigation canal and dirt road that are perpendicular to East Villa Avenue about 2,700 feet northeast of the ECGS Site. Only the upper portion of the CTG stack would be visible from most of these residences. This photo, taken where the houses meet the dirt access road and irrigation ditch, illustrates the most unobscured vista towards the Project Site. However, the existing ECGS Steam Turbine Building acts as a shield from the Project. Several of the residences along this corridor have mature vegetation that would help to screen their view of the Project Site. This KOP represents a high degree of visibility due to the flat, unobstructed terrain between it and the ECGS Site; however, there is a high degree of VAC because the new Project elements will easily blend into the existing ECGS. The ESIL from this area can be characterized as Class C because the viewshed has been modified with the presence of existing transmission lines and ECGS (Figure 6.11-6, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #3).

6.11.2 Environmental Consequences

*6.11.2.1 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 the Project.

The consideration of significant visual impacts was based predominantly on the requirements of CEQA, with input from the U.S. Forest Service, BLM, and the FHWA. Appendix G of the CEQA guidelines states that potential impacts to visual resources would be significant if a 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.
- Creation of a new source of substantial light or glare that would adversely affect daytime 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 backlight scatter during nighttime hours.
- Level of sunlight reduction or increase in shadows in areas used by the public.

Additionally, the matrix presented in Table 6.11-1, Visual Impact Significance Matrix – Sensitive Viewing Areas, aids in the assessment of visual impact significance.

**TABLE 6.11-1  
VISUAL IMPACT SIGNIFICANCE MATRIX – SENSITIVE VIEWING AREAS**

<b>Visual Impact Severity</b>	<b>High Susceptibility</b>	<b>Moderate Susceptibility</b>	<b>Low Susceptibility</b>
High Impact Severity	Significant	Less Than Significant	No Impact
Moderate Impact Severity	Less Than Significant	No Impact	No Impact
Low Impact Severity	No Impact	No Impact	No Impact

*Visual Simulations*

BLM methodology (in addition to others) recommends using visual simulations to help define visual impacts. A visual simulation is a comparison of an existing view (without the project in

place) with a visual simulation (the existing view with the project in place). Simulations help visualize potential aesthetic impacts. To more accurately assess a project's potential impacts, simulation KOPs focus on views from those potentially affected by a project. Although other angles or other views might show project features more clearly, visual assessment simulation KOPs select views from potentially affected viewers only.

To ensure a high degree of visual accuracy in the visual simulations, CAD equipment, GIS, and the use of global positioning systems (GPS) allow for life-size modeling with a computer. This translates to using real-world scale and coordinates to locate facilities, other site data, and the actual camera locations corresponding to 3D simulation viewpoints. The degree of accuracy of the CAD and GIS equipment is absolute; the accuracy for the GPS location data is to within approximately 1 meter, or 3.28084 feet.

A GIS site map is imported as a background reference. CAD drawings of proposed facilities are placed on top of the site map in GIS. 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 and scaled and input into GIS.

An electronic camera lens matches the camera lens that was actually used in the field. A 35-millimeter camera with a 50-millimeter lens was used consistently throughout the process. This lens selection allows for viewing the computer-generated model in the same way that the Project 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. This is supported by the GPS location. 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.

Final simulations were created to remain consistent with general Project engineering. Once field KOP location photos and GPS coordinates for photo locations were gathered in the field, the final simulation was produced. The processes described above relate to general simulation construction and are included for reader understanding of the procedures.

The visual simulations developed for this Project have been designed to be viewed 18 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*

Following the identification of the three most sensitive viewing areas within the VSOI, the degree of impact on each area was determined through the analysis of the following components:

- ESIL – The degree of existing disturbance within the natural setting.
- Viewer Sensitivity – All identified viewers were considered high or moderate 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 Project, number of viewers, and duration of views.

### *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 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 (i.e., topographic and/or vegetative) and night lighting

### *6.11.2.2 Visual Impact Assessment Results*

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 severity levels at key and characteristic viewing locations.

### *Visual Project Description*

This section discusses the affected visual resources for the Project. A description of the potential impacts on scenic attractiveness and on sensitive viewers is provided. A detailed description of the Project is in Section 2.0, Project and Facility Description. For a close-up visual illustration of the Project features refer to Figure 6.11-7, Existing and Simulated Close-up View from East of the ECGS Looking to the West, and Figure 6.11-8, Existing and Simulated Close-up View from West of the ECGS Looking to the East. The following Project description elements are some of the more important Project features related to the visual impact assessment:

- The Unit 3 Repower Project will be adjacent to the existing Unit 3 boiler on the west side of the existing ECGS Steam Turbine Building, and south of ECGS Unit 2.
- The ECGS Site consists of predominately disturbed native soil and is relatively flat at an elevation of approximately 50 feet below sea level.
- The Project CTG will interconnect with the existing 92-kV El Centro Switching Station via an overhead line at an approximate height of 60 to 80 feet. At the 92 kV side of the GSU transformer, an A-frame structure interconnect will route west then north around an existing maintenance building, route east within the north boundary of the ECGS, and make a final turn south towards the existing El Centro Switching Station. The new south traveling lines necessitate relocating a short stretch of existing lines to the east to provide a clear corridor and adequate line-to-line clearance. The 92-kV transmission line required for the electrical interconnection is contained within the existing ECGS Site.

- The HRSG exhaust stack will be approximately 15 feet in diameter, and will be 100 feet tall with associated appurtenances, such as sampling ports, exterior ladders, and side step platforms.
- The Project is not proposing any changes to existing site security which presently includes an 8-foot high chain link fence with three strands of barbwire on top around the perimeter of the ECGS Site.

### *Project Lighting*

The existing lighting system will be reused to the greatest extent possible and any new lighting of new Project equipment will be integrated into this existing system. Adequate lighting will be provided for operation, safety, and security around the Project, specifically in the following areas:

- Building interior, office, control equipment, and instrument areas
- Outdoor catwalks, stairs, and platforms
- Ground level areas around equipment
- Substation control shelter areas
- Roadway and parking areas
- Truck unloading area

Lighting on the Project Site will be limited to areas required for operations and safety, directed on-site to avoid backscatter, and shielded from public view to the extent practicable. The Project lighting system will be designed and installed to meet OSHA minimum standards. Lighting not required to be on during nighttime hours will be controlled with sensors or switches operated such that lighting will be on only when needed.

No FAA beacons will be required or installed at the Project Site. Illustrated in the visual simulations (Figure 6.11-7, Existing and Simulated Close-up View from East of the ECGS Looking to the West, and Figure 6.11-8, Existing and Simulated Close-up View from West of the ECGS Looking to the East), the new stack will have red striping to make it visible to aircraft. It should be noted that during construction-related activities, slightly higher amounts of backscatter lighting may be apparent to the casual observer. This condition is due to providing for safety of construction workers during this phase of the Project. Upon completion of construction, night lighting at the Project Site will be substantially reduced and less noticeable to the casual observer.

### *Direct Impacts*

The following sections describe direct impacts related to the Project.

### Visual Impact Significance on Scenic Attractiveness

The Project and related facilities would be visible from adjacent locations in the area. Given the lack of significant topographic features and degree of existing modification and landscape degradation (e.g., existing ECGS, exhaust stacks, and transmission lines) within the VSOI, no

significant impacts on scenic attractiveness would occur. Ground-disturbing activities at the Project Site would occur in areas previously disturbed or with degraded landscapes and within areas classified as retaining low distinctive or diverse natural amenities or lacking substantial positive cultural modifications. Therefore, no significant impacts would occur.

**Visual Impact Significance on Sensitive Viewing Areas**

Figures 6.11-9 through 6.11-11, Existing and Simulated Views, aided in verifying Project-related impacts. These simulations served to present a representative sample of the existing landscape settings contained within the VSOI, as well as an illustration of how the Project may look from specific key viewing locations. They also aided in assessing visual impact significance.

Tables 6.11-2 through 6.11-4, illustrate the visual impact susceptibility, visual impact severity, and resultant visual impact significance on sensitive viewing areas, respectively. As illustrated in Tables 6.11-2 through 6.11-4, no significant impacts will occur within the VSOI. Therefore, it is determined that no significant visual impacts will occur due to the construction, operation, maintenance, or long-term presence of the Project.

Table 6.11-2, Visual Impact Susceptibility – Sensitive Viewing Areas, illustrates the level of visual impact susceptibility anticipated for each sensitive viewing area based on an evaluation of the factors presented in the methodology section (Section 6.11.2.1, Significance Criteria and Assessment Methodology).

**TABLE 6.11-2  
VISUAL IMPACT SUSCEPTIBILITY – SENSITIVE VIEWING AREAS**

	<b>Existing Scenic Integrity Level</b>	<b>Viewer Sensitivity</b>	<b>Project Visibility</b>	<b>Viewer Exposure</b>	<b>Visual Impact Susceptibility</b>
Sensitive Viewing Area and KOP #1 (Figures 6.11-4 and 6.11-9) – from residences on North 3 <sup>rd</sup> Street	Low	High	Moderate/ Low	Moderate/ Low	Moderate
Sensitive Viewing Area and KOP #2 (Figures 6.11-5 and 6.11-10) – from newer residences off Cross Road	Low	High	Low	Low	Low
Sensitive Viewing Area and KOP #3 (Figures 6.11-6 and 6.11-11) – from residences off East Villa Avenue	Low	High	Low	Low	Low

Notes:  
KOP = key observation point

Table 6.11-3, Visual Impact Severity – Sensitive Viewing Areas, describes levels designated to each of the primary criteria for assessing Project impacts as they relate to the degree of visual impact severity anticipated on representative sensitive viewing areas.

**TABLE 6.11-3  
VISUAL IMPACT SEVERITY – SENSITIVE VIEWING AREAS**

	<b>Form Contrast</b>	<b>Line Contrast</b>	<b>Color Contrast</b>	<b>Texture Contrast</b>	<b>Scale Dominance</b>	<b>Spatial Dominance</b>	<b>View Blockage Night Lighting</b>	<b>Visual Impact Severity</b>
Sensitive Viewing Area and KOP #1 (Figures 6.11-4 and 6.11-9) – from residences on North 3 <sup>rd</sup> Street	Low	Low	Low	Low	Subordinate	Subordinate	Low	Low
Sensitive Viewing Area and KOP #2 (Figures 6.11-5 and 6.11-10) – from newer residences off Cross Road	Low	Low	Low	Low	Subordinate	Subordinate	Low	Low
Sensitive Viewing Area and KOP #3 (Figures 6.11-6 and 6.11-11) – from residences off East Villa Avenue	Low	Low	Low	Low	Subordinate	Subordinate	Low	Low

Notes:  
KOP = key observation point

Table 6.11-4, Visual Impact Significance – Sensitive Viewing Areas, describes the resultant visual impact significance on sensitive viewing areas after determining visual impact susceptibility and severity.

**TABLE 6.11-4  
VISUAL IMPACT SIGNIFICANCE – SENSITIVE VIEWING AREAS**

<b>Description</b>	<b>Visual Impact Susceptibility</b>	<b>Visual Impact Severity</b>	<b>Visual Impact Significance</b>	
Sensitive Viewing Area and KOP #1 (Figures 6.11-4 and 6.11-9) – from residences on North 3 <sup>rd</sup> Street	KOP #1 is from a residence off North 3 <sup>rd</sup> Street, approximately 1 block south of East Villa Avenue. KOP #1 is located approximately 0.5 mile east of the Project Site. It should be noted that existing vegetative screening has contributed to reduced visibility from some residences at this location. (Note that Figures 6.11-4 and 6.11-9 were taken from a residence with no vegetative screening. The Project would be visible from this location.)	Moderate	Low	No Impact
Sensitive Viewing Area and KOP #2 (Figures 6.11-5 and 6.11-10) – from newer residences off Cross Road	KOP #2 is from the edge of a relatively new residential development, “Victoria Ranch” off Cross Road. The Project Site is located approximately 1 mile to the southeast. The Project will be slightly visible in the distance across the agricultural field. The Project would be a subordinate feature from this location due to distance.	Moderate	Low	No Impact

**TABLE 6.11-4  
VISUAL IMPACT SIGNIFICANCE – SENSITIVE VIEWING AREAS**

	Description	Visual Impact Susceptibility	Visual Impact Severity	Visual Impact Significance
Sensitive Viewing Area and KOP #3 (Figures 6.11-6 and 6.11-11) – from residences off East Villa Avenue	KOP #3 is from residences off East Villa Avenue. The Project is located about 0.5 mile southwest of this area. The Project would be visible but with a high degree of visual absorption capacity because it will easily blend into the existing ECGS. It should be noted that existing vegetative screening has contributed to reduced visibility from some residences at this location.	Moderate	Low	No Impact

Notes:  
ECGS = El Centro Generating Station  
KOP = key observation point

Three sensitive viewing areas were identified as representative of viewers who would be most susceptible to visual impact within their viewshed as a result of the Project. A brief description of potential impacts for these areas is described below:

**Sensitive Viewing Area and Key Observation Point #1**

KOP #1 (Figure 6.11-4, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #1) is from a residence along North 3<sup>rd</sup> Street, approximately 0.5 mile west of the Project Site and located in the neighborhood closest to the Project Site (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs). Figure 6.11-9, Existing and Simulated Views from KOP #1: Residences on N. 3<sup>rd</sup> Street, shows the existing view and the proposed visual simulation from this location. It should be noted that existing vegetative screening has contributed to reduced visibility from some residences along North 3<sup>rd</sup> Street. However, the Project would be clearly visible from this location and adjacent residences.

Visual impact susceptibility from this location is characterized as Moderate (Table 6.11-2, Visual Impact Susceptibility – Sensitive Viewing Areas). Visual impact severity from this location is characterized as Low (Table 6.11-3, Visual Impact Severity – Sensitive Viewing Areas). Thereby, aesthetic impact significance from this location is classified as No Impact (Table 6.11-1, Visual Impact Significance Matrix – Sensitive Viewing Areas, and Table 6.11-4, Visual Impact Significance – Sensitive Viewing Areas).

**Sensitive Viewing Area and Key Observation Point #2**

KOP #2 (Figure 6.11-5, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #2) is from a relatively new development of residences, “Victoria Ranch” off Cross Road at the northern edge of El Centro (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs). Figure 6.11-10, Existing and Simulated Views from KOP #2: New Residences off Cross Road, shows the existing view and the proposed visual simulation from this location. It should be noted that the Project would only be slightly visible in the middle ground at a distance of nearly 1 mile away.

Visual impact susceptibility from this location is characterized as Low (Table 6.11-2, Visual Impact Susceptibility – Sensitive Viewing Areas). Visual impact severity from this location is characterized as Low (Table 6.11-3, Visual Impact Severity – Sensitive Viewing Areas).

Thereby, aesthetic impact significance from this location is classified as No Impact (Table 6.11-1, Visual Impact Significance Matrix – Sensitive Viewing Areas, and Table 6.11-4, Visual Impact Significance – Sensitive Viewing Areas).

### Sensitive Viewing Area and Key Observation Point #3

KOP #3 (Figure 6.11-6, Scenic Attractiveness Evaluation Form for Sensitive View and KOP #3) is from an assortment of mobile homes and detached residences which run along an irrigation ditch and dirt road that are perpendicular to East Villa Avenue about 0.5 mile northeast of the Project Site (Figure 6.11-3, Visually Sensitive Areas, Photo Locations and KOPs). Figure 6.11-11, Existing and Simulated Views from KOP #3: Residences off E. Villa Avenue, shows the existing view and the proposed visual simulation from this location. It should be noted that the Project would be visible in the middle ground for the residences that do not have mature trees and foliage to screen.

Visual impact susceptibility from this location is characterized as Low (Table 6.11-2, Visual Impact Susceptibility – Sensitive Viewing Areas). Visual impact severity from this location is characterized as Low (Table 6.11-3, Visual Impact Severity – Sensitive Viewing Areas). Thereby, aesthetic impact significance from this location is classified as No Impact (Table 6.11-1, Visual Impact Significance Matrix – Sensitive Viewing Areas, and Table 6.11-4, Visual Impact Significance – Sensitive Viewing Areas).

### Night Lighting and Light Glare

Direct impacts resulting from night lighting and glare would range from less than significant to no impact for all sensitive viewing areas. Currently, light glare is produced by the existing ECGS. Safety night lighting also exists currently in the area. The Project would not significantly increase the impact created by existing night lighting, backscatter light, or glare from viewers within the VSOI when looking toward the Project Site, based on existing lighting conditions.

### Visible Plumes

There will be negligible to no change in visible plumes associated with the Project. The frequency, visibility, and size of visible plumes from the Unit 3 Repower Project are dependent on the atmospheric conditions during viewing. The dry, hot climate of the Imperial Valley is beneficial to reducing visible plumes because it quickly evaporates the moisture that creates plumes. Visible plumes relating to the Project are considered negligible and will create no additional impact.

### Landscaping

No landscaping is planned for the Project; therefore, less than significant impact is associated with landscaping.

### *Indirect and Construction-Related Impacts*

Construction activities will be concentrated to the west side of the existing steam turbine building. There will be additional construction to the north and east all associated with constructing the overhead transmission line from the CTG GSU to the El Centro Switching

Station. All construction activities will be within the ECGS Site boundary. Project Site preparation includes removing existing foundations, miscellaneous debris, old steel transmission tower sections, and rerouting underground piping, along with surface grading.

The construction period is expected to last 20 months. The construction period is scheduled from September through April 2009. The daily work schedule may be adjusted to avoid the hottest hours of the day. The workforce is expected to average 73 construction workers, peaking to approximately 98 workers during months 10 and 11 of the Project schedule. The workforce is expected to commute primarily from within the El Centro area.

Major freeway access is approximately 2.5 miles south of the Project Site. Typically, deliveries of equipment and material to the Project Site or Temporary Construction Area will be made by truck. The Temporary Construction Area is located entirely within the existing ECGS Site.

Indirect impacts associated with the construction, operation, and long-term presence of the Project and ancillary facilities may include impacts associated with fugitive dust plumes, night lighting, and presence of construction equipment. These impacts are considered temporary and insignificant.

### 6.11.3 Cumulative Impacts

According to the City of El Centro Planning Department, several projects are proposed for the City of El Centro. Five specific projects are within 1 mile northwest of ECGS including the 8<sup>th</sup> Street Industrial Park, scheduled for development within the year of 2006 and four commercial projects (Imperial Plaza, Town Center, Wal-Mart, and Northgate), which are approved for development (City of El Centro Planning Department 2005). The Project Site is obscured from view from these proposed developments by the existing built environment. Additionally, two residential projects, Rancho Imperial and Victoria Ranch are proposed for Imperial County, and are within the affected environment of the Project. Victoria Ranch residences were selected as KOP#2 with the assistance of the CEC to help represent existing residential views as well as represent future similar developments proposed in the area. Refer to Appendix H, List of Proposed Projects, for further detail on proposed development. Figure H-1, Future Projects Within 6 Miles of the Project, shows the relationship of where these future projects will be located and where the Project is located.

The Project is consistent with the overall industrial nature of the landscape setting. The VSOI has already experienced a significant amount of cultural modifications, and the addition of any of these projects, when considered with the Project, will not significantly affect the visual setting within the VSOI. No significant cumulative impacts have been identified as a result of the construction, operation, maintenance, or long-term presence of the Project. The addition of the Project will not significantly alter the landscape or alter the visual setting and therefore will not create a substantial additive impact to the general character of the area.

### 6.11.4 Mitigation Measures

No mitigation measures are proposed because the Project is essentially replacing an existing boiler unit with a CTG/HRSG wholly within the ECGS Site. Additionally, design elements have been incorporated into the Project that will reduce potential Project visual impacts to below a level of significance. The design elements are described below.

### *Night Lighting and Light Glare*

To help minimize night lighting impacts to a level below significance, night lighting elements will be shielded and directed downward. Type, style, and placement of lighting features will also be designed to minimize aesthetic impacts. Colors and textures will be chosen to help minimize light glare in the area. It is assumed that proposed lighting elements will replace existing like elements and therefore, impacts relating to night lighting and light glare are considered less than significant.

### *Visible Plumes*

Visible plumes from the Unit 3 Repower Project are expected to be similar to plumes associated with the existing ECGS Unit 3. Therefore, impacts relating to visible plumes are considered less than significant.

### *Landscaping*

There is no landscaping associated with the Project; therefore, no cumulative impacts are expected. As a result, impacts relating to landscaping are considered less than significant.

### *Transmission Lines*

The Project CTG unit will interconnect with the existing 92-kV El Centro Switching Station via an overhead line at an approximate height of 50 to 80 feet. The new line will route around existing structures within the boundary of the ECGS Site. As the new line travel south on the eastern side of ECGS Site into the El Centro Switching Station, it necessitates relocating a short stretch of an existing 161-kV line to the east. Structures and conductors will be treated to reduce sun reflectivity. New and replacement transmission lines will parallel existing linear features and will be located within the minimum required distance to provide a clear corridor and adequate line-to-line clearance. Impacts relating to transmission lines are considered less than significant.

### *Laydown Yard*

The Temporary Construction Area is located on the existing and previously disturbed ECGS Site; therefore, impacts relating to the laydown yard are considered less than significant.

## **6.11.5 Laws, Ordinances, Regulations, and Standards**

Applicable visual resource LORS are summarized in Table 6.11-5, Summary of Laws, Ordinances, Regulations, and Standards, and described below. Agency contacts are provided in Table 6.11-6, Agency Contact List for Laws, Ordinances, Regulations, and Standards.

**TABLE 6.11-5  
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS**

<b>Jurisdiction</b>	<b>LORS</b>	<b>Requirements</b>	<b>Conformance Section</b>	<b>Administering Agency</b>	<b>Agency Contact</b>
<b>Federal</b>	Application for Certification Requirements	As required.	Section 6.11.5.1, Federal and State	CEC	1
<b>State</b>	State Scenic Highway Requirements	Requirements are applicable to state designated scenic highways. There are none in the Project study area.	Section 6.11.5.1, Federal and State	Caltrans	2
<b>Local</b>	City Goals <i>Goal 7</i>	City Beautification: Develop an attractive visual identity for the City of El Centro that includes entryway themes and agency identity.	Section 6.11.5.2, Local	City of El Centro Planning Department	3
	Land Use Element Community Design <i>Goal 3</i>	Improve the visual appearance of the community by targeting areas in need for rehabilitation and beautification.	Section 6.11.5.2, Local	City of El Centro Planning Department	3
	Land Use Element Community Design <i>Policy 3.3</i>	Promote and encourage an overall improvement in visual appearance for all commercial and industrial areas.	Section 6.11.5.2, Local	City of El Centro Planning Department	3
	Land Use Element Community Design	The City of El Centro contains some areas that are design sensitive since they provide major thoroughfares and destination points for the community. These areas include the Industrial/Commercial area on the eastern portion of the city along Commercial Avenue and Main Street. The city will continue to improve this important area in the community, visually linking the areas through enhancements such as landscaping and façade improvements.	Section 6.11.5.2, Local	City of El Centro Planning Department	3
	Conservation/Open Space Element Open Space and Natural Resources <i>Policy 3.4</i>	Develop a greenbelt system that provides buffer zones between potentially incompatible land uses, such as between industries and homes, and that upgrades the visual quality of the community	Section 6.11.5.2, Local	City of El Centro Planning Department	3

Notes:  
CEC = California Energy Commission  
LORS = laws, ordinances, regulations, and standards

**TABLE 6.11-6  
AGENCY CONTACT LIST FOR LAWS, ORDINANCES,  
REGULATIONS, AND STANDARDS**

<b>State</b>	
1	California Energy Commission 1516 9 <sup>th</sup> Street Sacramento, CA 958114 Eileen Allen, Facilities Siting Program Manager (916) 654-4082
2	California Department of Transportation (Caltrans) Guidelines for the Official Designation of Scenic Highways, Office of Landscape Architecture, Caltrans, Sacramento
<b>Local</b>	
3	City of El Centro Planning Department 1275 Main Street El Centro, CA 92243 Oliver M. Alvarado AICP, Planning Director (760) 337-4545, oalvarado@cityofelcentro.org

**6.11.5.1 Federal and State**

The Project is located on private lands and is not subject to any federal regulations pertaining to visual resources. Therefore, compliance with federal aesthetic LORS is inapplicable.

***California State Department of Transportation***

Caltrans maintains a statewide system of designated and eligible scenic highways, with the intent of recognizing and protecting the more scenic corridors along the state highway system (Caltrans 1996). State-designated scenic highways or highways eligible for designation were not identified within the VSOI.

Further, no other area managed by the state by which the Project would be required to adhere to aesthetic LORS was identified. Therefore, compliance with additional state aesthetic LORS is inapplicable.

**6.11.5.2 Local**

The Project is located on private lands. The ECGS Site is zoned LU. In addition, industrial facilities and transmission lines occur in proximity to the Project Site within the VSOI.

The City of El Centro Planning Department has identified within the General Plan several regulations relating specifically to aesthetics, minimizing impacts to visual resources and improving the visual quality and appearance of the community. These are summarized in Table 6.11-5, Summary of Laws, Ordinances, Regulations, and Standards. In addition, Project design elements have been incorporated into the Project description that will be effective in minimizing visual impacts. The Project will conform to all applicable local LORS related to the preservation of areas identified as retaining high scenic value. Based on the inventory of scenic attractiveness and ESILs, areas retaining high scenic value were not identified within the VSOI.

### *6.11.5.3 Permits Required and Permit Schedule*

No permits are required pertaining to visual resources.

### **6.11.6 References**

Bureau of Land Management (BLM). 1986. Visual Resource Management Inventory and Contrast Rating System. January.

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

California Department of Transportation. 1992. AFC, p.6.9-1.

California Energy Commission. Systems Assessment and Facilities Siting Division, Environmental Protection Office. Personal correspondence and field visit, 2005-06.

Caltrans. 1996. Guidelines for the Official Designation of Scenic Highways.

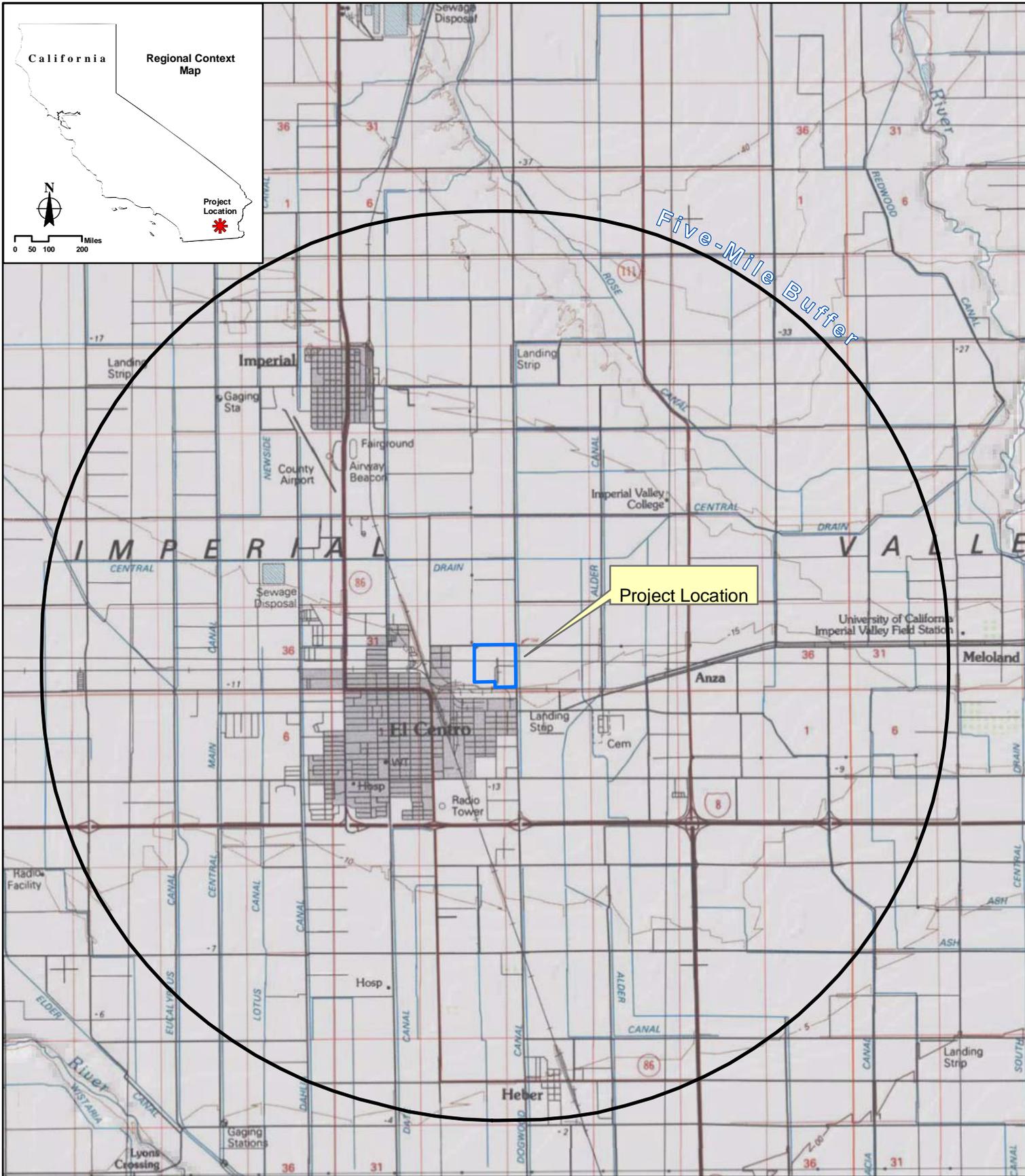
El Centro General Plan. 2004.

Federal Highway Administration (FHWA). March 1981. Visual Impact Assessment for Highway Projects Manual.

Imperial County General Plan. 1989.

Salton Sea Unit 6 Geothermal Power Plant AFC, URS. 2004.

U.S. Department of Agriculture, Forest Service (USDA). 1996. Landscape Aesthetics – A Handbook for Scenery Management. USDA Handbook 701. 1996.

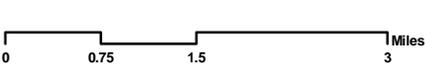


**Visual Sphere of Influence (VSOI)**

El Centro Unit 3 Repower Project  
Imperial Irrigation District



FIGURE 6.11-1



SOURCE:  
USGS (100K Topographic Base, 1970s).

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**Above: Looking Down E. Villa Road from Project Site Entrance**



**Above: Industrial Activities at Commerical Avenue**

**Character Photos - Areas Surrounding the Project**

El Centro Unit 3 Repower Project  
Imperial Irrigation District



FIGURE 6.11-2A

SOURCE:  
URS (Field Photos, January 2006)





Above: Typical Newer Residences off Cross Road



Above: Typical Residence off E. Villa Road

**Character Photos - Areas  
Surrounding the Project**

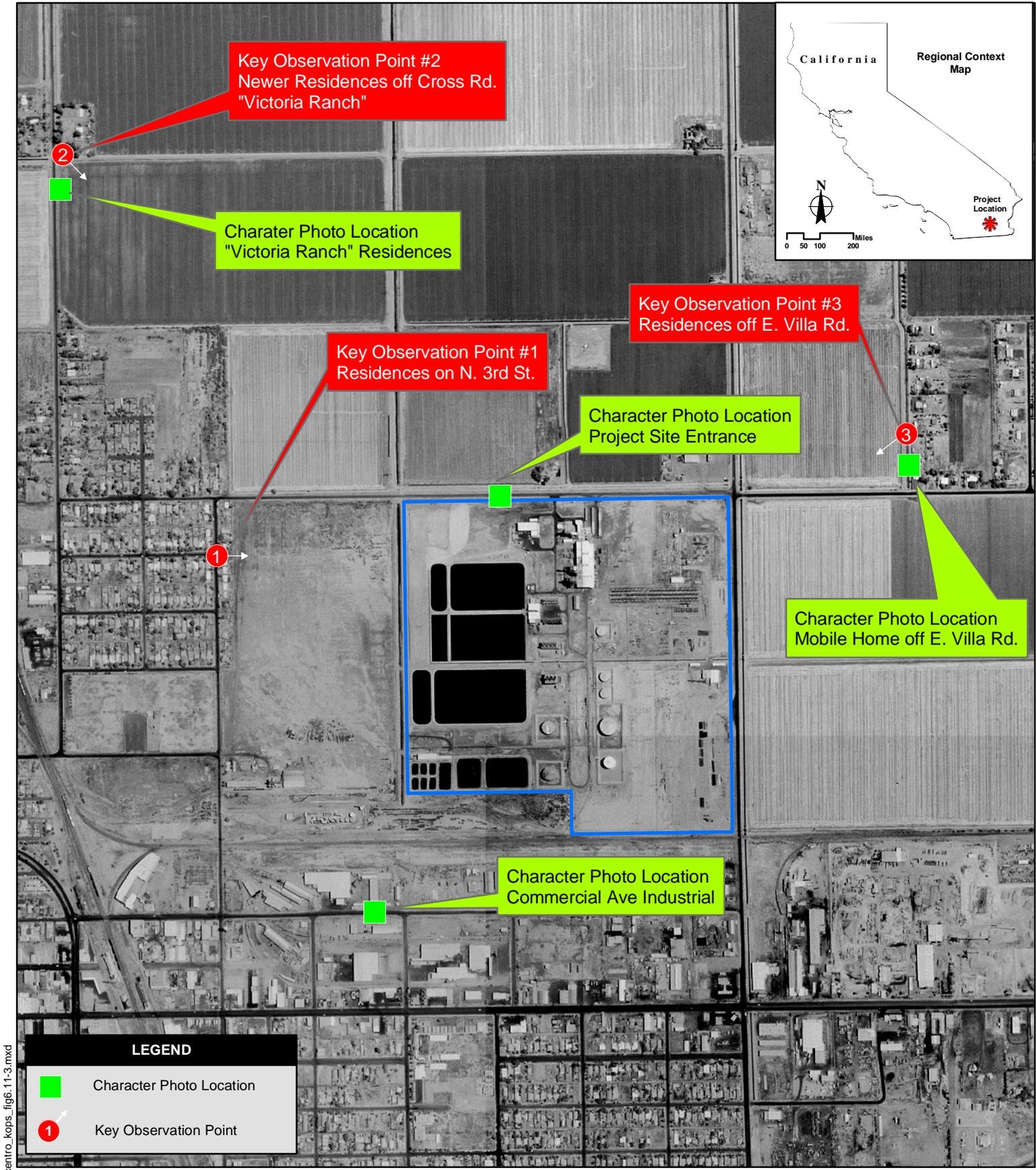
El Centro Unit 3 Repower Project  
Imperial Irrigation District



FIGURE 6.11-2B

SOURCE:  
URS (Field Photos, January 2006)

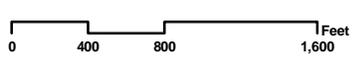




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**Visually Sensitive Areas, Photo Locations and Key Observation Points (KOPs)**

El Centro Unit 3 Repower Project  
Imperial Irrigation District



SOURCES:  
USGS (aerial, 1989).



FIGURE 6.11-3



# SCENIC ATTRACTIVENESS EVALUATION FORM

Landform	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Vegetation	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Water	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Color	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Adjacent Scenery	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Scarcity	H (5)	H/M (4)	M (3)	M/L (2)	<u><b>L (1)</b></u>
Modifications*	H (2)	H/M (1)	M (0)	M/L (-2)	<u><b>L (-4)</b></u>
Scenic Attractiveness Class C (2)					

Scenic Quality  
Classifications

A = 19 or more

B = 12 to 18

C = 11 or less

**Notes:**

Evaluation score is bold and underlined

H = High; M = Moderate; and L = Low

\* = Explains cultural modifications present in the landscape, ranging from negative intrusions (-4) to those that complement the scenic quality and promote visual harmony (2)



**Narrative Landscape Description and Photograph.** This photo was taken approximately 0.5 miles west of the proposed Project site (Figure 6.11-3), on N. 3rd Street, about 1 block south of E. Villa Road. This location illustrates views east toward the project from the back of homes along N. 3rd Street. Topographic relief across the setting is negligible, adding minimal visual interest from form and line characteristics. The only form and line diversity comes from the existing ECGS location and surrounding urban development. Vegetation consists of cultivated/ruderal and desert-related plants typical of the area. The dominant cultural modifications include the ECGS and transmission lines. It should be noted that some of the residences on N. 3rd Street are partially or completely screened by mature vegetation.

## Scenic Attractiveness Evaluation Form for Sensitive View Area and KOP #1

El Centro Unit 3 Repower Project  
Imperial Irrigation District

SOURCES:  
URS (Field Photos, Simulations, January 2006).



FIGURE 6.11-4



# SCENIC ATTRACTIVENESS EVALUATION FORM

Landform	H (5)	H/M (4)	M (3)	M/L (2)	<b><u>L (1)</u></b>
Vegetation	H (5)	H/M (4)	M (3)	<b><u>M/L (2)</u></b>	L (1)
Water	H (5)	H/M (4)	M (3)	<b><u>M/L (2)</u></b>	L (1)
Color	H (5)	H/M (4)	M (3)	<b><u>M/L (2)</u></b>	L (1)
Adjacent Scenery	H (5)	H/M (4)	M (3)	<b><u>M/L (2)</u></b>	L (1)
Scarcity	H (5)	H/M (4)	M (3)	M/L (2)	<b><u>L (1)</u></b>
Modifications*	H (2)	H/M (1)	M (0)	<b><u>M/L (-2)</u></b>	L (-4)
Scenic Attractiveness Class C (8)					

Scenic Quality Classifications

A = 19 or more

B = 12 to 18

C = 11 or less

**Notes:**

Evaluation score is bold and underlined

H = High; M = Moderate; and L = Low

\* = Explains cultural modifications present in the landscape, ranging from negative intrusions (-4) to those that complement the scenic quality and promote visual harmony (2)



**Narrative Landscape Description and Photograph.** This photo was taken approximately 1.0 mile northwest of the proposed Project (Figure 6.11-3). This photo is intended to represent residential views from the relatively new residential development, “Victoria Ranch” off Cross Road. The terrain is flat varying little in distinctive setting. There are no unique natural forms. Vegetation is primarily green agricultural fields, offering little diversity to the visual setting. Cultural modifications from this view, include the access gate to the adjacent farmland, rural roadways, and the existing ECGS in the distance.

**Scenic Attractiveness Evaluation Form for Sensitive View Area and KOP #2**

El Centro Unit 3 Repower Project  
Imperial Irrigation District

SOURCES:  
URS (Field Photos, Simulations, January 2006).



FIGURE 6.11-5



# SCENIC ATTRACTIVENESS EVALUATION FORM

Landform	H (5)	H/M (4)	M (3)	<b><u>ML (2)</u></b>	L (1)
Vegetation	H (5)	H/M (4)	M (3)	M/L (2)	<b><u>L (1)</u></b>
Water	H (5)	H/M (4)	M (3)	<b><u>ML (2)</u></b>	L (1)
Color	H (5)	H/M (4)	M (3)	<b><u>ML (2)</u></b>	L (1)
Adjacent Scenery	H (5)	H/M (4)	M (3)	<b><u>ML (2)</u></b>	L (1)
Scarcity	H (5)	H/M (4)	M (3)	M/L (2)	<b><u>L (1)</u></b>
Modifications*	H (2)	H/M (1)	<b><u>M (0)</u></b>	M/L (-2)	L (-4)
<b>Scenic Attractiveness Class C (10)</b>					

Scenic Quality  
Classifications

A = 19 or more  
B = 12 to 18  
C = 11 or less

**Notes:**

Evaluation score is bold and underlined

H = High; M = Moderate; and L = Low

\* = Explains cultural modifications present in the landscape, ranging from negative intrusions (-4) to those that complement the scenic quality and promote visual harmony (2)



**Narrative Landscape Description and Photograph.** This photo was taken from an irrigation ditch and dirt road that are perpendicular to E. Villa Road about 0.5 miles northeast of the Project site. This photo represents residential views from nearby mobile homes and detached residences along this road (Figure 6.11-3). Topographic relief across this setting is minimal. Views of the distant mountains offer some diversity to form and line characteristics. However, most contrast to form and line are created from the cultural modification of the existing ECGS. The homogeneous vegetative pallet consists of a large agricultural field and adds little interest to the area.

**Scenic Attractiveness  
Evaluation Form for  
Sensitive View Area and KOP #3**

El Centro Unit 3 Repower Project  
Imperial Irrigation District

**SOURCES:**  
URS (Field Photos, Simulations, January 2006).

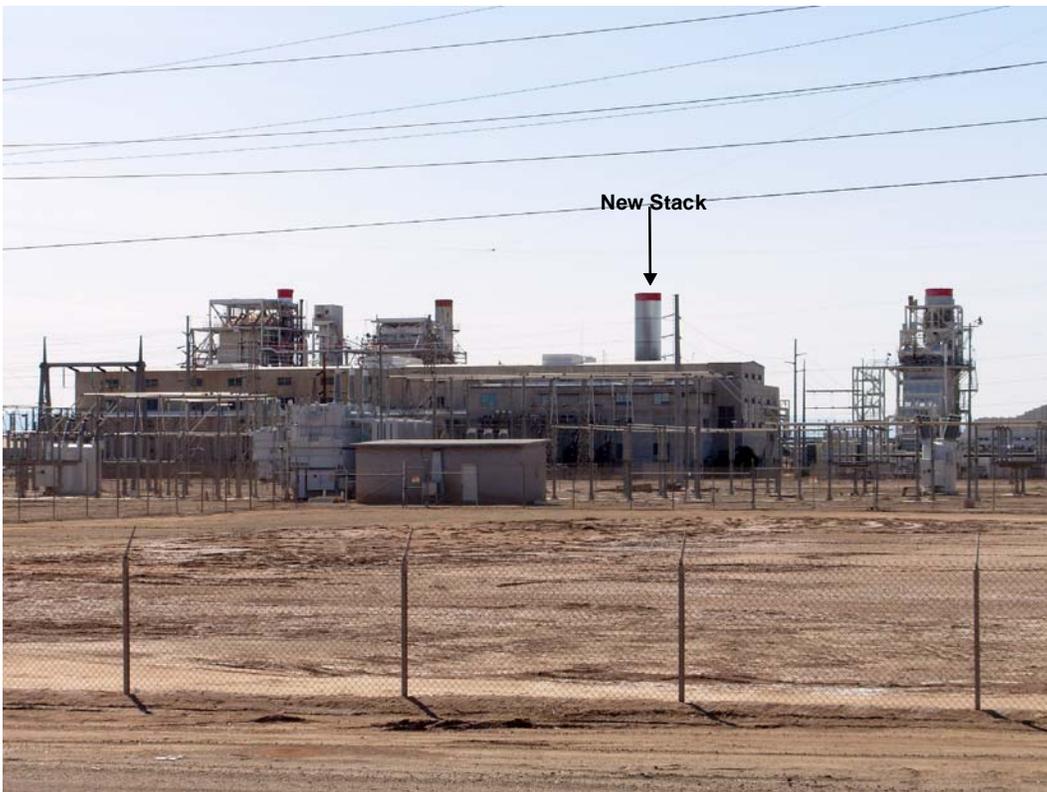


**FIGURE 6.11-6**





Above: Existing View from East of the ECGS Looking West



Above: Simulated View from the East of the ECGS Looking West

**Existing and Simulated Close-up View from  
East of the ECGS Looking to the West**

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Imperial Irrigation District



FIGURE 6.11-7

SOURCES:  
URS (Field Photos, Simulations, January 2006),  
Power Engineers (3-D Model, February 2006).





Above: Existing View from West of the ECGS Looking East



Above: Simulated View from the West of the ECGS Looking East

**Existing and Simulated Close-up View from  
West of the ECGS Looking to the East**

El Centro Unit 3 Repower Project  
Imperial Irrigation District



FIGURE 6.11-8

SOURCES:  
URS (Field Photos, Simulations, January 2006),  
Power Engineers (3-D Model, February 2006).





Above: Existing View from Residences on N. 3rd Street



Above: Simulated View from Residences on N. 3rd Street

**Existing and Simulated Views from  
KOP #1: Residences on N. 3rd Street**

El Centro Unit 3 Repower Project  
Imperial Irrigation District



FIGURE 6.11-9

SOURCES:  
URS (Field Photos, Simulations, January 2006),  
Power Engineers (3-D Model, February 2006).





Above: Existing View from Newer Residences off Cross Road ("Victoria Ranch")



Above: Simulated View from Newer Residences off Cross Road ("Victoria Ranch")

**Existing and Simulated Views from  
KOP #2: Newer Residences off  
Cross Road ("Victoria Ranch")**

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Imperial Irrigation District



FIGURE 6.11-10

SOURCES:  
URS (Field Photos, Simulations, January 2006),  
Power Engineers (3-D Model, February 2006).





Above: Existing View from Residences off E. Villa Road



Above: Simulated View from Residences off E. Villa Road

**Existing and Simulated Views from  
KOP #3: Residences off E. Villa Road**

El Centro Unit 3 Repower Project  
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FIGURE 6.11-11

SOURCES:  
URS (Field Photos, Simulations, January 2006),  
Power Engineers (3-D Model, February 2006).

