

APPENDIX AF

PIPELINE BREAKOUT FOR BLM

3.0 AFFECTED ENVIRONMENT FOR BLM LANDS

3.1 GEOLOGY/MINERALS/GEOLOGIC HAZARDS

3.1.1 POWER PLANT AND ASSOCIATED FACILITIES

Portions of the Gas Pipeline Located on BLM Lands Geological conditions occurring at the locations of the proposed portions of the gas pipeline routes located on BLM lands are described in Section 3.1 of the DEIS. The proposed gas pipeline route is located within the Sacramento Valley, an agraded desert plain which drains to the south. The Sacramento Valley is mantled by thick deposits of unconsolidated sand, gravel, cobbles and boulders several hundred feet thick which date from late Pleistocene to recent times (Gillespie and Bentley, 1971).

The Project area lies within seismic risk zone 2 (on a scale of 0 to 3, with 3 being the highest risk) (Algermissen, 1969). Moderate damage from earthquakes corresponding to an intensity of 7 (on the Modified Mercalli Intensity Scale which measures intensities from 0 to 10) is the maximum impact which can be expected within the area.

3.2 WATER RESOURCES

3.2.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

3.2.1.1 Groundwater

Groundwater in storage in the Sacramento Valley aquifer has been estimated to be in the range of 6.5 to 13 million acre-feet, based on an average specific yield of 5 to 10 percent (ADWR, 1994). It has been estimated by the ADWR that there is 2.3 million acre-feet of water in storage in the Sacramento Valley aquifer above a depth of 1,200 feet below the surface (Table 3.2-1) (ADWR, 1994). Natural annual recharge of the aquifer has been estimated at 4,000 acre-feet/year with discharge to the Colorado River west of Yucca equaling recharge (Roscana, 1991 and Gillespie and Bentley, 1971).

Water withdrawal from the aquifer has varied over time, due primarily to intermittent mining activity. In 1981, because of scaled back mining operations and subsequent reduced water demand, the volume of withdrawal was reduced to 1,935 acre-feet per year; and in 1986 the rate of withdrawal was further reduced to 500 to 700 acre-feet per year, still primarily for use in the Mineral Park Mine operation (Roscana, 1991).

Little additional withdrawal from the groundwater aquifer has been initiated since 1994. There are no springs in the area that are being used as sources of groundwater. The gas pipeline would be located where groundwater is approximately 1,000 to 1,500 feet below ground surface.

Water level fluctuations in the unconfined aquifer have been minimal. The USGS (Boner et al. 1991, Smith et al. 1993, 1994, and 1995) have been tracking water levels in 10 wells within the Sacramento Valley for as long as 46 years. The median water level fluctuation for the period of record was 6.09 feet. The maximum observed fluctuation for the period of record was 47.5 feet for a well in Section 21, T21N, R18W, located 8 miles west of Kingman. Water level fluctuations between 1990 and 1993 ranged from 0.1 feet to 3.2 feet for the 10 wells, and generally showed decreases in the depth to water, i.e., an increase in the elevation of the water table. The ADWR (1994) predicts a 1.5-foot per year decrease in the water table elevation in the Golden Valley area.

3.2.1.2 Surface Water

Streams are ephemeral throughout the lower elevations of the Project Area and flow only in response to storm events. There are two named washes, Griffith Wash and Black Rock Wash, and several unnamed washes in the vicinity of the gas pipeline and power plant. As the streams exit the mountain canyons, they flow southwest across highly dissected alluvial fans which act as an infiltration sink. Stream channels diminish in size and dry up due to recharge of the alluvium and increased evaporation associated with higher temperatures at the lower elevations.

The proposed portions of the gas pipeline located on BLM lands, and access roads would not cross any designated 100 year flood plains. Floodplain boundaries are determined by the Federal Emergency Management Agency (FEMA). The FEMA designated 100 year floodplain within the vicinity of the pipeline are shown on Figures 3.2-2a and 3.2-2b of the DEIS.

3.3 METEOROLOGY/AIR QUALITY

3.3.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Climate and Air Quality conditions in the location of the portions of the gas pipeline located on BLM lands are similar to those described in Sections 3.3.1 and 3.3.2 of the DEIS.

3.4 SOILS

3.4.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Soils at the location of the gas pipeline routes located on BLM lands have been mapped by the Natural Resources Conservation Service (NRCS, 1996). Four mapping units have been identified along the pipeline route: 052 Castaneda extremely gravelly loam, dry, 1 to 7 percent slopes; 052B Castaneda extremely gravelly loam, 1 to 7 percent slopes; 073B Goodsprings gravelly sandy loam, 1 to 15 percent slopes; and 150 Mohon-Poachie complex, dry, 2 to 15 percent slopes.

052-Castaneda 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 very

slight. Corrosivity for uncoated steel is high. Potential rooting depth is 20 to 40 inches. Available water capacity for these soils is moderate.

052B-Casteneda extremely gravelly loam, 1 to 7 percent slopes, has formed on the proximal ends of fan terraces with slopes of 1 to 7 percent. These are moderately deep soils over a lime cemented hardpan, and are not subject to flooding. These soils have moderate shrink-swell potential. The hazard of wind erosion is very slight, while the hazard of water 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.

073-Goodsprings gravelly sandy loam, dry, 1 to 15 percent slopes, has formed on fan terraces with slopes of 1 to 15 percent. These are shallow to moderately deep soils over a lime cemented hardpan. They are in an upland landscape position, and are not subject to flooding. These soils have a moderate shrink-swell potential. The hazard of wind erosion is slight, while the hazard of water erosion is moderate. Corrosivity for uncoated steel is high. Potential rooting depth is 20 to 40 inches. Available water capacity is very 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 potential. 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.

3.5 VEGETATION

3.5.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The proposed gas pipeline is located within desert scrub communities situated on west-facing alluvial fans of the Sacramento Valley. The higher locations are occupied by Mohave creosotebush-bursage-mixed scrub on deeper, sandier soils and Mohave creosotebush-yucca on soils richer in carbonates. The warmer, drier, lower locations are occupied by Sonoran creosotebush-bursage.

Vegetation communities correlated to the soil map units in section 3.4 Soils are:

052 Casteneda: present plant community; creosotebush, white bursage, range ratany, and rayless goldenhead.

052B Casteneda: present plant community; creosotebush, range ratany, Joshua tree, and broom snakeweed.

073 Goodsprings: present plant community; creosotebush, white bursage, ocotillo, and Nevada Mormontea.

150 Mohon Poachie: present plant community - Mohon; big galleta, Anderson wolfberry, and range ratany. Poachie - white bursage, creosotebush, and Joshua tree.

No wetlands occur in the area of the portions of the gas pipeline located on BLM lands. No special status plant species are known from the portions of the gas pipeline located on BLM lands.

The alternative route for the gas pipeline roughly parallels the proposed route. The alternative route is located approximately one-quarter mile to one-half mile north of the proposed route. The same vegetative communities would be crossed by the alternative route as by the proposed route. However, the alternative route would be located in an existing dirt road. As a result, the vegetative community along the roadsides is likely altered because vehicular traffic can import seeds and roadsides are good invasion sites for the imported seeds. Such altered roadside communities would be varied over the length of the road.

No wetlands occur in the area of the portions of the alternative gas pipeline located on BLM lands. No special status plant species are known from the portions of the alternative gas pipeline located on BLM lands.

3.6 WILDLIFE

3.6.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The proposed gas pipeline would be located within Sonoran creosotebush-bursage scrub habitat type. Wildlife expected to be present is described in Section 3.6 of the DEIS includes big game, predators, small mammals, songbirds, raptors, and reptiles. Due to the limited amount of permanent water resources within the area, the occurrence of aquatic and amphibian species are expected to be minimal.

No species of special concern were observed during the survey of the gas pipeline route, the proposed plant site, water pipeline and well sites, and plant access road. There are three BLM-designated sensitive species (rosy boa, chuckwalla, and Gila monster) and one species designated as sensitive by both the BLM and AGFD (Sonoran desert tortoise) reported from the area. The route crosses both Category II and Category III desert tortoise habitat; the Hualapai Foothills Category II (approximately 6.25 miles) and the Rawhide Mountains/Dutch Flat Category III habitat (approximately 0.5 miles).

The alternative route for the gas pipeline roughly parallels the proposed route. The alternative route is located approximately one-quarter mile to one-half mile north of the proposed route. The same wildlife habitat would be crossed by the alternative route as by the proposed route, including the Category II (approximately 6.44 miles) and Category III (approximately 0.5 miles) desert tortoise habitat.

3.7 CULTURAL RESOURCES

3.7.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

No cultural resources were observed during the reconnaissance survey (Ezzo and Späth 1998) of the portions of gas pipeline on private lands near the plant site, proposed plant site, water pipeline and well site, and plant site access road. Information for the portion of gas pipeline on

BLM land was provided by the records search and literature review, which identified no prior studies or recorded cultural resources.

The archaeological reconnaissance survey (Ezzo and Späth 1998) identified no cultural resources on those portions of the two proposed gas pipelines that fall within the area studied. Since portions of the east-west gas pipeline route on BLM lands cross soils that are identical or highly similar to those of the surveyed area, and vegetation and terrain were closely comparable, there is a low probability for cultural resources to be present. At the east-west gas pipeline's crossing of the BNSF Railroad corridor, there could be cultural resources associated with the railroad. In general, it is concluded that the pipeline routes are likely to contain no cultural resources, and none that are eligible for listing within the National Register of Historic Places.

3.8 LAND USE

3.8.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Land ownership for the western half mile of the pipeline route is private. From the Interstate highway eastward, both of the two alternate gas pipeline routes would be on BLM lands. Area land ownership is shown in Figures 3.8-1a & 1b, 3.8-2a & 2b, and 3.8-3a & 3b of the DEIS.

The amount of the proposed eastern route gas line corridor located on rangelands administered by the BLM is approximately 3.6 miles. The alternative to the eastern route gas line follows an existing 4WD road. Approximately 3.5 miles of the road is located on BLM lands. The portion of these gas pipeline routes on private lands are inside of the new industrial corridor designated by the County.

3.9 RECREATION

3.9.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

There are no developed recreation sites on the approximately 3.6 miles of BLM lands in the pipeline corridor. The primary land use is grazing, although some dispersed recreation uses such as hunting and ORV use do occur.

The alternative pipeline corridor follows a 4-wheel drive road that crosses through BLM lands. There is no significant recreational use of the road, as it is used primarily to access grazing lands.

3.10 VISUAL RESOURCES

3.10.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

BLM lands that would be affected by the pipeline have been classified as Class IV under this system which indicates relatively low visual quality.

3.11 SOCIOECONOMICS

3.11.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

There are no socioeconomic effects from the proposed portions of the gas pipeline located on BLM lands that would affect the environment differently from those described for the entire project in Section 3.11 of the DEIS.

3.12 TRANSPORTATION

3.12.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Current access in the area surrounding the alternate routes of the portions of the gas pipeline located on BLM lands consists of a loop road that extends from the railroad ROW eastward to the base of the Hualapai Mountains. The southern arm of the road arises in Section 7, T19N, R17W, then crosses sections 18, 17, 16, 21, 22, and 15, where it turns northward and intersects the existing El Paso gas line in Section 10. The northern arm of the road arises on Section 6, T19N, R17W, then crosses sections 5, 4, and 3 where it turns south and intersects the existing El Paso gas line in Section 10 and completes the loop road. There are other similar roads in the area but they are farther away from the proposed routes of the portions of the gas pipeline located on BLM lands.

3.13 NOISE

3.13.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The existing noise generators in the area are Interstate Highway 40 and the BNSF Railroad. The proposed routes are perpendicular to these linear noise sources so noise levels would range from approximately 60 decibels at the west end of the routes to approximately 20 decibels at the east end of the routes.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 GEOLOGY/MINERALS/GEOLOGIC HAZARDS

4.1.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

4.1.1.1 Proposed Project

Construction of the proposed gas supply pipeline would have little impact on the gently sloping topography located in areas to be crossed by the proposed pipelines. The potential for impacts from mass wasting is relatively low because of the area's gentle slopes and location away from large drainages which could be susceptible to flash floods or mud flows.

Although seismic risk in the location is moderate, historically there have been no large earthquakes close enough to the area to cause significant damage. The thick alluvial deposits along the routes should prove relatively stable during a small to moderate seismic event. Pipeline design would take local seismic risk into consideration to mitigate any potential damage.

4.2 WATER RESOURCES

4.2.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The proposed pipeline to connect with the existing EPNGC gas line would cross three unnamed washes and no 100-year floodplains. Clearing and grading activities for the gas pipeline construction would temporarily expose soils to erosional forces until revegetation of the site occurs. Increased erosion would result in soil loss which could increase sediment in storm runoff. Erosion prior to revegetation would be controlled through various soil stabilization procedures and silt control devices.

Hydrostatic testing of this pipeline prior to use would result in brief, low volume discharges, which would either be routed to the brine disposal pond or would infiltrate into the ground within 1,500 feet of the discharge point if discharged on the land surface. There would be no impact on the groundwater quantity expected as a result of the discharge because of the quality of the water used for the test and depth to groundwater in the area.

During construction of the pipeline, the storage and use of fuel, lubricants, and other fluids could create a potential contamination hazard. This impact would be minimized or avoided by restricting the location of refueling activities and by requiring immediate clean-up of spills and leaks of hazardous materials.

4.3 AIR QUALITY

4.3.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Construction of the proposed gas line would contribute fugitive dust from construction activities. Best Management Practices (BMPs) explained in Table 2.1-4 of the DEIS would be implemented to control blowing dust during the construction period. Potential effects from these emissions would be negligible because the source would be mobile, linear, and short-term.

4.4 SOILS

4.4.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

An increase in soil erosion may be associated with construction of the gas supply pipeline. During clearing and installation of the proposed gas pipeline, the disturbed areas within the right-of-way could be subject to wind and water erosion because of the removal of protective vegetation, disturbance of shallow soils on steeper slopes, and/or creation of graded cut-and-fill areas. Implementation of erosion control measures during construction would minimize effects of soil disturbance on soil productivity. Best Management Practices (BMPs) explained in Table 2.1-4 of the DEIS would be implemented to control blowing dust during the construction period.

A loss of soil productivity would result from mixing the topsoil and subsoil layers during construction. Compaction of soils from construction equipment would inhibit natural revegetation. The potential for soil contamination from hazardous materials and petroleum products would increase during construction.

Although most project area soils are not highly susceptible to water and wind erosion, it could take several years to reestablish a protective cover of vegetation on disturbed soils. Low rainfall in the area combined with the low productivity and excessive gravel content of these soils would make reclamation difficult without use of soil amendments and intensive management. Until vegetation is reestablished, use of erosion control measures such as mulching, silt fences, and staked hay bales can substantially reduce water erosion problems.

4.5 VEGETATION

4.5.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The area of disturbance would be restricted to the location of the temporary access road and pipeline right-of-way. The Sonoran creosotebush-bursage-desert scrub community is resilient and construction of a linear feature like a pipeline leaves a scar through the vegetation but does not significantly alter the community functions of growth and reproduction. Construction of the gas supply pipeline would result in the direct and long-term loss of about 21 acres of Sonoran desert scrub habitat. The loss of approximately 21 acres from thousands of acres of similar vegetation is not considered significant.

The alternative pipeline route would be located within one-half mile north of the proposed route. The same vegetation communities would be disturbed as by the proposed route. Slightly more

area would be disturbed by the alternative route as it is a slightly longer route by approximately 0.1 mile. However, disturbance to vegetative communities would be less than for the proposed route because some of the construction would be in the existing roadway. All construction would not be in the road, but a reasonable assumption could place half the disturbance in the roadway over a distance of approximately 15,000 feet. A comparison of disturbance by the two pipeline routes could then be as follows:

Table 4.5-1. Comparison of Gas Supply Pipeline Routes

Element	Proposed Pipeline	Alternative Pipeline
Length (feet)	20,250	20,625
Total acres (50 ft. ROW)	23.2	23.7
Acres on public land	20.2	19.2
Soils	4 units	Same
Vegetation disturbance*	23.2 acres	15.0 acres
Reclaimed acres	23.2	15.0
TES Plant potential	Low	Low
TES Animal potential**	High	High

* Assumes half the construction disturbance would be in the existing road for 15,000 feet.

** Both routes pass through Category II and Category III Sonoran desert tortoise habitat.

4.6 WILDLIFE

4.6.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Long-term impacts include the habitat loss of approximately 23 acres for the proposed gas supply pipeline. Since all of the habitats encountered within the Project area are widely distributed in the region, loss of this habitat is not expected to adversely affect the viability of any species. Riparian and wetland areas, which exhibit the greatest abundance of diversity within the desert communities, would not be impacted.

The construction and operation of the gas pipeline are expected to have only minor 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. Three BLM sensitive species (rosy boa, chuckwalla, and Gila monster) and one BLM and AGFD sensitive species (Sonoran Desert tortoise) have the potential to occur within the pipeline disturbance area. Desert tortoise habitat (both Category II and III) would be crossed by the pipeline route. Potential impacts would be similar for all four of these species as they utilize similar habitats.

All four of these sensitive species have a moderate to high potential for occurrence within the area. Habitat requirements for the Sonoran desert tortoise range from marginal to high quality along the proposed pipeline route. Based on the observations of lack of suitable habitat and

existing land use conditions, populations or individuals of sensitive species are unlikely to occur within the pipeline ROW. However, the higher quality habitat and higher potential for encountering desert tortoise individuals (as well as the other sensitive species) is located along the eastern end of the pipeline where the route approaches the Hualapai Mountain foothills. 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. These measures would also benefit the rosy boa, chuckwalla, and the Gila monster.

- The applicant plans to survey the pipeline ROW within all areas of potential desert tortoise habitat and their burrows within 48 hours prior to onset of surface-disturbing activities. The surveys would be conducted by a competent desert tortoise biologist who is certified in USFWS survey methodology and a qualified tortoise handler. The biologist would survey the proposed route immediately in advance of construction equipment and remove active and/or hibernating tortoise and move them to another burrow or den outside the construction ROW.
- 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.
- Compensation of designated BLM tortoise habitat areas would be provided by the direct purchase of privately owned desert tortoise habitat for transfer to conservation management or the direct payment of funds to an appropriate land management agency or entity for purchase of tortoise habitat or other tortoise management actions. The compensation formula would be developed by the applicant in accordance with input from the corresponding agencies.
- Specific seeding rates and approved seed mixtures would be developed on a site-specific basis in consultation with appropriate agency or landowner.
- Additional tortoise mitigation measures are provided in Chapter 2 of the DEIS.

The alternative pipeline route would parallel the proposed route, would pass through the same habitat types, and would experience potential impacts very similar to the proposed route. A comparison of the two routes was presented in **Table 4.5-1**. In several cases, differences between the two routes vary by less than five percent. Even though the alternative route is approximately 400 feet longer than the proposed route, the distances within Category II and Category III Sonoran desert tortoise habitat are essentially the same. Mitigation measures for wildlife would also be implemented for the alternative pipeline route, as described for the proposed route.

4.7 CULTURAL RESOURCES

4.7.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Reconnaissance archaeological surveys of the power plant site, portions of the gas pipeline on private lands near the plant (Ezzo and Späth 1998), observed no cultural resources. The areas on BLM lands are expected to contain few if any cultural resources, and none that are eligible for listing within the National Register of Historic Places. Accordingly, no significant impacts to cultural properties are predicted to occur from clearing and grubbing, and pipeline installation/construction.

The pipeline's crossing of the BNSF Railroad corridor could potentially affect historic resources that might be present at that location. However, it is probable that the pipeline would be bored under the railway which, depending upon design, could avoid all cultural resource impacts.

4.8 LAND USE AND RECREATION

4.8.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Easements for the pipeline and temporary access road on private lands would be negotiated with the land owners, and ROW for the portion of the east-west pipeline on federal land would be secured from the BLM.

There would be no impacts on existing land zoning status from the construction of the gas supply pipeline because it would be located within the I-40 Industrial Corridor that has been designated for industrial development. Industrial land uses are also compatible with Mohave County's previously planned land uses for rural development in this area. The existing land use of the area (grazing) would be displaced over the construction of the project.

During the construction phase of the gas pipeline, public access would be temporarily disrupted at some locations. Short-term disruption during construction from the physical intrusion of the crew and equipment, the generation of dust and noise, and the obstruction of traffic is not expected to affect area residents because none are located near the proposed site.

Recreation activities are minimal along the proposed pipeline corridor. Hunting and other dispersed recreational activities likely do not occur in the corridors because of the proximity to grazing operations and the Interstate 40 corridor. Therefore, there would be minimal short- or long-term impacts to recreation from construction and none from the operation of the pipeline.

4.9 VISUAL RESOURCES

4.9.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Impacts to the visual resources of the Project area from the construction of the gas supply pipeline would occur as short-term disturbance of the landscape by project construction activities, and as the long-term addition of a pipeline corridor to the landscape. These effects result from changes to the physical setting and visual quality of the landscape and how the

landscape is experienced from sensitive viewpoints including travel routes, residences, and wilderness areas. The proposed pipeline would introduce a new long-term linear element into the landscape that would alter the existing line, color, and texture of the existing landscape.

The existing vegetation along the pipeline corridor is primarily desert shrub community. Once the pipeline is installed and the land within the ROW is reclaimed, the visual impact resulting from construction would continue until vegetation has been reestablished on disturbed areas. In this environment, that would take many years. The portion of the gas supply pipeline on BLM lands is designated as Visual Resource Management (VRM) Class IV. Class IV objectives provide for major modification of the landscape, and allow management activities to dominate the landscape. The construction and operation of the gas pipeline would be consistent with VRM Class IV objectives because once the line is installed and the ROW reclaimed, the gas pipeline ROW, while visible, would not be a prominent feature in the landscape.

Long-term visual impacts resulting from the installation and operation of the pipeline would be minimized by implementing mitigation including clearing edges of the pipeline corridor irregularly to give a natural appearance and revegetation.

4.10 SOCIOECONOMICS

4.10.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Labor, Employment and Local Economy

Construction of the proposed gas pipeline is anticipated to occur over an approximately 3-month period and would require a variety of tradesmen and contractors. The construction workforce would range from eight to twelve and would include both skilled and non-skilled workers.

It is anticipated that the majority of the required skilled labor would be provided by the pipeline contractor selected to construct the project. Non-skilled labor could be provided by those available in the Kingman/Yucca/Havasu area.

The construction crew members that come from outside the area would stay only for the short construction time frame. These construction workers would use temporary housing such as motels or weekly rentals. Since the project site is located approximately 15 miles from the community of Kingman, some workers may also be accommodated in personal trailers or motor homes.

Potential impacts to public services during construction could result from construction related demands for police, fire, medical and other emergency services. It is not expected that these effects would be significant, with the implementation of standard construction health and safety measures.

Some solid wastes would be generated by construction, but the amount of wastes generated are expected to be too small to affect the life expectancy of the two municipal solid waste facilities currently operated by Mohave County.

4.11 TRANSPORTATION

4.11.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Impacts on transportation for the construction of the 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 two lightly used roads.

During pipeline construction, materials would arrive via truck and would be delivered to the proposed project site via existing access roads. A staging/lay down area may be constructed at the Power Plant site as well as at the rail siding along the pipeline ROW. Traffic on the two unpaved roads crossed by the pipeline (one paralleling the railroad and one paralleling the EPNGC supply line) would be disrupted for the very short time when crossed by the construction crews.

4.12 NOISE

4.12.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

Noise during the construction phase would result from the operation of construction equipment and vehicles. Not all construction equipment would operate continuously so an average construction site noise level is assumed to be less than 85 dBA. The noise levels emanating from the construction site of various construction equipment are shown in Table 4.12-1 in the DEIS along with the expected noise levels at various distances from the equipment.

Using the noise propagation formulation, noise levels would fall below 55 dBA, a noise level established by the EPA as the maximum noise level that does not adversely affect public health and welfare, at approximately 1500 feet from the construction activities. The nearest residence would be approximately 3.5 miles northwest of the construction site. The noise at this location produced by construction activities would be 36.5 dBA, a level consistent with the general noise of a rural background and lower than the average noise of 44.5 dBA produced by Interstate 40 traffic. It is expected that most construction would occur during daylight hours so nighttime noise levels would remain at existing levels with the Interstate-40 and the occasional train being the predominant noise sources.

4.13 HEALTH AND SAFETY

4.13.1 PORTIONS OF THE GAS PIPELINE LOCATED ON BLM LANDS

The pipeline construction contractor would implement a comprehensive occupational safety and health program to optimize minimize safe and healthy working conditions during all phases of construction. The program would meet or exceed all federal, state, and local requirements.

Hazardous materials anticipated to be on-site during construction are equipment fuels (gasoline and diesel), lubricants, and solvents. These materials would be handled according to standard safety precautions and manufacturer's specifications for use, where appropriate.

During operation, pipe, valves, or connections could fail resulting in the release of gas ranging from minor leaks to rupture. However, such failures in containing the gas would be greatly reduced through construction in accordance with the requirements of the U.S. Department of Transportation for natural gas pipeline construction and operation. Industry standards of valving and emergency shut-off controls and procedures would be used and maintained. A monitoring program for detecting leaks for the natural gas supply facilities would be implemented and continued in adherence to an approved schedule for the life of the Project. Also the line would be marked to minimize the potential for accidental damage from future construction activities.

APPENDIX BF
VISUAL CONTRAST RATING WORKSHEETS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 3-17-99
 District Phoenix
 Resource Area Kingman RA
 Activity (program) Power Plant

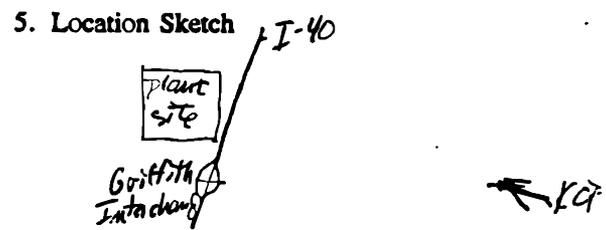
SECTION A. PROJECT INFORMATION

1. Project Name
Griffith Energy Power Plant

2. Key Observation Point
#1 Wababuma Wilderness

3. VRM Class
NA

4. Location
 Township 19N
 Range 17W
 Section 6



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER 2. -VEGETATION 3. STRUCTURES

I
1
%
0
II
w
z
-3

Flat terrain Indistinct **amorphous**

Horizontal/Diagonal Weak

1
%
0
0
u

Medium to light tans medium grey-green, uniform due to distance

. LU
x m
w Z)

Fine to smooth fine to smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER 2. VEGETATION 3. STRUCTURES

x
I
%
0

Flat indistinct geometric, rectangular

L
U
zn

Horizontal weak weak geometric

w.
0 -
1 0
u

Tan Uniform green Tan

. LU X
W ul
ZD
E -
@.

Fine Fine Medium

SECTION D. CONTRAST RATING M SHORT TERM XI LONG TERM

DEGREE OF CONTRAST	LAND/WATER BODY (1)	FEATURES	
		VEGETATION (2)	STRUCTURES (3)
	2 11 10 8 2	2 0 4 g	2 10 4 78 160
	.w 9 0 z	on 2	ba 2 CZ
		X lu	0 z
			I 0z
		X	X X
		X	X
	X ;		-g -
	x	-3F	

2. Does project design meet visual resource management objectives? C3 Yes E3 No (Explain on reverse side)

3. Additional mitigating measures recommended
0 Yes [I No (Explain on reverse side)

Evaluator's Names
Lisa Welch Date
8-25-98

VI Form
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L@ Color
@Lj 'Texture
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The plant site is below the observer position, and is blocked by the intervening topography.

-- **SECTION D. (Continued)**

Comments from item 2.

KOP 1 is within the Wabayuma Wildernes, 5.5 miles from the plant site. At this distance, the plant site appears indistinct. The terrain is a flat horizontal area back dropped by the Black Mountains. The textures of vegetation and land forms are not visible at 5.5 miles from the KOP. The proposed plant will not be visible from the KOP because of the distance and because the plant is in the Sacramento Valley below the middle horizon as seen from the KOP.

The plant will be on privately owned lands. BLM does not manage visual resources on private lands. The plant is on private lands and not managed with ELM.'s VRM objectives.

Additional Mitigating Measures (See item 3)

The plant will not be visible from any viewpoint in the wilderness, because the buildings will be painted with tan colors that blend with the surrounding.

SECTION D. (Continued)

Comments from item 2.

The plant buildings, will impose prominent, rectangular forms on the flat, horizontal topography. The power plant will dominate the landscape as viewed from KOP2.

Plant site is on private lands that are not managed with BLM's VRM objectives.

Additional Mitigating Measures (**See, Item 3**)

The plant will be repainted with tan desert colors that harmonize with the landscape.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date 3-17-99

District Phoenix

VISUAL CONTRAST RATING WORKSHEET

Resource Area Kingman

Activity (program) Power Plant

SECTION A. PROJECT INFORMATION

1. Project Name
Griffith Energy - Power plant
2. Key Observation Point
#3 - Warm Springs Wilderness
3. VRM Class
na
4. Location
Township 19N
Range 17W
Section 6
5. Location Sketch

J-40
Plot site
Griffith
Interchange

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat terrain	indistinct, smooth (due to distance)	small, indistinct, blocky rectangular (Praxair)
LINE	horizontal	weak	geometric
COLOR	medium to light tans	medium grey-green due to distance	white
TEXTURE	fine	fine	fine

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat	indistinct	small, indistinct due to distance, blocky & rectangular
LINE	horizontal	weak	geometric
COLOR	medium to light tans	medium	tan
TEXTURE	fine	fine	fine

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.

DEGREE OF CONTRAST	FEATURES											
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form												
Line			X				X				X	
Color			X				X				X	
Texture			X				X					

2. Does project design meet visual resource management objectives? Yes No
(Explain on reverse side) n

3. Additional mitigating measures recommended
 Yes No (Explain on reverse side)

Evaluator's Names Date
Lisa Welch 8-25-98

SECTION D. (Continued)

Comments from item 2.

KOP 3 is in the Warm Springs Wilderness Area more than 5 miles west of the plant site, The existing Praxair facility is located at approximately the same distance from the KOP as the proposed plant. The Praxair facility is barely visible from the KOP, indicating that the plant will have a similar low visibility. The plant site is on private lands that are not managed with BLM's VRM objectives.

Additional Mitigating Measures (**See item 3**)

The plant will be painted desert tan colors that harmonize with the- landscape. The plant will be more difficult to see from KOP3 than the nearly white-painted praxair plant.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date 3-17-99

District Phoenix

Resource Area Kingman

VISUAL CONTRAST RATING WORKSHEET

Activity (program),
Transmission Line - Segment C

SECTION A. PROJECT INFORMATION

1. Project Name: Griffith Energy Transmission Line @
 2. Key Observation Point: #4
 3. VRM Class: III
 4. Location: I To.,vnship I 21 N
 S. Location Sketch: ~
 Range: ~
 Section: 11 c
 -F-to

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	with rough land-& veg for	irregular, patchy veg. asts forms	linear, vertical existing pole structures
LINE	flat, horizontal	irregular, undulating	linear, perpendicular
COLOR	medium to light tan	dark to light greens	grey
TEXTURE	smooth to medium	medium grained random	sparse, ordered

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	flat linear road', smooth to angular	irregular, forms patchy	linear,
LINE	flat, horizontal	undulating	linear, angular, parallel to existing poles
COLOR	medium-light tan dark grey road	dark-light greens gold	grey
TEXTURE	smooth - medium	random, medium	sparse, ordered

SECTION D. CONTRAST RATING EI SHORT TERM M LONG TERM

DEGREE OF CONTRAST	LANDWATER BODY (1)	VEGETATION (2)	STRUCTURES (3)	2. Does project design meet visual resource management objectives? (D Yes M No (Explain on reverse side))	3. Additional mitigating measures recommended (E I Yes U No (Explain on reverse side))
I	X	X	X		
II	X	X	X		
III	X	X	X		

Evaluator's Names
Lisa Welch

Date
8-25-98

SECTION D. (Continued)

Comments from item 2.

New pole structures will be located adjacent to existing structures. existing pole structures do not dominate the landscape because most viewers are traveling on the highway and view the structures for only a few minutes. The new line will be an additive impact. The

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 3-17-99
District Phoenix
Resource Area Kingman
Activity (program), Transmission Line

SECTION A. PROJECT INFORMATION

1. Project Name _____ 4. Location _____ S. Location Sketch Pr U), @w crve@-
Township 20N } > @
Range 17W
Section 7
VRM Class na I zd
@4vv - I

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER-R 2. VEGETATION 3. STRUCTURES

FORM	flat to rugged	irregular, patchy	angular
LINE	horizontal foreground diagon/horiz-background	undulating	verticle fence posts
COLOR	light tan, brown	med to light green, golds, buff	dark brown
TEXTURE	medium to coarse, contrasting	continuous, stippled background; irregular, fine to coarse	regular, directional

SECTION C. PROPOSED ACTRVITY DESCRIPTION

1. LAND/WATER 2. VEGETATION 3. STRUCTURES

FORM	flat to angular	irregular, patchy	linear, verticle
LINE	horizontal, diagonal	indulating	linear, angular, directional
COLOR	light tan, brown	green, gold	grey
TEXTURE	coarse, contrasting	stippled background, fine to coarse, clumped foreground	coarse, ordered

SECTION D. CONTRAST RATING M SHORT TERM Pq LONG TERM

DEGREE OF CONTRAST	LAND(WATER) BODY (1)	FEATURES VEGETATION - (2)	STRUCTURE,S (3)	2. Does project design meet visual resource management objectives? C3 Yes [3 No (Explain on reverse side) na	3. Additional mitigating measures recommended El Yes El No (Explain on reverse side)
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	I x)				
	I x @				

Evaluator's Names Lisa Welch Date 8-25-98

SECTION D. (Continued)

Comments from **item 2.**

The view is to the South from Walnut Creek Estates. The low ridge in the middleground obstructs views of the plant. The proposed transmission line is on private land that is not managed with the VRM system.

Additional Mitigating Measures (See item 3)

None

Date 3-1-96

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

District Phoenix

Resource Area Kingman

VISUAL CONTRAST RATING WORKSHEET

Activity (program)

Transmission Line

SECTION A. PROJECT INFORMATION

1. Project Name Griffith Energy EIS	4. Location Township <u>20N</u> Range <u>17W</u> Section <u>19</u>	5. Location Sketch <i>J-40</i> <i>KOP 6</i> <i>Transmission Line</i> <i>RE</i>
2. Key Observation Point 6		
3. VRM Class NA		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	flat to rugged (background) terrain	irregular, patchy	linear, angular distribution poles, linear, directional road
LINE	horizontal/diagonal	undulating	angular, vertical poles, straight, horizontal road
COLOR	light tan	medium to light green, gray-green, gold	gray, dark brown
TEXTURE	fine	coarse, random	coarse

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
z	flat	patchy	linear, vertical transmission structures
ua z -2	horizontal	undulating	angular, directional
	light tan	medium to light green, gray-green, gold	gray, glow (from steel)
.w x ce @ 1 =)	fine	coarse	coarse

SECTION D. CONTRAST RATING

C3 SHORT TERM

;@ LONGTERM

DEGREE OF CONTRAST

LAND/WATER BODY (1)

FEATURES

VEGETATION (2)

STRUCTURES (3)

2. Does project design meet visual resource management objectives? [3 Yes 11 No (Explain on reverse side) NA

3. Additional mitigating measures recommended 0 Yes Z No (Explain on reverse side)

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Evaluator's Names
Lisa Welch

Date
10/19/98

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SECTION D. (Continued)

Comments from item 2.

The transmission line will add linear features to the landscape. The pole structures are linear, angular structures that are perpendicular to the horizontal land form. The line is also a linear feature that is in foreground at road crossing, and recedes into background. The transmission line is not on BLM lands and is not managed for VRM objectives.

II Additional Mitigating Measures (See item 3)

Date 3-17-99

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

District Phoenix

Resource Area Kingman

VISUAL CONTRAST RATING WORKSHEET

Activity (program) Transmission Line

SECTION A. PROJECT INFORMATION

Project Name Griffith energy EIS

4. Location Township 20N Range 17W Section 8

5. Location Sketch

2. Key Observation Point

3. VRM Class NA

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

LAND/WATER	2. VEGETATION	3. STRUCTURES
flat to angular (background) terrain	irregular, patchy	angular, complex
horizontal foreground, diagonal background	irregular, broken	diagonal/horizontal
light tan	medium green, gray-green, golds	white, tan, red, green
fine to coarse	coarse, random foreground, smooth to mid background	clumped, contrasty

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER	2. VEGETATION	3. STRUCTURES
flat to angular		indistinct, narrow vertical
horizontal/diagonal		vertical, angular
light tan		light grey
fine to coarse		fine

SECTION D. CONTRAST RATING 0 SHORT TERM M LONGTERM

DEGREE OF CONTRAST	LAND/WATER BODY (1)	VEGETATION (2)	STRUCTURES (3)	2. Does project design meet visual resource management objectives? 0 Yes 0 No (Explain on reverse side)	3. Additional mitigating measures recommended 0 Yes 0 No (Explain on reverse side)
Form		X	X	.Evaluator is Names Lisa Welfh Date 10/16/98	
Line		X	T		
Color	li	X	T		
Texture	-	T	T		
	X				

SECTION D. (Continued)

Comments from item 2.

The transmission line (either single pole or lattice structures) will be located between 1-2 miles from the KOP 7. The J line will not be noticeable at this distance, and will harmonize with the surrounding rural/industrial landscape. A small portion of the line will be on Class IV BLM lands. BLM objectives will be complied with because the line will be subordinate to the existing landscape.

Additional Mitigating Measures (See item 3)

**APPENDIX CF
ENDANGERED SPECIES CONSULTATION**



United States Department of the Interior
Fish and Wildlife Service

Arizona Ecological Services Field Office

2321 W. Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

(602) 640-2720 Fax (602) 640-2730



in Reply Refer To:

2-21-98-1-227

December 23, 1998

Mr. John Holt
Environmental Manager
Western Area Power Administration
P.O. Box 6457
Phoenix, Arizona 85005-6457

Dear Mr. Holt:

The Fish and Wildlife Service has reviewed your biological assessment (BA) and draft environmental impact statement (DEIS) for the Griffith Power Plant Project in Mohave County, Arizona. Your letter requested our concurrence with findings of "may affect, not likely to adversely affect" for two listed species: the bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus anatum*) and the experimental non-essential population of California condor (*Gymnops californianus*).

For the peregrine falcon, the BA and DEIS did not provide survey information regarding potential habitats for this species that would be in the area of effect. Given that no information was provided regarding the suitability of the project area and vicinity for nesting peregrines, the Service is concerned about potentially disturbing activities occurring proximate to occupied and unsurveyed habitat during the breeding season. We can conditionally concur with the finding of "may affect, not likely to adversely affect" given the following:

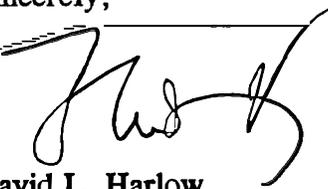
- a) no disturbing activity (i.e. construction activity, use of heavy equipment etc.) will occur within 1/2 mile of known or potential peregrine nesting habitat during the breeding season (March I to July 15), or within one mile of such habitat for blasting activity; or
- b) all potential peregrine nesting habitat within 1/2 mile of proposed disturbing activities (or one mile for blasting) will be surveyed during the year in which such activities will occur, using the Arizona Game and Fish Department Peregrine Falcon Survey Methodology (Ward 1994. 1994 peregrine falcon survey methods, Nongame Branch, Wildlife Management Division, Arizona Game and Fish Department, Phoenix. 12pp.). If peregrines are located, no disturbing activity will occur within 1/2 mile (one mile for blasting) during the breeding season (March I to July 15).

The Service concurs with your finding of "may affect, not likely to adversely affect" for the bald eagle. Bald eagles are unlikely to nest within the project area, but may be present as wintering birds or migrants. There is a remote risk of a bald eagle being injured or killed by a collision with the transmission line, but the risks are insignificant and discountable.

For purposes of section 7 consultation, nonessential experimental populations are treated as species proposed for listing. If an action's effects are significant a formal conference is required. In the case of the Griffith Power Plant Project, the likelihood of effects to California condors is insignificant and discountable. The Service concurs with the finding of "may affect, not likely to adversely affect" for this project. Formal conference is not required.

The Service appreciates the efforts of your agency to implement the terms of the Endangered Species Act . If there are questions regarding this concurrence, please contact Lesley Fitzpatrick or Tom Gatz.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Harlow", written over a horizontal line.

for
David L. Harlow
Field Supervisor

**APPENDIX DF
ENVIRONMENTAL PROTECTION AGENCY LETTER**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 8, 1999

Mr. John Holt, Environmental Manager
Western Area Power Administration
Desert Southwest Region
P.O. Box 6457
Phoenix, Arizona, 85005

Dear Mr. Holt:

Thank you for meeting with EPA on January 6, 1999 to discuss EPA's environmental objections to the Griffith Energy Project Draft Environmental Impact Statement (DEIS). The purpose of this letter is to provide a meeting summary based on agenda issues, from EPA's perspective, and to list action items necessary for objection resolution. I have followed the draft agenda item format provided by Western, as it generally reflects issues discussed at the meeting.

1. Purpose and Need

We discussed Western's Purpose and Need as it relates to its jurisdiction and mission. It is our understanding that Western must provide transmission access, based on Federal Energy Commission (FERC) orders, assuming that access is consistent with Western's transmission and power marketing mission. EPA recommended revision of, or amplification of, the Purpose and Need statement in the EIS to reflect the underlying project purpose. We suggested that one way to do this would be to discuss the project proponent's purpose and need, separately, and to amplify on the rather narrow scope of Western's Purpose and Need statement in the context of its jurisdiction and mission. Regardless of exact phrasing, the environmental impacts discussed in the DEIS largely describe combined impacts from the proposed power generating facilities and transmission lines on the environment. Since NEPA requires a full and fair discussion of significant environmental impacts, the Purpose and Need statement should not be defined too narrowly, so as to preclude a full discussion of potential project-related environmental impacts.

2. Alternatives

We agree with Western that alternatives to be analyzed in an EIS should be reasonable ones, namely those which are economically and technically feasible. It is the Federal Activities Office's EIS review policy to identify and recommend corrective action for any significant environmental impacts associated with a proposal. At the meeting, we agreed that additional discussion of the potential to use dry cooling tower technology at the proposed project should be included in the Final EIS (FEIS). EPA always encourages consideration of alternatives which would minimize

adverse environmental effects. For the proposed project, significant reduction in the use of water resources, and elimination of a pond with potential toxins, would be consistent with Western's Purpose and Need statement in the DEIS ("to cause the minimum adverse environmental effects consistent with Federal land management policies"). Western has agreed to provide data on projected cooling tower emissions. The projected wet cooling tower emissions could have a bearing on the viability of a dry-cooling system. PM10 emissions from the wet cooling towers should not exceed the PM IO P SD increment. Furthermore, issuance of a PSD permit from the Arizona Department of Environmental Quality (ADEQ), is subject to requirements of Best Available Control Technology (BACT). Prior to dismissing a dry-cooling technology, we recommend that Western review the projected wet cooling tower emissions and their consistency with Clean Air Act regulations and requirements of the PSD permit, and incorporate this information into the FFIS. We also request that EPA be provided a copy of the supplemental air emissions projections, for review, prior to issuance of the FEIS.

3 Merchant Plants and Relationship to Growth

In our meeting, we concluded that Western would amplify its general discussion of merchant plants and their relationship to potential growth. We also request that any information pertaining to the potential of the specific project to induce growth, locally or regionally be included in the FEIS. We recommended that any previous studies, by Western, Department of Energy, FERC, etc., which would help in the discussion, be included by reference. Western agreed to provide additional information about a planned future 230/69 kV transformer and any relationship between the proposed power-plant and the identified industrial corridor (including plans or the feasibility of co-generation applications).

4. Consultation and Survey Process

We discussed the intent of NEPA regulations to encourage agencies to complete required surveys and consultations prior to decision making. We agreed that Western should accelerate its cultural properties/archaeologic surveys (per requirements of the National Historic Preservation Act), to the fullest extent possible, and at the least, ensure that screening level surveys have adequately identified any possible sensitive areas that should be avoided. In this way, Western would provide assurance that final project design would not significantly differ from the proposal presented in the FEIS, thus minimizing the possibility for any additional future NEPA compliance requirements. We commend Western for completing its consultation with the Fish and Wildlife Service and concur with Western that these results would be reflected in the FEIS.

5. Clean Water Act, Section 402 Permits

We concluded that while the steam-electric utility sector is considered a New Source, it would be unlikely that an individual National Pollution Discharge Elimination System (NPDES) permit would be required for the project. We asked for additional verification in the FEIS that the proposed project would be a zero discharge facility for storm water, and what the event capacity of the evaporation pond would be. We also noted that the project applicant could apply for a zero discharge NPDES permit. For further information on NPDES permits, the project applicant,

or Western, should contact Laura Gentile of EPA's Water Division at 415-744-1913.

6. Session to address EPA's modeling questions.

We agreed that response to EPA's groundwater modeling questions, impacts to Springs, etc., should follow the format of a draft written response followed up by a conference call. If additional questions remain at that time, we could arrange a further meeting.

We look forward to continuing our work with you. For any questions, clarification of discussion points and omissions/corrections, please don't hesitate to contact us.

Sincerely,



Karl Kanbergs, Geologist/Environmental Scientist
Federal Activities Office

MI: 003068

cc: Bill Wadsworth, Bureau of Land Management, Kingman, Arizona