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5.13 UTILITIES AND SERVICE SYSTEMS

5.13.1 AFFECTED ENVIRONMENT

The Cadiz Project area is located in a very rural area with little or no local utility services. Of the known utilities within the area, Pacific Bell (PacBell), Pacific Gas and Electric (PG&E), and Southern California Edison (SCE) have facilities. In addition to these utilities, there is an interstate crude oil pipeline which transverses the Cadiz Project area owned and operated by Questar, and several interstate natural gas pipelines as shown on Figure 5.13-1.

Telephone

PacBell provides services to the communities of Amboy and Cadiz through microwave transmissions and underground local telecommunication lines. PacBell's telephone conduits and microwave transmission towers are not located within the Cadiz Project area, however. Local lines are limited to the communities north of the Cadiz Project site, along National Trails Highway.

Each of the railroad companies in the area, BNSF and the ARZC, has its own telephone lines located adjacent to and within the rights-of-way of their respective rail lines.

Both AirTouch Cellular and AT&T Wireless provide service in the Cadiz Valley through booster stations. The AirTouch Cellular and the AT&T Wireless booster stations are located within the Cadiz Project area.

Crude Oil

All American Pipeline, L. P. previously owned and operated a 30-inch diameter, high pressure, common carrier, crude oil pipeline. This pipeline flows northwest to southeast through a portion of the project wellfield. A pump and heater station (Cadiz Station) is located in the southeast corner of Section 26, T5N, R14E. This pump station is located in the southeastern corner of the project wellfield and adjacent to Cadiz-Rice Road. Pump station facilities include two 150,000 barrel floating roof crude oil storage tanks and other facilities and equipment. This pipeline facility was recently sold to the El Paso Natural Gas Company and is now in service as a natural gas pipeline.

The Questar pipeline runs generally southwest to northeast through the project wellfield. Both the All American and Questar pipelines cross the proposed Cadiz Project water conveyance facilities for all project construction alternatives.

Natural Gas

Four interstate natural gas pipelines, and appurtenant facilities are located north of National Trails Highway and north of the Cadiz Project area. One pipeline facility is owned and operated by PG&E and is utilized to provide natural gas service in the general vicinity of the Cadiz Project area. A second pipeline facility, located approximately 200 feet to the north, is owned and operated by the Mojave Pipeline Operating Company. A third pipeline facility, located several miles north of the PG&E and Mojave Pipeline Operating Company facilities, is owned and operated by SCE. The fourth pipeline is the former All American Pipeline crude oil pipeline discussed above; now owned and operated by the El Paso Natural Gas Company.

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The All American Pipeline, L.P. owns and operates a 6-inch, underground natural gas pipeline within the Cadiz Project area. This pipeline originates at the PG&E pipeline and runs south, along the east side of the ARZC rail line. The pipeline then crosses to the west side of the ARCZ rail line to provide natural gas to the Cadiz pump station.

Electricity

SCE provides electrical service to Amboy, Cadiz and other communities located on National Trails Highway.

Currently, the only electrical lines at the Cadiz Project area are those servicing the limited domestic and related uses in the communities along National Trails Highway.

Sewer

Sewage disposal is handled locally using septic tanks and leach lines. There are no public sewage treatment plants serving the Cadiz Project area.

Water

Residents and businesses in the nearby communities of Amboy, Chambless and Essex, to name a few, obtain water using private wells or water is shipped in by truck or rail. Cadiz Inc. agricultural operations provide their own domestic water supply and agricultural irrigation water supply needs through their existing groundwater wells.

Storm Drains

The Cadiz Project area consists of mountainous regions scattered through low lying valley areas. Runoff becomes concentrated through the mountain ravines, and as a result, flash floods occur in the valleys. Due to the lack of development, storm drain systems operated by a public agency do not exist in the area. Individual entities, however, have taken precautions to protect their facilities. The ARZC and BNSF have constructed and maintain levees along their respective rail lines alignments to divert runoff to undercrossings to protect their rail lines and other facilities.

Solid Waste Disposal Facilities

Solid waste generated by the Cadiz Inc. agricultural operations is collected by Sierra Environmental and is transported to the Twentynine Palms Landfill. This landfill has sufficient capacity to dispose of additional amounts of solid waste into the foreseeable future. Private residences located in the vicinity of the Cadiz Project area individually dispose of their solid waste. For example, individuals haul their solid waste to the Twentynine Palms landfill or another permitted facility.

5.13.2 CEQA THRESHOLDS OF SIGNIFICANCE

For purposes of CEQA, a project will normally have a significant adverse environmental impact on utilities and service systems if it results in:

- Exceedance of the wastewater treatment requirements of the Colorado River Basin Regional Water Quality Control Board.

- A need for expansion or construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects.
- A need for expansion or construction of new storm water drainage facilities, the construction of which could cause significant environmental effects.
- The need for significant new or expanded water supplies or water entitlements.
- A determination by the local wastewater treatment provider that, in addition to its existing commitments, it cannot serve the project because of a lack of adequate wastewater treatment plant capacity.
- Insufficient permitted capacity in the landfill serving the project to accommodate the project's solid waste disposal needs.
- Disruption of service provided by privately owned utility companies.
- Conflict with federal, state or local statutes and regulations related to solid waste disposal.

For a further discussion of CEQA thresholds of significance, see Section 5.20.

5.13.3 METHODOLOGY

Several resources were utilized to obtain utility information. These resources included a request to DigAlert, review of USGS quadrangle maps, and phone consultation. After reviewing the responses from DigAlert and the USGS maps, a utility request package was prepared for distribution. This utility package included maps of the Cadiz Project area, a description of the Cadiz Project, and a request for information sent to each utility company regarding its facilities in the Cadiz Project area.

To facilitate the request for information, follow up telephone calls were made. In several cases, additional multiple information packages were prepared for several individuals within the same utility company in order to ensure that the correct individuals were contacted. Attempts were made to contact unresponsive addressees by phone and voice message, where possible.

Typically, a lack of response was due to the absence of any utility company facilities within or sufficiently close to the Cadiz Project area. Of those utility companies that did respond, the majority sent a letter asking questions regarding their concerns about the project but omitted maps of their facilities. Follow up to obtain the locations of facilities within or serving the Cadiz Project area often had to be made. Whenever possible and available, the utility companies provided maps detailing the locations of their respective facilities.

5.13.4 IMPACTS

Eastern Alternative

Telephone

Construction and operation of the Cadiz Project would result in a slight increased need for telephone communication services to serve the telecommunications needs for facilities such as the Cadiz Pumping Plant, project wellfield and related Cadiz Project facilities. During construction, communications are expected to use cell phones and two-way radios. The project would also install its own telecommunications wiring. Existing telecommunications booster stations would be used. The volume of communications resulting from Cadiz Project operations would not result in a need for additional or upgraded booster stations. Therefore, no significant adverse impact would be created on telephone services as a result of the Cadiz Project.

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Crude Oil

The construction of the Cadiz Project would be coordinated with Questar. Proper separation of conveyance and other facilities from the oil pipeline will be incorporated into the Cadiz Project design. For example, if necessary, the conveyance facilities would be constructed underneath the oil pipeline and in accordance with the requirements of the pipeline owners and operators. Blasting near oil pipelines would not be permitted due to potential explosion hazard.

Natural Gas

Although the use of natural gas was considered as a power source for the Cadiz Project to eliminate the need for lengthy electrical transmission lines, it was determined that natural gas would not be used in the construction or operation of the Cadiz Project facilities. Refer to Section 5.9 (Energy and Mineral Resources) for a description of this analysis. The water conveyance facilities would be designed to avoid the 6-inch natural gas All American Pipeline, L.P. facility. Proper separation of conveyance facilities and other Cadiz Project facilities from the gas pipeline will be incorporated into the Cadiz Project design. For example, if necessary, the conveyance facilities would be constructed underneath the gas pipeline and in accordance with the requirements of the pipeline owners and operators. Blasting near the gas pipeline would not be permitted due to potential explosion hazard. Therefore, construction of the proposed Cadiz Project would not significantly impact the existing natural gas pipelines, nor would natural gas be required for project operations.

Electricity

Construction of the Cadiz Project would require electricity to operate construction equipment. This would be provided by the use of portable generators and the use of electrical power presently available at Cadiz and at Iron Mountain Pumping Plant. Substantial amounts of electrical power would be required on a long-term basis to operate project wellfield pumps and the Cadiz Pumping Plant when extraction or spreading activities are occurring. Some electrical power would be needed for security lights at Cadiz Project facilities. Electricity to power these facilities would be obtained from Metropolitan's power supply currently used to provide power to other pumping plants along the Colorado River Aqueduct. As explained in Section 5.9 (Energy and Mineral Resources), other pumps would be taken off-line when the Cadiz Project was in spreading or withdrawal mode. New electrical equipment would be installed as necessary to supply power to Cadiz Project facilities. These new power lines would parallel the water conveyance facility and wellfield pipelines. Therefore, Metropolitan's existing power supply is sufficient to power the Cadiz Project facilities.

Water

A supply of water would be required to construct the Cadiz Project. Water would also be consumed on a daily basis by construction crews and by operations and maintenance staff once the project has been constructed. Construction water would be obtained from Cadiz Inc. agricultural operations wells and from Iron Mountain Pumping Plant. Water used for construction purposes would be trucked to construction areas and stored in tanks. During construction, a large quantity of water would also be needed for pressure testing the water conveyance facility. Since a sufficient supply of water is currently available in the Cadiz Project area, the project would not create a significant adverse impact on the area's water supply or water supply facilities.

Stormwater Runoff Facilities

Cadiz Project construction activities would not impact any existing storm runoff facilities. Construction activities would also avoid impacts to the drainage diversion berms constructed by the railroads.

Solid Waste Facilities

Construction of the Cadiz Project would generate small quantities of solid waste. This solid waste would be associated with construction worker activities such as meals, office record keeping, etc. This waste material would be collected and periodically hauled off the site to be disposed of at the Twentynine Palms Landfill. Cadiz Project operations would generate only negligible quantities of solid waste associated with permanent employee activities such as operation and maintenance of project spreading basins and Cadiz Pumping Plant maintenance. Since sufficient capacity is available in the Twentynine Palms Landfill, the proposed project would not adversely impact the solid waste disposal facility.

Western Alternative

Construction and operation of the Western Alternative would result in the same impacts to services and utility systems as would occur under the Eastern Alternative. The Western Alternative requires construction of power lines from the Iron Mountain Pumping Plant to the West Portal in order to connect the Cadiz Project to Metropolitan's existing electric power supply.

Combination Alternative

Construction and operation of the Combination Alternative would result in the same impacts to service and utility systems as would occur under the Western Alternative.

Eastern/Canal Alternative

Construction and operation of the Eastern/Canal Alternative would result in the same impacts to service and utility system as would occur with the Eastern Alternative. The canal segment of the Eastern/Canal Alternatives does not cross any pipelines or other utility lines.

No Project Alternative

The No Project Alternative would have no impact on utilities and service systems because the Cadiz Project would not be constructed, operated or maintained.

5.13.5 MITIGATION MEASURES

The following mitigation measures are proposed to reduce the Cadiz Project's impacts on utility and services systems.

USS-1 The water conveyance facilities shall be constructed underneath the existing crude oil and natural gas pipelines. All construction activities shall be closely coordinated with the operators of the affected oil and gas pipelines.

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USS-2 Utilities that the conveyance facilities crosses underneath shall be supported in place during pipeline construction.

USS-3 Should a utility line be damaged during Cadiz Project construction activities, the utility service providers shall be immediately contacted to determine appropriate repair actions.

5.13.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures USS-1 through USS-3, impacts of the Cadiz Project on utilities and service systems will be reduced to below a level significance for all project alternatives.