

4.13 Visual Resources

Visual resources consist of the natural and cultural features that make up the visible landscape, including land, water, vegetation, buildings, structures, and cultural features within an observer's visual environment. The management of visual resources on public lands generally includes an inventory of the present landscape within its administrative boundaries and an assignment of management classes to define landscape units.

Federal agencies have developed various systems, or methodologies, for describing, analyzing, and managing visual resources on public lands. For example, BLM uses the Visual Resource Management System and the USFS uses the Scenery Management System. On nonpublic lands, variations of both systems and other methodologies are used. The Navajo Nation, BIA, and OSMRE currently do not have established methodologies for the inventory of visual resources on tribal trust lands; therefore, these agencies have not assigned visual resource management (VRM) classes to the tribal lands they administer. Past visual resource analyses in the Project Area used a combination of the USFS Scenery Management System, the BLM VRM System, and a hybrid system called the Visual Sensitivity-Visual Contrast System. Aspects of all three analysis systems were used in this evaluation of the visual landscape of the FCPP and Navajo Mine Lease Areas.

The Visual Resources ROI is defined as those areas within the visual landscape of these project components that are visible from key observation points. The visual environment of the ROI is comprised of the natural and cultural elements of the Project components (the Navajo Mine and FCPP Lease Areas and the PNM and APS transmission line ROWs).

4.13.1 Regulatory Compliance Framework

OSMRE and BIA have trust responsibilities for the management of the lands and resources within Navajo Nation tribal trust lands. Regulatory requirements applicable to regional haze and visibility are addressed in Section 4.1, Air Quality, and are not addressed in this section. Air quality is regulated under the CAA, which addresses emissions of criteria pollutants, including those that can cause visibility issues. The only Federal regulation applicable to the visual resources analysis is the Indian Lands Program of SMCRA, which states that the application package will contain "an evaluation of [impacts to] the scenic and aesthetic resources, due to the proposed surface mining and reclamation operation." No New Mexico or Arizona State, Navajo Nation or Hopi Tribe, or county or municipal visual resources requirements are considered applicable to the project.

4.13.2 Affected Environment Pre-2014

The ROI is located within the Colorado Plateau physiographic region, the major distinguishing features of which are landforms that have been sculpted by wind and water, ranging from mesas to badlands. These landforms and the wet and dry waterways that shaped them largely define the visual environment of the region.

4.13.2.1 *Regional Landscape*

The natural environment around the ROI consists of broad, open natural desert areas, intermingled with agricultural areas, residential areas, coal mines, and power plants. Viewing distances are greater than 50 miles. The natural terrain consists of broad, gently undulating mesas cut by numerous shallow arroyos. Scattered residences and agricultural areas are located on the mesas. Isolated buttes and hogbacks (a ridge with a sharp summit and steep slopes of nearly equal inclination on both flanks) rise abruptly out of the landscape in stark contrast to the mesas. Shiprock, the Chuska Mountains, the Lukachukai Mountains, the Carrizo Mountains, Sleeping Ute Mountain, and the La Plata Mountains are visible in the distance to the west, northwest, and northeast from many locations within the Navajo Mine Lease Area. Within the ROI, the

Hogback (Hogback Mountain) is the prominent landform, extending roughly north to south along the western side of the Navajo Mine Lease Area. Figure 4.13-1 shows regional landscape features.

The San Juan River extends east to west and creates a riparian corridor through the landscape. The relatively dense vegetation along the river contrasts sharply with the sparse desert vegetation on the mesas that surround it. Smaller water courses in the ROI also have patches of denser vegetation, including the Chaco River in the northern portion of the Navajo Mine Lease Area and Cottonwood Arroyo in the southern portion of the Navajo Mine Lease Area.

Agricultural and residential areas are concentrated along the San Juan River. Industrial developments related to power plants are located on the San Juan River mesas, with the San Juan Generating Station to the north and FCPP to the south. The FCPP is adjacent to Morgan Lake; a man-made lake used both for industrial and recreational purposes. A network of transmission lines traverse the landscape extending outward in all directions from the FCPP and the San Juan Generating Station. A portion of the Navajo Mine Lease Area within the Navajo Mine SMCRA Permit Area has been historically mined; the Navajo Mine SMCRA Permit Area is now in various stages of active mining and mine reclamation.

4.13.2.2 *Region of Influence*

Paved and improved roads in and around the Navajo Mine Lease Area provide the principal views of the project components to the greatest number of viewers. Visible project components are the FCPP and associated facilities, Navajo Mine Lease Area, and transmission lines. The DFADAs along the Chaco River are only visible to FCPP employees from a few locations along two-track roads in Navajo Mine Resource Area I. Burnham Road is an improved road that extends north to south through the eastern and central portions of Area IV North, Area IV South, and Area V. Navajo Nation Highway 3005 extends north to south, east of Area I and Area II. BIA Road N-5 extends along the southern border of the Navajo Mine Lease Area, and BIA Highway N-36 extends along its northern border. U.S. Highway 64 is located to the north of the lease area. U.S. Highway 491 is located to the west of the lease area and New Mexico State Highway 371 is located to the east of the lease area.

4.13.2.3 *Visual Resources Inventory*

Visual resources inventories describe the existing visual environment through analysis of a number of variables. Two inventories were used in the description of the affected environment.

Desert Rock Draft EIS

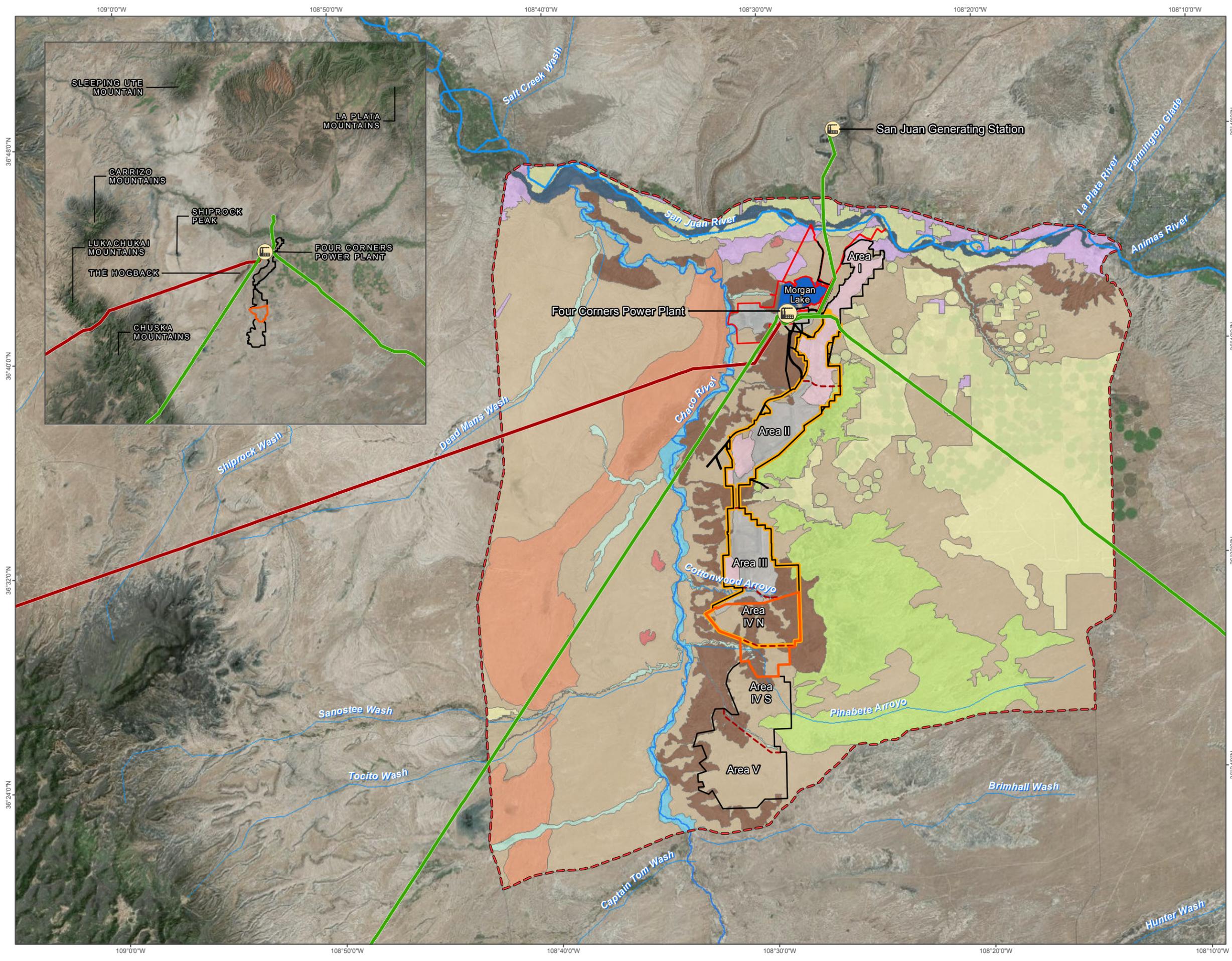
A visual resources study was undertaken in connection with development of the draft EIS for the proposed Desert Rock coal-fired power plant and associated transmission lines (DOI and BIA 2007). The proposed Desert Rock project was adjacent to and west of the Navajo Mine and the FCPP Lease Area. A visual resources inventory was completed for the Desert Rock proposed action and alternatives using aspects of the USFS Scenery Management System (USFS 1997) and the BLM VRM System (BLM 1986). The inventory describes the landscape character, visibility and viewer sensitivity, and the scenic integrity of the natural landscape. The Visual Resources ROI was a 6-mile wide corridor that extended north to south through the western side of the Navajo Mine Lease Area from a point northwest of the San Juan Generating Station to the community of Burnham on Highway 5.

Four Corners Power Plant and Navajo Mine Energy Project

ENVIRONMENTAL SETTING & CONSEQUENCES

Figure 4.13-1

Visual Resources Inventory



PROJECT FACILITIES

Power Plant 

PROJECT BOUNDARIES

- Navajo Mine Resource Areas 
- Four Corners Power Plant Lease Area 
- Navajo Mine Lease Area and ROWs 
- Navajo Mine SMCRA Permit Boundary 
- Proposed Pinabete SMCRA Permit Boundary 

TRANSMISSION LINES

- 345kV 
- 500kV 

VISUAL RESOURCES INVENTORY

- Survey Area 
- Agricultural Lands 
- Badlands 
- Chaco River Basin 
- Desert Plains 
- Dry Wash 
- Eroding Escarpment 
- Hogback 
- Industrial Desert Plains 
- Mesa 
- Mixed Development 
- Morgan Lake 
- Reclaimed Mining Lands 
- San Juan River 



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It included the FCPP Lease Area and a majority of the Navajo Mine Lease Area (portions of Resource Areas I and II). Landscape character types were defined for all lands within the Visual Resources ROI and further subdivided into subtypes and units. Landscape character type was defined as “the visual and cultural image of a geographic area, and consists of a combination of physical, biological, and cultural attributes that make each landscape unique or identifiable” (DOI and BIA 2007:3-119). The landscape character type for the Navajo Mine Lease Area was designated the Navajo Landscape Character Type, described as, “an area of young plateaus with broad, open valleys; horizontal sandstone beds, eroded tablelands, cuerdas, rock terraces, receding escarpments, shallow canyons, rolling desert plains, dry washes, and riparian corridors; and sparse vegetation consisting of desert plains, grasslands, salt bush, and sagebrush” (DOI and BIA 2007:3-119).

Landscape character subtypes were defined as regional areas with common distinguishing physical and visual characteristics (DOI and BIA 2007: 3-119). Three landscape character subtypes were designated for the Navajo landscape character types: High Plateau Tablelands, San Juan River Lands, and Navajo Modified Lands. Landscape character subtypes were further subdivided into landscape character units with distinguishing physical and visual attributes and different visual characteristics, as follows:

- The High Plateau Tablelands were subdivided into six landscape character units (Hogback, Playa, Weathered Badlands, Eroding Escarpment, Mesa, and Desert Plains).
- The San Juan River Lands were subdivided into four units (San Juan River, Chaco River, Dry Wash, and Morgan Lake).
- The Navajo Modified Lands were subdivided into four units (Industrial Desert Plains, Rural Desert Plain, Agricultural Lands, and Reclaimed Mine Lands).

These units were all defined in the study, with the exception of Rural Desert Plains, which did not occur within the project’s visual resources ROI.

The Desert Rock study also evaluated scenic integrity of the landscape character units. Scenic integrity is defined as, “the degree of intactness or wholesomeness of the landscape character” (USFS 1997). The level of scenic integrity was evaluated as generally high over most of the ROI. A landscape character with a high degree of scenic integrity is defined as a landscape that “has a sense of wholeness, intactness or being complete. Its scenic condition is near-perfect with no evident discordant elements or deviation from the existing character valued for its aesthetic appeal” (USFS 1997).

FCPP and Navajo Mine Energy Project

A new visual resources inventory of the landscape was conducted for the FCPP and Navajo Mine Energy Project to refine the previous landscape character study and incorporate ROI changes that occurred in the past 5 years. The landscape character analysis was conducted using topographic maps, aerial photography, soil maps, the USGS National GAP, and National Hydrologic Data. The landscape character units derived were field verified during a site visit in October 2012. The area analyzed encompassed a larger area than that analyzed in the previous study to incorporate landscapes directly adjacent to the FCPP and Navajo Mine Lease Area. The ROI is depicted in Figure 4.13-2, comprised of a roughly square-shaped area surrounding the FCPP and the Navajo Mine Lease Area that is bounded by the primary travel routes (U.S. Highway 491, U.S. Highway 64, New Mexico Highway 371, and Navajo Nation Road 5).

Similar to the study performed in the Desert Rock Draft EIS, the defined landscape character types were based on like physiographic characteristics (texture, color, variety, man-made features, similar visual patterns, and topographic features). The landscape character units derived were similar to those derived in the previous study with some minor variations (Table 4.13-1). All three previously defined landscape character subtypes (High Plateau, San Juan River, and Navajo Modified Lands) were expanded over the current ROI. Most of the previously defined landscape character units were used. The Playa landscape character unit was dropped because it was not found to occur within the ROI. The Desert Plain landscape

character unit was expanded over the western portion of the current ROI, and the Agricultural Plains were expanded over the eastern portion of the ROI. The Badlands character type was expanded to encompass additional areas at the southern end of the Navajo Mine Lease Area. A new landscape character unit was defined for areas of residential development that were not present on the landscape in 2007. The DFADAs within the FCPP Lease Area were included as an element in the Industrial Desert Plains unit (Figure 4.13-2).

Scenic integrity was evaluated for each landscape character unit identified in the ROI (Table 4.13-1). Scenic integrity follows definitions used in the Scenery Management System (USFS 1997). It varies from very high to very low. Scenic integrity was found to be high in a majority of the landscape character units.

4.13.2.4 Visual Sensitivity Analysis

Visual sensitivity is the degree of change a given landscape can accommodate without having major impacts on the visual resources. Landscapes with a high degree of visual sensitivity cannot accommodate a great amount of change without having a major impact on the visual resources of an area, and landscapes with a low degree of visual sensitivity can accommodate a greater amount of change without a major impact on the visual resources of an area (Ecosphere 2012d). Two sensitivity analysis studies were used in the description of the affected environment.

May 2012 Study

A visual sensitivity analysis was performed as part of the visual resources baseline assessment of the Navajo Mine Lease Area, conducted in May 2012 (Ecosphere 2012d). The visual sensitivity analysis of the landscape was based on three factors:

1. Viewer sensitivity, defined as the level of concern for change in the visual character of the landscape by the viewing population.
2. Visual quality, defined as the appeal of a given view to the viewing population.
3. Viewer exposure, defined as the summation of overall visibility of the project, distance from the project, number of viewers of the project, and duration of the view of the project.

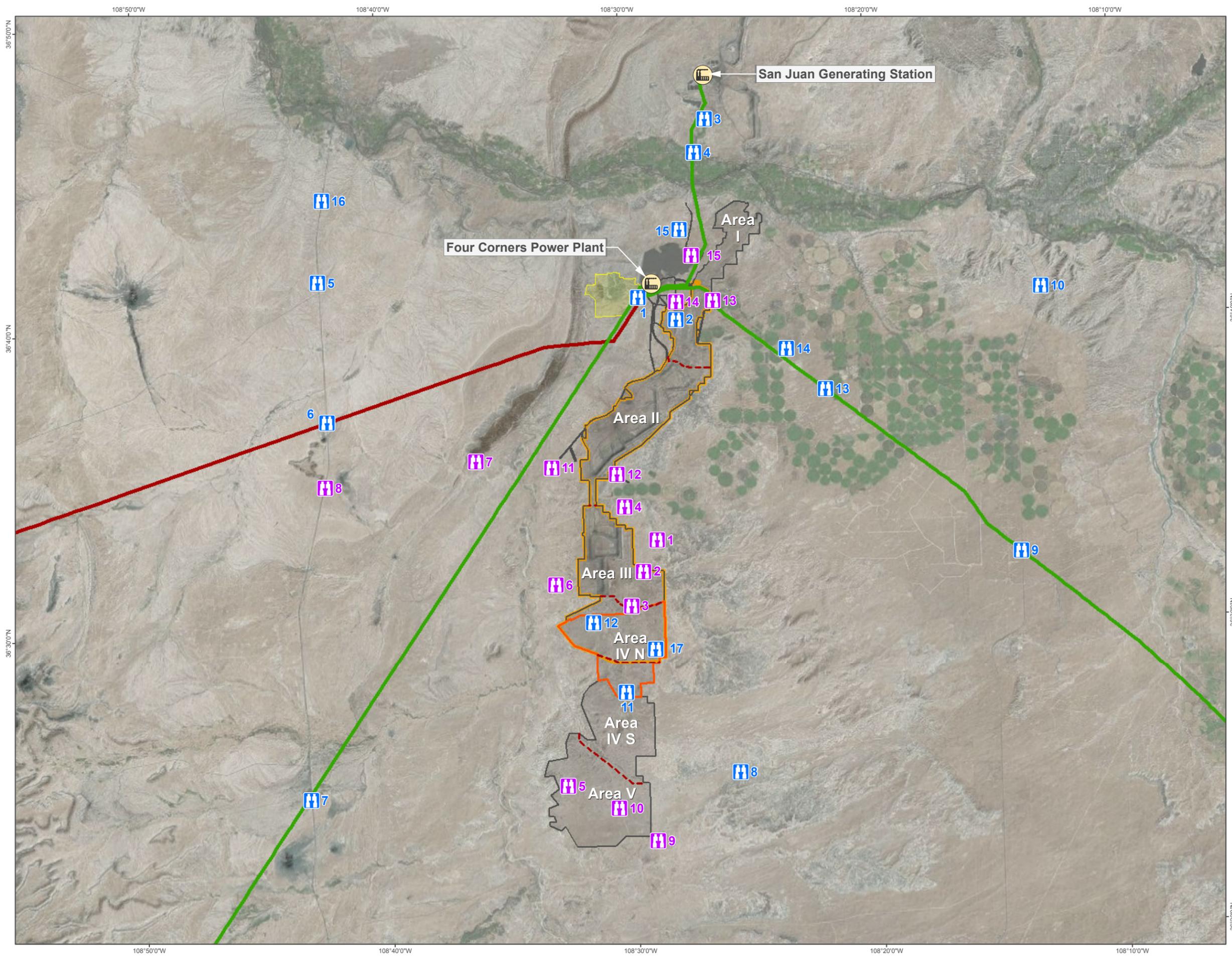
The Navajo Mine's visibility to a viewer was defined in terms of distance zones (Foreground, Middleground, Background, Seldom Seen), which follow definitions used in the BLM Visual Resource Management Manual (BLM 1986). Distance zones were based on the visibility of project activities from observation points and the variable dominance of four design elements (form, line, texture, and color). The distance zones and their definitions used are presented below (Table 4.13-2). Ultimately, all three factors (viewer sensitivity, visual quality, viewer exposure) are based on the individual analyst's judgment and interpretation.

In the study, visual sensitivity analysis was conducted from 15 viewpoints, referred to as Key Observation Points (KOPs). The viewpoints are shown in Figure 4.13-2, and included, "residences within 2 miles of the mine lease area, significant features on the landscape (i.e., Hogback geologic feature), travel corridors (i.e., highways), scenic viewpoints, recreation areas, residential areas, and representative views of the typical landscape" (Ecosphere 2012d). The study analyzed viewer sensitivity, visual quality, and viewer exposure to arrive at an overall visual sensitivity. The results of the visual sensitivity analysis indicated a low to moderate overall visual sensitivity (Table 4.13-3).

Four Corners Power Plant and Navajo Mine Energy Project

ENVIRONMENTAL SETTING & CONSEQUENCES

Figure 4.13-2
Key Observation Points
May 2012 and October 2012



PROJECT FACILITIES

- Four Corners Power Plant
- Future Ash Disposal Area

PROJECT BOUNDARIES

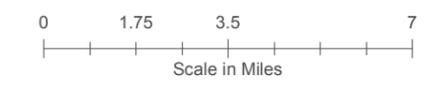
- Navajo Mine Resource Areas
- Navajo Mine Lease Area and ROWs
- Navajo Mine SMCRA Permit Boundary
- Proposed Pinabete SMCRA Permit Boundary

TRANSMISSION LINES

- 345kV
- 500kV

KEY OBSERVATION POINTS

- Survey - October 2012
- Survey - May 2012



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Table 4.13-1 Landscape Character Types, Subtypes, and Units

Type	Subtype	Unit	Description
Navajo Landscape	High Plateau Tablelands	Hogback	High ridge that varies in both width and elevation; typified by cross-bedded sandstone rock strata; vegetation varies from bare rock to sparse desert scrub; most dominant landform in the ROI. The scenic integrity of this unit is moderate with some development visible, but not dominant, within it (transmission lines, radio towers).
Navajo Landscape	High Plateau Tablelands	Badlands	Distinctive sandstone layering on escarpments; stratified color variation; ranges from flat beaches and bars to rolling hills and cross-bedded escarpments. The scenic integrity of this unit is high with very little development visible within it.
Navajo Landscape	High Plateau Tablelands	Eroding Escarpment	Encompasses broken and weathered geologic uplifts, cuestas, buttes, spires, volcanic dikes, steep-sloped windblown sand dunes, sandstone outcroppings defined by erosion, geologic deposits, tilted fault-block mountains, and retreating cliffs and bluffs; landforms ranges from jagged edged, steep-sloped escarpments with bare rock ridges to gently dipping slopes of sand dunes; bare rock landforms provide texture to the dominant Desert Plains landscape; color and striations provide a high degree of visual contrast. The scenic integrity of this unit is high to moderate with little in the way of development within it.
Navajo Landscape	High Plateau Tablelands	Mesa	Large, dominant, high plateaus with eroded edges and cliffs; vegetation ranges from bare rock to grasslands. The scenic integrity of this unit is very low because of the heavy alteration from agriculture and the Navajo Mine within it.
Navajo Landscape	High Plateau Tablelands	Desert Plains	Ranges from barren Desert Pavement to relatively dense low-lying desert shrub vegetation; sedimentary rock provides texture and color variation; homogenous topography varying from flat to rolling hills; dominant landforms and cultural modifications are highly visible and noticeable. The scenic integrity of this unit is high to moderate with some development visible, but not dominant, within it (primarily transmission lines).
Navajo Landscape	San Juan River Lands	San Juan River	East/west-flowing river corridor; visually distinctive with cut banks, rocky streambed, flowing water, and dense vegetation that lines the corridor. The scenic integrity of this unit is low to very low because of the heavy residential and industrial development.
Navajo Landscape	San Juan River Lands	Chaco River	Ephemeral water feature with highly varied width and depth; corridor has cutbanks replete with a sandy channel bed; dense vegetation within channel that varies from desert grasses to mature paloverde and mesquite trees. The scenic integrity of this unit is moderate to low because of transmission lines and the FCPP DFADAs along it.
Navajo Landscape	San Juan River Lands	Dry Wash	Many dry washes dissect the landscape; flow only seasonally; erode to varying widths and depths; sparse vegetation along banks and on channel bars; visually evident but not dominant. The scenic integrity of this unit is high to very high.
Navajo Landscape	San Juan River Lands	Morgan Lake	Man-made lake that is a dominant feature on the landscape. The scenic integrity of this unit is high to very high.
Navajo Landscape	San Juan River Lands	Mixed Development	Lands with concentrated housing developments and scattered commercial development, creating distinctive visual patterns with agricultural lands mixed in. The scenic integrity of this unit is moderate to low.
Navajo Landscape	Navajo Modified Lands	Industrial Desert Plains	Industrial development areas that include active and inactive mining areas, FCPP, transmission lines, and the DFADAs. The scenic integrity of this unit is high.

Type	Subtype	Unit	Description
Navajo Landscape	Navajo Modified Lands	Agricultural Plains	Includes residences, agricultural outbuildings, ranches, fields, and other associated facilities; visually distinctive because of color contrast during growing season, circular pattern of irrigated fields, and greater density of vegetation. The integrity of this character unit is high.
Navajo Landscape	Navajo Modified Lands	Reclaimed Mining Lands	Lands that have been mined in the past and are currently in various stages of reclamation. The integrity of this character unit is low because of the patchwork of reclamation that has occurred.

Table 4.13-2 Visual Distance Zone Definitions (adapted from Ecosphere 2012d)

Distance Zone	Distance (in miles)	Definition
Foreground	0 to 1	Existing infrastructure is readily visible.
Middleground	1 to 5	Existing coal mining activities are visible. Outer boundary of distance zone is defined as point where texture and form of individual floristic items in the vegetative environment are no longer apparent on the landscape.
Background	5 to 15	Existing coal mining activities and vegetation are visible as patterns of light and dark.
Seldom Seen	15+	Resource areas are faintly visible under excellent atmospheric conditions.

Table 4.13-3 May 2012 Visual Sensitivity Analysis

KOP #	Viewer Sensitivity	Visual Quality	Overall Viewer Exposure	Overall Visual Sensitivity
KOP 1	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 2	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 3	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 4	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 5	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 6	Low	Low to Moderate	Moderate	Low to Moderate
KOP 7	Low	Moderate	Moderate	Moderate
KOP 8	Low	Moderate to High	Low to Moderate	Low to Moderate
KOP 9	Low to Moderate	Moderate	Moderate	Moderate
KOP 10	Low	Low to Moderate	Low to Moderate	Low to Moderate
KOP 11	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate
KOP 12	Low to Moderate	Low	Moderate	Low to Moderate
KOP 13	Low to Moderate	Low	Low to Moderate	Low to Moderate
KOP 14	Moderate	Low to Moderate	Moderate	Moderate
KOP 15	Moderate	Low to Moderate	Moderate to High	Moderate

Source: Ecosphere 2012d

October 2012 Study

An additional visual sensitivity analysis study was conducted from 17 KOPs during a ROI field reconnaissance in October 2012 (see Figure 4.13-2). The analysis was conducted to augment the May 2012 study baseline assessment (Ecosphere 2012d), which was considered to have these deficiencies with respect to utility for this EIS:

- The study was not conducted within the context of a specific proposed action, but rather as a broad visual resources study of the entire Navajo Mine Lease Area.
- KOPs used in the previous analysis did not take into consideration views of the FCPP component of the current ROI, including the addition of new DFADAs, nor did it take into consideration the continued operation and maintenance of the four existing transmission lines.
- KOPs used in the previous study were biased towards active residences, three of which would not be occupied once mining commences within the Pinabete SMCRA Permit Area.

The KOPs selected for analysis in the October 2012 study include locations where the various elements of the ROI would be visible to the viewing public. The KOPs include elevated locations overlooking the various elements of the ROI, locations along primary and secondary roads where the FCPP or proposed mining areas would be visible, and the locations along primary and secondary roads where they are crossed by the four transmission lines that are part of the ROI.

The visual sensitivity analysis was based on an assessment of viewer sensitivity, visual quality, and viewer exposure, as follows:

4. Viewer sensitivity was primarily the analyst’s judgment of public concern for the view as demonstrated by current land use and public comments received during scoping. The previous analysis from nearby KOPs, the type of viewer, and the current land use were taken into consideration in the current analysis.
5. Visual quality was analyzed based on seven inventory factors used by the BLM (1986) for evaluating scenic quality on public lands: the landforms present in the landscape, the type and density of the vegetation present, the presence or absence of water, the colors that are present, quality of the adjacent scenery, scarcity of the view, and the cultural modifications that are present.
6. Viewer exposure was analyzed based on a number of the factors used in the previous study, including visibility, distance zone, number of viewers, and the duration of the view.

The results of the October 2012 visual sensitivity analysis at the 17 KOPs are presented in Table 4.13-4 and representative, annotated photographs showing the view from each KOP are provided in Appendix D.

Table 4.13-4 October 2012 Visual Sensitivity Analysis

KOP #	Viewer Sensitivity	Visual Quality	Overall Viewer Exposure	Overall Visual Sensitivity
KOP 1	NA	NA	NA	NA
KOP 2	Low	Moderate	Low	Low to Moderate
KOP 3	Low	Moderate	Moderate	Low to Moderate
KOP 4	Low to Moderate	Low	High	Low to Moderate
KOP 5	Low to Moderate	Moderate	Low	Low to Moderate
KOP 6	Low to Moderate	Moderate	High	Moderate
KOP 7	Low to Moderate	Moderate	High	Moderate

KOP #	Viewer Sensitivity	Visual Quality	Overall Viewer Exposure	Overall Visual Sensitivity
KOP 8	Moderate	Moderate	Low	Moderate
KOP 9	Low to Moderate	Low	High	Low to Moderate
KOP 10	Low to Moderate	Moderate	Low	Low to Moderate
KOP 11	Moderate	Moderate	Moderate	Moderate
KOP 12	Moderate	Low	Moderate	Moderate
KOP 13	Low to Moderate	Low	Moderate	Low to Moderate
KOP 14	Low to Moderate	Moderate	Moderate	Low to Moderate
KOP 15	Low to Moderate	Moderate	High	Moderate
KOP 16	Low to Moderate	Moderate	Low	Low to Moderate
KOP 17	Low to Moderate	Moderate	Moderate	Low to Moderate

4.13.2.5 Visual Analysis of Project Components

The results of the visual analysis are presented below for each major project component. Refer to Figure 4.13-1 for the regional landscape context.

Four Corners Power Plant

The FCPP is located on the flat top of a mesa within the Industrial Desert Plain landscape character unit (see Table 4.13-1). Morgan Lake is located directly north of the FCPP, and extensive reclaimed mine areas of Area I in the Navajo Mine Lease Area bound it on the east. A large escarpment at the edge of the mesa on which it lies is located beyond Morgan Lake approximately 3 miles to the north, and the prominent Hogback geologic feature is located approximately 3 miles to the west. The landscape has a very industrial appearance because it has been extensively modified by construction of the FCPP facilities, an electrical substation, and multiple transmission lines.

The FCPP is visible from a limited number of locations along U.S. Highway 491 and from the mesa north of U.S. Highway 64 near the San Juan Generating Station. From along New Mexico Highway 371, it is seen from only one location in the far distance. The FCPP facilities are prominent from secondary highways BIA Highway N-36 and Navajo Nation 3005. The plumes from the stacks and the brown haze from the plant emissions are visible for short periods of time from U.S. Highway 491 and U.S. Highway 64 and from a limited number of locations along New Mexico Highway 371. The stacks and plumes are very prominent from secondary highways BIA Highway N-36 and Navajo Nation 3005.

KOP 14 from the May 2012 study (see Figure 4.13-2) included views of the FCPP from active residences located south of the plant in the foreground distance zone. From KOP 14, the visual quality was rated as low to moderate (see Table 4.13-3). The viewer sensitivity, overall viewer exposure, and overall viewer sensitivity were rated as moderate. A visual sensitivity analysis of the FCPP was conducted in October 2012 from KOPs 2, 3, 10, 14, and 15 (see Figure 4.13-2) in the middleground, background, and seldom seen distance zones. Viewer sensitivity ranged from low to moderate. Visual quality was rated as moderate from all five KOPs. Overall viewer exposure ranged from low to high, and overall visual sensitivity ranged from low to moderate (see Table 4.13-4).

The DFADA is located approximately 3 miles west of the FCPP between Chaco River and the escarpment at the western edge of the mesa upon which the FCPP sits. The Hogback geologic feature is very prominent directly to the west and dominates the landscape. The DFADA is located within the Industrial Desert Plain landscape character unit as defined above (see Table 4.13-1). The DFADAs are

not visible from surrounding primary and secondary roads within the Navajo Mine Lease Area to the east. They are visible from the primary FCPP access road, the escarpment above them to the east, and from the scattered residences on the terraces on the western side of Chaco River. Viewers of the ash pits are primarily FCPP employees; there are few locations from which the public can view them. Because of the type of viewers and the limited views available to the public of the DFADAs, the visual sensitivity analysis was not conducted.

Navajo Mine

The Navajo Mine Lease Area consists of five Resource Areas (Areas I through V). Areas I and II are located at the northern end of the Navajo Mine Lease Area, and Area III is approximately in the center of the Lease Area. All three areas have been mined historically and are now in various stages of reclamation. The area proposed for mine expansion is known as the Pinabete SMCRA Permit Area and consists of portions of Area IV North and Area IV South at the southern end of the Navajo Mine Lease Area. Area V is at the south end of the Navajo Mine Lease Area. The Eroding Escarpment, Desert Plain, Badland, and Dry Wash landscape character units are all present in the Pinabete SMCRA Permit Area. The landscape is in a predominantly natural state with little development visible, except for the transmission lines that cross the area and a few scattered residences.

The topography of Areas IV North and South and Area V is characterized by a highly eroded plain with numerous small, dry washes with little to no vegetative cover. The Hogback geologic feature is prominent to the northwest in the background, and the Chuska Mountains are visible beyond it. Mesas are prominent to the north in the background with the La Plata Mountains visible in the distance. Highly weathered badlands and isolated buttes are visible in the foreground to the south and east. Cottonwood Arroyo is located along the northern border of Area IV North, and Pinabete Arroyo flows through the northwestern corner of Area IV South. Areas IV North and South and Area V are visible from high points on the eastern end of BIA Road N-5 and from a few locations along New Mexico Highway 371. Both areas are highly visible from Burnham Road, which crosses roughly north to south through them.

KOPs 3 and 4 (see Figure 4.13-2) from the May 2012 visual resources study examined Area IV North from the middleground distance zones. KOP 3 was from the intersection of Burnham Road and a public road along Cottonwood Arroyo, and KOP 4 was from an active residence along Burnham Road. The viewer sensitivity was rated as low at both KOPs. The visual quality was rated as low to moderate at both, as was overall viewer exposure. Overall visual sensitivity was also rated as low to moderate (see Table 4.13-3).

KOPs 5, 9, and 10 (see Figure 4.13-2) from the May 2012 visual resources study examined Area IV South from the middleground distance zone. KOP 5 was from an active residence west of Burnham Road, KOP 9 was from the BIA Highway 5 near Burnham, and KOP 10 was from along Burnham Road. The viewer sensitivity at the three KOPs varied from low to moderate. The visual quality was rated as low to moderate at all three KOPs. The overall viewer exposure to Area IV South at all three locations was rated as low to moderate. The overall visual sensitivity was also rated as low to moderate at all three (see Table 4.13-3).

KOPs 8, 11, 12, and 17 (see Figure 4.13-2) from the October 2012 visual resources study also examined Area IV North and Area IV South from the foreground and background distance zones. KOP 8 was from BIA Road No. 5, which overlooks both Area IV North and Area IV South. KOP 11 was located along Burnham Road at the southern edge of Area IV South at the southern end of the proposed realignment of Burnham Road. KOP 12 was from an abandoned Navajo residence with overlooks of Area IV North. KOP 17 was located along the present Burnham Road realignment (Phase I) at the intersection with the planned Phase II realignment. The viewer sensitivity and visual quality ranged from low to moderate. Viewer exposure at KOPs 11, 12, and 17 was moderate, and low at KOP 8. The overall visual sensitivity ranged from low to moderate (see Table 4.13-4).

Transmission Lines

The four existing transmission lines connected with FCPP are highly visible from all of the primary highways in the area (U.S. Highway 491, U.S. Highway 64, and New Mexico Highway 371) as well as secondary highways (BIA Road No. 5, BIA Highway N-36, Navajo Nation 3005) and local mine access roads (Burnham Road). The APS Moenkopi 500-kV and Cholla 345-kV transmission lines cross U.S. Highway 491 and are highly visible for extended periods of time along the highway. The PNM 345-kV transmission line to the San Juan Generating Station crosses U.S. Highway 64 and BIA Highway N-36. It is highly visible along extensive lengths of these highways and from along Navajo Nation 3005. The PNM 345-kV West Mesa transmission lines cross New Mexico Highway 371 and Navajo Nation 3005. They are visible for extensive lengths along both highways. The landscape along the entire lengths of transmission lines was not inventoried because it would not be affected by the Proposed Action or alternatives (see Section 4.13.4). However, short portions of all four transmission lines lying within the landscape ROI were analyzed in this EIS. In addition, there is the potential for visual impacts to TCPs located along the transmission Line ROWs.

The APS 500-kV Moenkopi transmission line crosses portions of the Hogback, Eroding Escarpment, Desert Plains, and Chaco River units. The APS 345-kV Cholla transmission line crosses the Eroding Escarpment, Desert Plains, and Chaco River units. The PNM 345-kV transmission line to the San Juan Generating Station lies partially within the landscape that was inventoried during the October 2012 study. Nearby landscape units suggests it crosses the Eroding Escarpment, Desert Plain, San Juan River, and Agricultural Lands units. Similar to the PNM 345-kV transmission line to the San Juan Generating Station, the PNM 345-kV West Mesa transmission line crosses lands that were not evaluated. Projecting nearby landscape units onto it suggests it crosses the Desert Plain, Agricultural Lands, and Reclaimed Mine Lands units.

KOP 7 (see Figure 4.13-2) from the May 2012 study was used in assessing visual sensitivity for the Cholla 345-kV transmission line in the middleground distance zone. The KOP was located along the access road to a radio tower. From this KOP, the viewer sensitivity was rated as low while visual quality, overall viewer exposure, and overall visual sensitivity were rated as moderate (see Table 4.13-3). Visual sensitivity analysis was conducted from the three KOPs along primary roads (KOPs 4 and 6) and a secondary road (KOP 14) in the October 2012 study. Viewer sensitivity ranged from low to moderate and visual quality was rated as moderate at all four KOPs. Viewer exposure was rated as high at KOPs along the primary roads (KOPs 4, 6, and 7), but moderate at the KOP along secondary roads (KOP 14). Overall visual sensitivity ranged from low to moderate with higher ratings along U.S. Highway 491 than U.S. Highway 64 and the secondary road (see Table 4.13-4).

4.13.3 Changes to Visual Resources Affected Environment Post-2014

Two completed Federal Actions have been incorporated into the baseline for this analysis: (1) the EPA has made its ruling with respect to BART to control air emissions; and (2) OSMRE has approved the SMCRA permit transfer from BNCC to NTEC (Section 2.4). These completed Federal Actions are considered part of the environmental baseline to which the impacts of continuing operations and the Proposed Actions are compared in the following section. Neither of these completed Federal Actions would change the affected environment for Visual Resources.

4.13.4 Environmental Consequences

Visual impacts are caused by changes to the existing features in the environment. Changes include adding new features, colors, or textures to the environment that are uncharacteristic to the locality or region. Changes also occur when aesthetic features of the landscape are made less visible.

Impacts of the Proposed Action and the alternatives were evaluated according to the level of change they would cause to the existing landscape character. The assessment of impacts takes into consideration a number of factors, including scenic integrity, viewer sensitivity, visual quality, viewer exposure, and overall visual sensitivity.

Viewer sensitivity, visual quality, viewer exposure, and overall visual sensitivity were previously evaluated for the Navajo Mine Lease Area (Ecosphere 2012d). The same variables were evaluated for the FCPP Lease Area, the Pinabete SMCRA Permit Area, the Burnham Road realignment, and the portions of the four transmission lines lying within the landscape character ROI.

The definitions of impact severity from a previous landscape study (DOI and BIA 2007) were applied in this visual resources impacts analysis. Significance of impacts of the Proposed Action and alternatives on the character of the landscape and its scenic integrity was evaluated according to the following definitions:

- *High Impact.* Proposed Action or alternatives would cause a substantial long-term effect on the landscape character/scenic quality of the existing visual environment of a sensitive viewer.
- *Moderate Impact.* Proposed Action or alternatives would cause a noticeable, but not substantial, change in the landscape character/scenic quality, or would cause a noticeable, but not substantial, change to the visual environment of a sensitive viewer.
- *Low Impact.* Proposed Action or alternatives would cause negligible or no change in the landscape character/scenic quality or the visual environment of a sensitive viewer.

4.13.4.1 Alternative A – Proposed Action

Impacts of the Proposed Action from implementation of each of the primary project components are summarized in Table 4.13-5. The overall impact on visual resources from the Proposed Action would be moderately adverse.

Table 4.13-5 Visual Resources Impacts from the Proposed Action

Impact Variables	Navajo Mine	FCPP	Transmission Lines
Scenic Integrity	High (adverse)	Moderate (adverse)	None
Visual Sensitivity	Moderate (adverse)	Negligible	None
Overall	High to Moderate (adverse)	Low (adverse)	None

Navajo Mine

Under Alternative A, a new permit area (Pinabete SMCRA Permit Area) would be strip mined and reclaimed. The Pinabete SMCRA Permit Area would include portions of the current Navajo Mine SMCRA Permit Area, portions of Area IV North, and all of Area IV South (see Table 3-10). The landscapes of Area IV North and Area IV South are in a predominately natural state with little development visible. The landscape character units within Area IV North consist of Eroding Escarpment, Desert Plain, and Dry Wash (Cottonwood Arroyo). Landscape character units within Area IV South consist of Eroding Escarpment, Desert Plain, Badland, and Dry Wash (Pinabete Arroyo). All landscape types in the Pinabete SMCRA Permit Area have a very high to moderate degree of scenic integrity. The mean scenic integrity of all these landscape units is high. The evaluations of viewer sensitivity, visual quality, viewer exposure, and overall visual sensitivity from the applicable KOPs ranged from low to moderate in both Area IV North and Area IV South in the foreground, middleground, and background distance zones. The low to moderate visual sensitivity in the three distance zones suggests the landscape can accommodate a fairly high degree of adverse visual change.

The strip mining in the Pinabete SMCRA Permit Area would have a high adverse impact on the scenic integrity of three of the landscape units within it (Eroding Escarpment, Desert Plain, and Badland). The removal of the vegetation and topsoil from the surface, excavation of the pits, placement of topsoil and coal stockpiles in Area IV South, and development of the necessary infrastructure (roads and power lines) would have a high degree of contrast with the existing natural landscape, which currently has little

development. The high impacts would be long-term, lasting for the duration of the mining period and until reclamation reestablishes compatible landform contours, drainage patterns, and vegetation. Viewer sensitivity would not change under the Proposed Action, but it would decrease the visual quality to low and increase the viewer exposure to high in the foreground and middleground distance zones. The mean impact on the overall visual sensitivity in these zones would be moderately adverse.

Because the overall impacts on scenic integrity would be highly adverse and the overall impacts on visual sensitivity would be moderately adverse, the overall impacts from the issuance of a SMCRA permit for the Pinabete Mine Area would be highly to moderately adverse. There are no measures to reduce the impacts to scenic integrity during mining operations themselves; however, implementation of reclamation activities as soon as possible after mining operations are complete, as proposed by NTEC, would reduce the duration of impacts. The interim reclamation of exhausted mine pits while mining operations continue at other pits would also reduce visual impacts through backfilling of pits, topsoil replacement, landscape contouring, and revegetation. Further, adverse impacts to visual sensitivity by viewers will naturally decrease over time as viewers grow accustomed to the mining operations in the Pinabete SMCRA Permit portion of the lease.

Four Corners Power Plant

Under Alternative A, the FCPP would continue to operate under a new lease agreement. The FCPP and its associated facilities are located wholly within the Industrial Desert Plains landscape character unit. The character unit is defined by the presence of the FCPP and the associated facilities. The character unit currently has a very industrial appearance with a high degree of scenic integrity. Evaluations of viewer sensitivity ranged from low to moderate at KOPs from the foreground, middleground, background, and seldom seen distance zones along primary and secondary roads. Visual quality was rated as moderate at a majority of the KOPs. Overall viewer exposure ranged from low to high at a majority of the KOPs, and overall visual sensitivity ranged from low to moderate. The low to moderate visual sensitivity suggests the landscape can accommodate a fairly high degree of adverse visual change.

The implementation of the new lease agreement for the FCPP would have a negligible impact on the scenic integrity of the Industrial Desert Plain landscape unit. The Proposed Action would not impact the current industrial appearance of this character unit. The proposed changes to the FCPP would largely be undetectable to sensitive viewers in any of the distance zones. The reduction in the emissions from Units 4 and 5 would reduce the visibility of the FCPP to sensitive viewers, particularly in the background and seldom-seen distance zones, thereby reducing the viewer exposure. The Proposed Action would result in a negligible decrease in the overall visual sensitivity.

The DFADA is also located within the Industrial Desert Plain landscape character unit. The character unit currently has a very industrial appearance with a high degree of scenic integrity. The addition of more material to the existing DFADAs would not change the industrial appearance of the landscape unit. The continued use of existing DFADAs 1 and 2 would have a negligible impact on the scenic integrity of the Industrial Desert Plain landscape character unit.

The proposed new DFADAs would extend into the adjacent Desert Plain landscape character unit. This character unit has a moderate degree of scenic integrity because of the active and reclaimed mining lands within it and the numerous transmission lines that crisscross it. The construction of new DFADAs in the Desert Plain landscape character unit would have a moderately adverse impact on the scenic integrity of the landscape unit. Visual sensitivity analysis was not conducted for the DFADAs because the only viewers are FCPP employees with few opportunities for the public to view them.

The overall impacts from changes to the FCPP would be negligible, and the overall impacts from changes to the DFADAs would be moderately adverse. Therefore, the overall impacts from implementation of the new lease agreement at the FCPP would be low adverse.

Transmission Lines

The ROW renewal for the four transmission lines would have no impact on any of the landscape character units they currently cross, as there is no change to the existing transmission line structures. They also would have no impact on the visual sensitivity in any of the distance zones.

4.13.4.2 Alternative B – Navajo Mine Extension Project

Impacts of Alternative B from implementation of each of the primary elements are summarized in Table 4.13-6. The overall impact on visual resources from Alternative B would be moderately adverse.

Table 4.13-6 Visual Resources Impacts from Alternative B

Impact Variables	Navajo Mine	F CPP	Transmission Lines
Scenic Integrity	High (adverse)	Moderate (adverse)	None
Visual Sensitivity	Moderate (adverse)	Negligible	None
Overall	High (adverse)	Low (adverse)	None

Navajo Mine

The Navajo Mine Extension Project Mine Plan would be followed under Alternative B. Only Area IV South would be mined, resulting in the area of disturbance shown in Table 3-10. The landscape of Area IV South is in a predominately natural state with little development visible. Landscape character units within Area IV South consist of Eroding Escarpment, Desert Plain, Badland, and Dry Wash (Pinabete Arroyo). All four landscape character types possess a moderate to very high degree of scenic integrity. The mean scenic integrity of these landscape units is high. The evaluations of viewer sensitivity, visual quality, viewer exposure, and overall visual sensitivity ranged from low to moderate in Area IV South in the foreground, middleground, and background distance zones. The low to moderate visual sensitivity suggests the landscape can accommodate a fairly high degree of adverse visual change.

Alternative B would have a high adverse impact on the scenic integrity of four landscape units. The removal of the vegetation and topsoil from the surface, excavation of the pits, placement of coal stockpiles along the boundary of the permit area, and development of the necessary infrastructure (roads and power lines) would have a high degree of contrast with the existing natural landscape, which currently has little development. The high impacts would be long-term, lasting for the duration of mining until reclamation reestablished compatible landform contours, drainage patterns, and vegetation. Plan implementation would decrease the visual quality to low and increase the viewer exposure to high in the foreground and middleground distance zones. The overall impact on the visual sensitivity in these zones would be moderate. The impacts on visual resources from Alternative B would be higher than they would be for Proposed Action due to the increased miles of roads and power lines and the alterations to Pinabete Arroyo. The overall impacts would be highly adverse.

Four Corners Power Plant

Under Alternative B, the F CPP would continue to operate under the same lease amendment as in the Proposed Action. Impacts would be the same as described for the Proposed Action (see Section 4.13.4.1).

Transmission Lines

The ROW renewal for the four transmission lines would have no impact on any of the landscape character units they currently cross and also would have no impact on the visual sensitivity in any of the distance zones.

4.13.4.3 *Alternative C – Alternative Pinabete Mine Plan*

Impacts of Alternative C from implementation of each of the primary elements are summarized in Table 4.13-7. The overall impact on visual resources from Alternative C would be moderately adverse.

Table 4.13-7 Visual Resources Impacts from Alternative C

Impact Variables	Navajo Mine	FCPP	Transmission Lines
Scenic Integrity	High (adverse)	Moderate (adverse)	None
Visual Sensitivity	Moderate (adverse)	Negligible	None
Overall	High (adverse)	Low (adverse)	None

Navajo Mine

Under Alternative C, NTEC would implement an alternative Pinabete Mine Plan. The proposed mining activity would be located in both Area IV North and Area IV South in two separate pits with disturbance as shown in Table 3-10. The landscapes of Area IV North and Area IV South are in a predominantly natural state with little development visible. The landscape character units within Area IV North consist of Eroding Escarpment and Desert Plain. Landscape character units within Area IV South consist of Eroding Escarpment, Desert Plain, Badland, and Dry Wash (Pinabete Arroyo). All four landscape types have a very high to moderate degree of scenic integrity. The mean scenic integrity for these units is high. The evaluations of viewer sensitivity, visual quality, viewer exposure, and overall visual sensitivity ranged from low to moderate in both Area IV North and Area IV South in the foreground, middleground, and background distance zones. The low to moderate visual sensitivity suggests the landscape can accommodate a fairly high degree of adverse visual change.

Alternative C would have a high adverse impact on the scenic integrity of four landscape units (see Table 4.13-7). The removal of the vegetation and topsoil from the surface, excavation of the pits, placement of coal stockpiles within the Pinabete SMCRA Permit Area, and development of the necessary infrastructure (roads and power lines) would have a high degree of contrast with the existing natural landscape, which has little development present currently. The high adverse impacts would be long-term lasting for the duration of mining until reclamation reestablishes compatible landform contours, drainage patterns, and vegetation. It would decrease the visual quality to low and increase the viewer exposure to high in the foreground and middleground distance zones. The impact on the overall visual sensitivity in these zones would be moderate. Overall, the impacts on visual resources from Alternative C would be higher than they would be for the Proposed Action due to the increased amount of disturbance acreage for the mine, increased length of the Burnham Road realignment, and the increased miles of roads and power lines to be constructed.

Four Corners Power Plant

Under Alternative C, the FCPP would continue to operate under the same lease amendment as in the Proposed Action. Impacts would be the same as described for the Proposed Action (see Section 4.13.4.1).

Transmission Lines

The ROW renewal for the four transmission lines would have no impact on any of the landscape character units they currently cross and also would have no impact on the visual sensitivity in any of the distance zones.

4.13.4.4 Alternative D – Alternative Ash Disposal Area Configuration

Impacts of Alternative D from implementation of each of the primary elements are summarized in Table 4.13-8. The overall impact on visual resources from Alternative D would be moderately adverse.

Table 4.13-8 Visual Resources Impacts from Alternative D

Impact Variables	Navajo Mine	F CPP	Transmission Lines
Scenic Integrity	High (adverse)	Moderate (adverse)	None
Visual Sensitivity	Moderate (adverse)	Negligible	None
Overall	High to Moderate (adverse)	Low (adverse)	None

Navajo Mine

Under this alternative, OSMRE would approve the Pinabete SMCRA Permit application and renew the SMCRA permit for the Navajo Mine permit. The Navajo Mine would operate as described under the Proposed Action. Impacts would be the same as described for the Proposed Action.

Four Corners Power Plant

Under this alternative, the area of disturbance required for the DFADAs would be 350 acres instead of 385 acres. The 10 percent reduction in surface area of the DFADAs would result in the same visual impacts as described for the Proposed Action. All other F CPP components of this alternative are the same as for the Proposed Action. Therefore, impacts would be the same as described for the Proposed Action.

Transmission Lines

Under this alternative, the transmission line ROWs would be approved and they would continue to be operated and maintained as described for the Proposed Action. The ROW renewal for the four transmission lines would have no impact on any of the landscape character units they currently cross and also would have no impact on the visual sensitivity in any of the distance zones. Impact would be the same as those described for the Proposed Action.

4.13.4.5 Alternative E – No Action Alternative

Impacts of Alternative E from implementation of each of the primary elements are summarized in Table 4.13-9. The overall impact on visual resources from Alternative E would be low.

Table 4.13-9 Visual Resources Impacts from Alternative E

Impact Variables	Navajo Mine	F CPP	Transmission Lines
Scenic Integrity	High (beneficial)	High (beneficial)	Unknown
Visual Sensitivity	High (beneficial)	High (beneficial)	Unknown
Overall	High (beneficial)	High (beneficial)	Unknown

Navajo Mine

Under the No Action Alternative, the Navajo Mine would close. The Pinabete SMCRA Permit Area (Areas IV North and South) would not be mined. Burnham Road would not be realigned. Mining in the Navajo Mine Permit Area (Areas III and IV North) would continue until the current SMCRA permit expires. Areas I and II, which are also part of the Navajo Mine Permit Area, have already been reclaimed, and no new mining would occur in these areas. Upon permit expiration, NTEC would begin reclamation activities in Areas III and IV North. Reclamation activities would continue until OSMRE approval, indicating that all requirements have been met. It is expected that all reclamation would be completed by June 2021. All ancillary buildings and facilities (e.g., communication lines, railroad) would be removed, and the land would be reclaimed.

Alternative E would have a high beneficial (as opposed to adverse) impact on scenic integrity and overall visual sensitivity. The scenic integrity of the Reclaimed Mine Lands is currently evaluated as low. The reclamation of Areas III and Area IV North and removal of the ancillary buildings and facilities would add substantially to the overall scenic integrity of this landscape character unit. Impacts on the visual sensitivity from Alternative E would also be high. Visual quality would be increased substantially with the removal of the cultural modifications from the landscape. Viewer sensitivity and overall viewer exposure would not be affected. The overall impact on the landscape from Alternative E would, thus, be highly beneficial.

Four Corners Power Plant

Under the No Action Alternative, Units 4 and 5 would be shut down when the current lease expires in 2016. The plant facilities would be decommissioned and dismantled. The impacts on the scenic integrity of the Industrial Desert Plains landscape character type would be negligible. Visual quality would be increased substantially with the removal of the cultural modifications from the landscape. Viewer sensitivity and overall viewer exposure would not be affected. The overall impact on the landscape would be highly beneficial.

Transmission Lines

Under the No Action Alternative, the ROWs for the four subject transmission lines would not be approved. The lines would either be decommissioned and dismantled or left in place. Dismantling would have a highly beneficial impact on the scenic integrity of the landscape character units they cross. Leaving them in place would have no impact on the scenic integrity of the landscape units they cross.

Dismantling the transmission lines would increase visual quality and decrease viewer exposure. The net effect on overall visual sensitivity would be highly beneficial. Leaving the transmission lines in place would have no impact on visual quality, viewer exposure, or overall visual sensitivity.

4.13.5 Visual Resources Mitigation Measures

The Project Applicants have proposed measures that would be implemented to reduce or eliminate some of the environmental impacts of the Proposed Action. These measures include specific mitigating measures for certain environmental impacts, standard operating procedures that reduce or avoid environmental impacts, and BMPs for specific activities. These are described in Section 3.2.6.13. These measures are part of their application materials and are enforceable through permit or lease conditions. In addition, the Project Applicants must comply with additional protective regulatory requirements including laws, ordinances, regulations, and standards that are enforceable by the responsible agency over that activity. These are described in the Regulatory Compliance Framework Section for each resource category. Where the environmental analysis in this EIS recommends additional protective measures, over and above the applicant proposed measures and regulatory compliance, they are listed below as specific mitigation measures.

The Proposed Action, including the continuing operations of Navajo Mine, FCPP, and the transmission lines, would result in short-term adverse impacts to the scenic integrity of multiple landscape character units through the introduction of elements that are uncharacteristic to the existing visual environment. The introduction of uncharacteristic elements results in a reduction in the scenic integrity of the landscape character unit. The contrasts between the characteristic elements and non-characteristic elements are noticeable to the casual viewer and result in an adverse impact to visual resources. Short-term impacts from the excavation of mine pits, construction of access road, and stockpiling of top soil and overburden within the Pinabete SMCRA Permit Area would create adverse visual impacts as these elements are uncharacteristic to the existing visual environment and create a high degree of visual contrast highly noticeable to the casual observer. However, interim reclamation would include backfilling of mine pits, re-contouring of the surface to its original surface elevations, and re-vegetation with the appropriate seed mixture to return the mined area to its original condition as closely as feasible. Reclamation would occur as soon as possible after the mining is complete and while mining would continue to occur in other portions of Pinabete SMCRA Permit Area. The interim reclamation of those portions of the Pinabete SMCRA Permit Area in which mining was complete would reduce the strong contrasts and reduce them to minor levels. No additional mitigation measures would be necessary.

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