

CHAPTER 3 NORTHERN GAS PIPELINE ALTERNATIVE

As described in Chapter 1 of the Final Environmental Impact Statement (EIS), this chapter has been developed to address a new routing alternative for the proposed gas pipeline to the Transwestern Pipeline Company's supply lines north of the proposed pipeline. The alternative is presented in this chapter since it deals with one complete component of the proposed Griffith Energy Project.

Whenever the potential impacts on a resource area are considered the same as for the proposed action, this chapter simply refers to the Draft EIS and does not repeat the impact analyses.

CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

2.2 ALTERNATIVES

2.2.1.1 Alternative Gas Pipelines

An alternative route for the proposed natural gas supply pipeline between the Plant Site and the existing pipeline owned by Transwestern Pipeline Company (TPC) is being considered. This alternative would proceed due north from the Plant Site either in the County road ROW located 0.5 miles east of the western boundaries of Township (T) 19N., Range (R) 17W., Section (sec.) 6, and in T 20N., R 17W., Sections 31, 30, and 19 or near this ROW in a separate easement. This route is shown on Figure 2.2-1. After construction, the ROW would be reclaimed to landowner specifications.

CHAPTER 3 AFFECTED ENVIRONMENT

3.1 GEOLOGY/MINERALS/GEOLOGIC HAZARDS

3.1.1 Power Plant and Associated Facilities

Geological conditions are the same for the alternative gas pipeline route to the north from the power plant as those described in section 3.1.1 of the Draft EIS.

3.2 WATER RESOURCES

3.2.1 Power Plant and Associated Facilities

3.2.1.1 Groundwater

Groundwater conditions for the alternative gas pipeline route north from the power plant site are the same as described in sections 3.2.1.1 and 3.2.2.1 of the Draft EIS.

3.2.1.2 Surface Water

Surface water conditions for the alternative gas pipeline route north from the power plant site are the same as described in section 3.2.1.2 and 3.2.2.2 of the Draft EIS, with only minor location changes.

3.3 METEOROLOGY/AIR QUALITY

Climate and Air Quality conditions in the location of the alternative gas pipeline are similar to those described in Sections 3.3.1, Climate and 3.3.2, Air Quality of the Draft EIS.

3.4 SOILS

3.4.1 Power Plant and Associated Facilities

Soils at the location of the gas pipeline routes located on BLM lands have been mapped by the Natural Resources Conservation Service (NRCS, 1998). Three mapping units have been identified along the pipeline route: 052 Casteneda extremely gravelly loam, dry, 1 to 7 percent slopes; 037 Arizo-Franconia-Riverwash complex, dry, 1 to 3 percent slopes; and 150 Mohon-Poachie complex, dry, 2 to 15 percent slopes

052-Casteneda extremely gravelly loam, dry, 1 to 7 percent slopes, has formed on fan terraces with slopes of 1 to 7 percent. These are moderately deep soils over a lime cemented hardpan, are in an upland landscape position, and not subject to flooding. These soils have a moderate shrink-swell potential. The hazard of water erosion is slight, while the hazard of wind erosion is slight. Corrosivity for uncoated steel is high. Potential rooting depth is 20 to 40 inches. Available water capacity for these soils is moderate.

037-Arizo-Franconia-Riverwash complex, dry, 1 to 3 percent slopes, has formed on flood plains and alluvial fans. Riverwash soils are in unstabilized areas of sandy, silty, or gravelly sediments. These areas are flooded, washed, and reworked by streams so frequently that they support little or no vegetation. These are very deep soils. The Arizo soils are subject to frequent flooding and the Franconia soils flood occasional. The soils have a moderate shrink-swell potential. The hazard of wind erosion is slight and the hazard of water erosion is slight. Corrosivity for uncoated steel is high. Available water capacity is low.

150-Mohon-Poachie complex, dry, 2 to 15 percent slopes, has formed on fan terraces with slopes of 2 to 15 percent. These are deep and very deep soils. They are in an upland landscape position, and are not subject to flooding. These soils have a high shrink-swell capacity. The hazard of water erosion is moderate, while the hazard of wind erosion is slight. Corrosivity for uncoated steel is high. Potential rooting depth is more than 60 inches. Available water capacity is high.

The alternative pipeline route east of the proposed pipeline route would cross the same soil mapping units as the proposed route (with the exception of the Poachie mapping unit), but would differ slightly in the length of pipeline in each of the mapping units.

3.5 VEGETATION

3.5.1 Power Plant and Associated Facilities

The alternative gas pipeline is located within desert scrub communities situated on west-facing alluvial fans of the Sacramento Valley. The route is occupied by Mohave creosotebush-yucca on soils in the northern portion and the southern portion of the route is occupied by Sonoran creosotebush-bursage. Vegetation communities correlated to the soil map units in 3.4 Soils are as follows:

052- Casteneda, dry; creosotebush, white bursage, range ratany, and rayless goldenhead.

037-Arizo-Franconia-Riverwash complex; creosotebush, white bursage, white burrobrush, and catclaw acacia.

150-Mohon-Poachie; Big Galleta, Anderson wolfberry, and range ratany. Poachie; white bursage, creosote bush, and Joshua Tree.

No wetlands occur in the route of the alternative gas pipeline located. No special status plant species are known from the location of the alternative gas pipeline.

3.6 WILDLIFE

3.6.1 Power Plant and Associated Facilities

Wildlife resources in the location of the alternate pipeline route are essentially the same as described in Section 3.6 of the Draft EIS. No species of special concern were observed during the survey of the alternative pipeline route, but the area has been determined to contain marginal habitat for four species of special interest including rosy boa, chuckwalla, Gila monster, and Sonoran desert tortoise.

3.7 CULTURAL RESOURCES

3.7.1 Power Plant and Associated Facilities

3.7.1.2 Gas Pipelines

Cultural resources in the location of the alternate pipeline route are essentially the same as described in Section 3.7 of the Draft EIS.

3.8 LAND USE

3.8.1 Power Plant and Associated Facilities

Land ownership for the entire alternate pipeline route is private. Area land ownership is shown in Figures 3.8-1a & 1b, 3.8-2a & 2b, and 3.8-3a & 3b of the Draft EIS. All affected lands are desert scrub rangelands.

3.9 RECREATION

3.9.1 Power Plant and Associated Facilities

Recreation conditions and opportunities in the location of the alternate pipeline route are the same as described in Section 3.9 of the Draft EIS.

3.10 VISUAL RESOURCES

3.10.1 Power Plant and Associated Facilities

Visual resources in the location of the alternate pipeline route are the same as described in Section 3.10 of the Draft EIS.

3.11 SOCIOECONOMICS

Socioeconomic conditions in the area are the same as those described in Section 3.11 of the Draft EIS.

3.12 TRANSPORTATION

3.12.1 Power Plant and Associated Facilities

Current access to the alternative gas pipeline route consists of three primary roadways: (1) a primitive access road developed along the north-south section lines between R17W and R18W for about six miles north of the proposed Griffith Energy site - this access road is approximately 0.5 miles west of the alternative pipeline route; (2) an access road beside portions of the Interstate I-40 in T 20N., R 17W., and (3) a non-maintained road diagonally crossing of R 17W., T 20N., secs. 19, 30, and 31.

3.13 NOISE

3.13.1 Power Plant and Associated Facilities

The existing noise conditions in the area of the alternative gas pipeline are the same as described in Section 3.13 of the Draft EIS.

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

Table 4.0-1 presents a comparison of selected elements potentially affected by the proposed and alternative gas supply pipeline routes to the TPC supply line.

Table 4.0-1. Comparison of Gas Supply Pipeline Routes from the Existing Transwestern Pipeline Company Pipeline

ELEMENT	PROPOSED PIPELINE	ALTERNATIVE PIPELINE
Length (feet)	14,230	15,500
Acres in 50-ft. ROW	16.3	17.8
Soil Units Crossed	4	3*
Vegetation types crossed	Sonoran desert scrub	Sonoran and Mohave desert scrub
Vegetation removed from 20-ft. centerline (acres)	0**	7.1
Special status species potential	Low	Low

*Same three as in proposed route.

**Existing roadbed would be used.

4.1 GEOLOGY/MINERALS/GEOLOGIC HAZARDS

4.1.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts from the alternative gas pipeline would be similar to those described in Section 4.1.2.1 of the Draft EIS.

4.2 WATER RESOURCES

4.2.3.1.2 *Alternative Gas Pipeline (Northern)*

Groundwater. Potential impacts to the groundwater from the alternative pipeline would be the same as those described in Sections 4.2.2.1.1 and 4.2.2.2.1 in the Draft EIS.

Surface water. Potential impacts to surface water from the alternative pipeline would be the same as those described in Section 4.2.1.2.2 of the Draft EIS. The alternative pipeline would cross three branches of Griffith Wash (designated as 100-year floodplain) in slightly different locations than the proposed pipeline.

The pipeline crossing areas of the flood plains would be examined to determine if the crossing was experiencing erosion or deposition. If erosion was the predominant activity, the pipeline would be buried to a depth greater than standard depth. If deposition was the predominant activity, the pipeline would be buried according to standard design.

4.3 METEOROLOGY/AIR QUALITY

4.3.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts to air quality from the alternative pipeline are the same as those described in Section 4.3.3.1 of the Draft EIS.

4.4 SOILS

4.4.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts to soils from the alternative pipeline are similar to those described in sections 4.4.2.1. and 4.4.3.1 in the Draft EIS. The alternative pipeline route would only cross three of the four soil mapping units that are crossed by the proposed pipeline route. The alternative route would not cross the Poachie very gravelly loam, dry, 1 to 4 percent slopes. Instead, the alternative route would create more disturbance in the Casteneda extremely gravelly loam, dry, 1 to 7 percent slopes.

4.5 VEGETATION

4.5.3.1.2 *Alternative Gas Pipeline (Northern)*

The area of disturbance would be restricted to the locations of overland travel from the existing roads to the alternative pipeline right-of-way. Construction of the gas supply pipeline would result in the direct and long-term loss of about 17.8 acres of Sonoran and Mohave desert scrub habitat (divided approximately equally between the two vegetative communities), while the proposed pipeline would disturb the Sonoran scrub community almost exclusively. It would take several years to reestablish a protective cover of vegetation on the disturbed soils. This loss would be a very small portion of the affected community type.

4.6 WILDLIFE

4.6.3.1.2 *Alternative Gas Pipeline (Northern)*

Long-term impacts include the habitat loss of approximately 17.8 acres for the alternative gas supply pipeline. Since all of the habitats encountered within the Project area are widely distributed in the region, loss of this habitat would not adversely affect the viability of any species. No riparian or wetland areas, which exhibit the greatest abundance of diversity within the desert communities, would be impacted.

The construction and operation of the alternative gas pipeline is not expected to have any adverse impacts on Federal and/or state listed species of special concern. Site reconnaissance and subsequent studies revealed no areas of suitable habitat or known locations or occurrences of federal or state listed threatened and endangered species within the Project area. However, three BLM sensitive species (rosy boa, chuckwalla, and Gila monster) and one BLM and AGFD sensitive species (Sonora Desert tortoise) have the potential to occur along the alternative.

The four sensitive species have a low potential for occurrence within the alternative pipeline route. Based on observations of lack of suitable habitat and existing land use conditions, populations or individuals of these four species are unlikely to occur within the pipeline route. In general, the habitats encountered within the Project area are widely distributed in the region. Even though impacts are not expected to be significant, Griffith Energy would implement the following mitigation measures for wildlife:

- A qualified biologist would be responsible for developing and implementing a worker education program to inform, educate, and properly identify any species of special concern.
- Specific seeding rates and approved seed mixtures would be developed on a site-specific basis in consultation with the landowner.

4.7 CULTURAL RESOURCES

4.7.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts to cultural resources from the alternative pipeline are the same as those described in Section 4.7.2.1 of the Draft EIS.

4.8 LAND USE AND RECREATION

4.8.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts to land use and recreation are described in Section 4.8.2.1 of the Draft EIS. No other potential impacts are expected in the alternative pipeline route.

4.9 VISUAL RESOURCES

4.9.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential impacts to the visual resources of the Project area from the construction of the alternative gas supply pipeline are the same as described in Section 4.9.2.1 in the Draft EIS.

4.10 SOCIOECONOMICS

4.10.3.1.2 *Alternative Gas Pipeline (Northern)*

Potential long-term impacts from the alternative gas pipeline would not be any different than those described for the project in Section 4.10.2.1 of the Draft EIS.

4.11 TRANSPORTATION

4.11.3.1.2 Alternative Gas Pipeline (Northern)

Impacts on transportation for the construction of the alternative gas pipeline would be short-term. Traffic effects related to the project include daily commuting by construction employees and other construction-related delivery traffic as well as the temporary disruption of traffic on three lightly used roads.

During pipeline construction, materials would arrive via truck and would be delivered to the proposed project site via existing access roads and minor amounts of overland travel. A staging/laydown area may be constructed at the Power Plant. Traffic on the three unpaved roads paralleled by the pipeline (one paralleling the Interstate highway, one along the west sections lines of T 20N., R 17W., secs. 19, 30, and 31 and one diagonally crossing those same sections) would be disrupted briefly when traversed by the construction crews.

4.12 NOISE

4.12.3 Alternatives

Potential impacts to noise were described in Section 4.12 in the Draft EIS. The potential impacts from the alternative gas pipeline would not be different from those already described.

4.13 HEALTH AND SAFETY

4.13.3 Alternatives

Potential impacts to health and safety were described in Section 4.13 in the Draft EIS. The potential impacts from the alternative gas pipeline would not be different from those already described.

4.14 ENVIRONMENTAL JUSTICE

4.14.3 Alternatives

Potential impacts to environmental justice were described in Section 4.14 in the Draft EIS. The potential impacts from the alternative gas pipeline would not be different from those already described.

4.15 ELECTRIC AND MAGNETIC FIELDS

4.15.3 Alternatives

Potential impacts to these resources were described in Section 4.15 in the Draft EIS. The potential impacts from the alternative gas pipeline would not be different from those already described.