Appendix C

San Juan Power Plant
Shiprock
San Juan River
Morgan Lake
Four Corners Power Plant
Navajo Nation
Chaco River

APPENDIX C

Construction Activities for Transmission Lines

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CONSTRUCTION ACTIVITIES FOR TRANSMISSION LINES

Surveying the centerline would involve verifying the centerline of the transmission line alignment, structure centers, right-of-way boundaries, access roads (where needed), and spur roads to structure sites. Where the proposed transmission line would parallel an existing transmission line or other linear facility, the access road within the right-of-way for the existing facility would be used where possible to minimize the amount of new road construction. These typically two track roads may require upgrading before they could be used for construction. To minimize construction, spur roads to tower sites may be practical where suitable primary and secondary roads exist.

Clearing of natural vegetation would be required for construction of access roads and tower sites, land-surveying activities, clearances for electrical safety, long-term maintenance, and reliability of the transmission line. At each tower site, leveled areas, or pads (approximately 40 feet), would be needed to facilitate the safe operation of construction equipment, such as cranes. At each structure site, a work area of approximately 200 by 200 feet would be required for the location of structure footings, assembly of the tower, and equipment maneuvers. The work area would be cleared of vegetation only to the extent needed. After construction, disturbed area not needed for normal maintenance of the transmission line would be graded to blend as near as possible with the natural contours, and revegetated with indigenous plant species. Areas would be reseeded prior to the season(s) when precipitation is normally received.

A minimum of two material staging sites would be located near each end of the transmission line; at the well field and at the power plant site. These would be located in areas previously disturbed or in areas of minimal vegetative cover where possible and would require about 2 acres of land. The location of these sites would be coordinated with the Bureau of Indian Affairs (BIA), Navajo Nation, affected local Navajo Chapters, and Desert Rock Energy LLC.

Concrete used to construct structure foundations would be dispensed from a portable concrete batch plant located at the proposed power plant site. Approximately 2 acres of land would be required for the batch plant.

The material staging sites and batch plant also would serve as field offices, reporting locations for workers, parking space for vehicles and equipment, sites for material storage, and stations for equipment maintenance. Facilities would be fenced and gates locked. Security guards would be assigned where needed.

To install the power transmission line structure foundation, vertical excavations would be made with power-drilling equipment. Concrete footings would be cast-in-place. Foundation excavation and installation would require a power auger or drill, crane, material trucks, and ready-mix concrete trucks.

Bundles of the structures' steel members and associated hardware would be assembled on site into subsections of convenient size and weight and hoisted into place using a large crane and then fastened together to complete the structure. Insulators, hardware, and stringing sheaves would be delivered to each structure site and the towers would be rigged with insulator strings and stringing sheaves.

Pilot lines would be pulled (strung) from structure to structure by helicopter and threaded through the stringing sheaves at each tower. Following the pilot lines, a larger diameter, stronger line would be attached to conductors to pull them through. Conductors and ground wires would be strung using

powered pulling equipment at one end and powered tensioning equipment at the other end of a conductor segment. Sites for tensioning equipment and pulling equipment would be approximately 3 miles apart. The tensioning site would be an area approximately 200 by 200 feet. Tensioners, line trucks, wire trailers, and tractors needed for stringing and anchoring the ground wire or conductor would be located at this site. The pulling site would require approximately half the area of the tension site. A puller, line trucks, and tractors needed for pulling and temporarily anchoring the counterpoise, ground wire, and conductors would be located at this site.

Construction sites, material storage yards, and access roads would be kept in an orderly condition throughout the construction period. The right-of-way would be restored as near to its original conditions as practicable. All practical means would be made to restore the land to its original contour and to restore natural drainage patterns along the right-of-way. Because revegetation would be difficult in many areas of the project where precipitation is normally minimal, every effort would be made to minimize disturbance during construction. All practical means would be made to increase the chances of vegetation re-establishment in disturbed areas (e.g., use of native plants, or seed mix specified by BIA and/or the Navajo Nation).