The TDM facility would be equipped with air emissions control technology, including dry low-NO_x combustor technology and selective catalytic reduction (SCR) system for oxides of nitrogen emissions control, and catalytic oxidizers for carbon monoxide emissions control. TDM's proposed 600 MW generating facility would achieve air emission levels equal to those required in California. TDM has received a Mexican environmental permit (Manifesto de Impacto Ambiental D.O.O.DGOEIA-000032) for the proposed 600 MW generating facility, as well as for the linear transmission line facilities located in Mexico. A diagram showing the relationships between the generating facilities and the transmission lines described in the EA is shown in Figure 1.2.

Construction of both of the transmission lines in Mexican national territory will be conducted in accordance with the Mexican CFE, Comisión Reguladora de Energía, (CRE) and Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT), as well as other Mexican provisions, rules and regulations. In Mexico, the transmission lines now under construction will parallel SDG&E's existing Imperial Valley Substation to La Rosita Substation 230kV transmission line.

Operation of the power plants will require water for purposes of recondensing steam vapor (steam is created and used to generate electricity in each of the TDM and LRPC facility's steam turbines) and for "makeup" of water that is evaporated during the cooling process. Both the TDM and LRPC have contracted with the local Mexican water authority to receive wastewater from the Zaragoza wastewater treatment facility in Mexicali. TDM and LRPC will separately treat this effluent to clean it to power plant standards. After use at the facilities, power plant wastewater will be discharged to drainage channels managed by the Comisión Nacional del Agua (CNA). The drainage channels terminate at the New River in Mexico. The New River flows north, crossing the international border, and discharges, eventually, into the Salton Sea.

2.2.6 Applicant's Proposed Environmental Protection Measures

Several features of the project design and construction methods are intended to reduce the amount of surface disturbance and therefore the potential impacts on environmental resources. These include locating the support structures (steel lattice towers, crossing structures, and steel monopoles) so that new access roads can be kept as short as possible, using existing access roads to the maximum extent possible, and using a helicopter to place lattice tower assemblies onto footings to reduce the amount of ground disturbance that would otherwise be caused by the use of laydown areas and operation of cranes. Additionally, the applicants have hired the same construction contractor to build both lines, further minimizing impacts by combining and coordinating construction activity, eliminating potential repeated impacts to the same area, minimizing traffic flows, and similar measures.

The applicants have also committed to stringent monitoring and mitigation requirements to protect biological, cultural, and paleontological resources. These measures are listed below.

2.2.6.1 Biological Resources

The applicants agree to accept the following conditions to the grant of right-of-way agreement with the BLM:

1. Construction would be scheduled to occur as much as possible during the flat-tailed horned lizard's dormant period, November 15 to February 15, and the construction schedule shall be approved by the BLM before construction begins.

2. A pre-construction worker education program would be developed and implemented. In addition, wallet-cards would be provided to all construction and maintenance personnel that includes information regarding the biology and status of the lizard; the protection measures that are being implemented; the function of the flagging around sensitive resources; reporting procedures if a lizard is found within the construction area; and methods of reducing impacts during commuting to and from construction areas.

3. A field contact representative (FCR) shall be designated prior to the start of construction and approved by the BLM. The FCR would be responsible to ensure compliance with protective measures for the flat-tailed horned lizard and other sensitive biological resources and would act as the primary resource agency contact. The FCR shall have the authority to halt construction activities if the project is not in compliance with mitigation required by the BLM.

4. The FCR shall coordinate with the construction manager to assure that all surface-disturbing activities are located as much as possible in areas that have been previously disturbed or where habitat quality is lower, and where disturbance to biological resources can be minimized.

5. All work areas would be clearly flagged or otherwise marked and all work would be restricted to these areas. All construction workers would restrict their activities and vehicles to areas which have been flagged or to clearly recognizable areas such as access roads that have been identified as "safe" areas by the FCR.

6. A biological monitor would be present in each area of active construction throughout the work day from initial clearing through habitat restoration, except where the project is completely fenced and cleared of horned lizards by a biologist (see measure 12 below). The biologist must have sufficient education and field training with the flat-tailed horned lizard. This biologist would ensure

that the project complies with these mitigation measures and would have the authority to halt activities if they are not in compliance. The biologist would inspect the construction areas periodically for the presence of flat-tailed horned lizards and would inspect any open trenches or pits prior to backfilling. The biologist would also work with the construction supervisor to take steps to avoid disturbance to the lizards and their habitat. If a lizard is discovered within an affected area, the lizard would be captured and relocated. The monitor would also excavate all potential flat-tailed horned lizard burrows within the construction areas and relocate any flat-tailed horned lizards encountered.

7. Only biologists authorized by the BLM may handle flat-tailed horned lizards. Any workers who discover flat-tailed horned lizards would avoid disturbing the animals and would immediately notify their construction supervisor and the biological monitor.

8. If a flat-tailed horned lizard is detected within an affected area, it should be relocated according to the measures detailed in Measure No. 9 of the Mitigation Measures section (Appendix 3) of the *Flat-Tailed Horned Lizard Rangewide Management Strategy* (Foreman 1997). Any relocation must be conducted by a biologist authorized by the BLM to handle the lizards.

9. The area of vegetation and soil disturbance would be minimized to the greatest extent possible. When possible, the equipment and vehicles should use existing surfaces or previously disturbed areas. When excavation or grading is necessary, the topsoil should be stockpiled and restored following completion of the work.

10. Existing roads would be used to the greatest extent possible for travel and staging areas.

11. If desired by the BLM, newly created access roads would be restricted by the construction of barriers, erecting fences with locked gates, and/or by posting signs. Maintenance access control facilities shall be the responsibility of the applicant for the life of the project (construction and operation).

12. Sites where prolonged construction activity, lasting six hours or more, would occur, and in which lizard mortality could occur, may be enclosed with 0.5-inch wire mesh fencing to exclude the lizards from the site. This barrier fencing must be at least 12 inches above and below the ground surface and all entry gates should be constructed to prevent lizard entry. Once a fenced site has been cleared of flat-tailed horned lizards and fenced in this manner, an on-site monitor is no longer required. Fencing is not required if a biological monitor is present.

13. For all areas disturbed by construction, a habitat restoration plan shall be developed by a qualified biologist, approved by the BLM, and implemented by the applicant. The restoration plan must address all of the items included in Measure No. 14 in Appendix 3 and in the Overview for Techniques for Rehabilitation of Lands in Appendix 8 of the Rangewide Management Strategy. The restoration plan would include a schedule for monitoring and assuring the success of restoration, including the removal of invasive species, acceptable to the BLM. The restoration plan must include a minimum of three years of tamarisk and other exotics control following construction.

14. The FCR would keep a record of the extent of all areas permanently and temporarily disturbed by construction. This record would be the basis for determining a monetary compensation to be paid by the applicants to the BLM upon the completion of construction as required by Appendix 4 (Compensation Formula) of the Management Strategy. The BLM may require, prior to the beginning of construction, a reasonable deposit based on the extent of anticipated disturbance, with the final compensation to be determined according to the FCR's final record and the Compensation Formula in the Rangewide Management Strategy.

For any construction occurring during the flat-tailed horned lizard's active period, before November 15 or after February 15, all of the measures listed above that are applicable shall be implemented. In addition, the following measures would be required:

1. The FCR would coordinate with the construction manager for the applicants to assure that vehicular traffic is kept to a minimum consistent with the practical requirements of construction.

2. Work crews would not drive to the work site in the management area in individual vehicles. The applicant would arrange for workers to park on State Route 98 or some other facility outside the management area and be driven together to the work site in single collection vehicles. This limitation would apply to the members of a work crew (two or more persons) who would be working together throughout the shift, except for emergencies.

3. The FCR and biological monitors would keep a record of all sightings of flat-tailed horned lizards and fresh flat-tailed horned lizard scat. Sightings would be reported in writing to the BLM on a schedule established by the BLM.

There is a potential that the proposed project would impact active burrows of the western burrowing owl. The breeding season for burrowing owls is between February 1 and August 31. Burrows can be occupied and active during both the breeding and non-

breeding seasons. To avoid impacts to the burrowing owl, the following measures would be required.

1. Disturbance by construction of any occupied burrowing owl burrows should be avoided. A non-disturbance buffer of 160 feet during the non-breeding season and 250 feet during the breeding season should be maintained around each occupied burrow, when possible. It is preferable that construction take place between September 1 and January 31, to avoid impacts to breeding burrowing owls.

2. If construction is to begin during the non-breeding season, a pre-construction clearance survey should be conducted within the 30 days prior to construction to identify whether any burrowing owl territories are present within the project footprint. The proposed construction areas would need to be identified in the field by the project engineers prior to the commencement of the pre-construction clearance survey. The survey should follow the protocols provided in the Burrowing Owl Survey Protocol and Mitigation Guidelines by the California Burrowing Owl Consortium (2001).

4. Passive relocation of burrowing owls from occupied burrows that would be otherwise impacted by construction would be required. Passive relocation should only be done in the non-breeding season. This includes covering or excavating all burrows and installing one-way doors into occupied burrows. This would allow any animals inside to leave the burrow but would exclude any animals from re-entering the burrow. A period of at least one week is required after the relocation effort to allow the birds to leave the impacted area before construction of the area can begin. The burrows should then be excavated and filled in to prevent their reuse. An artificial burrow should be created beyond 160 feet from the impact area but contiguous with or adjacent to the occupied habitat.

4. The destruction of the active burrows on-site would require construction of new burrows at a mitigation ratio of 1:1 at least 50 meters from the impacted area. New burrows would be constructed as part of the above described relocation efforts.

5. If construction is to begin during the breeding season, the above-described measures should be implemented prior to February 1 to discourage the nesting of the burrowing owls within the area of impact. As construction continues, any area where owls are sighted should be subject to frequent surveys for burrows before the breeding season begins, so that owls can be relocated before nesting occurs.

6. It is possible that these protocols would need to be repeated throughout the length of construction to ensure that additional burrowing owls have not moved within the areas of impact subsequent to the initial pre-construction clearance survey and

relocation efforts. As the construction schedule and details are finalized, a qualified biologist should prepare a monitoring plan to detail the methodology proposed to minimize and mitigate impacts to this species.

The construction of the steel lattice tower portions of both the BCP and SER transmission lines would impact non-wetland jurisdictional waters of the U.S. To mitigate impacts to non-wetland jurisdictional waters, the following measures would be required.

1. Any areas of non-wetland jurisdictional waters temporarily impacted would be returned to pre-construction contours and condition.

2. Permanent impacts of 0.08 acre would be mitigated at a ratio consistent with federal regulatory agencies, which is typically 1:1. A restoration plan would be prepared detailing the proposed mitigation for impacts to jurisdictional waters. It is recommended that enhancement of the survey corridor through removal of the non-native invasive tamarisk be conducted. This should be conducted along the eastern edge of the Imperial Valley Substation, which would account for an area of at least 0.10 acre in size. Additional tamarisk could be removed from the southern wetland area, if necessary. The restoration plan should require a minimum of three years of control for tamarisk and other exotics following construction to ensure that these species are not allowed to establish within the impacted areas.

3. In addition, impacts to these waters would require a Section 404 permit from the U.S. Army Corps of Engineers and a 401 certificate from the Regional Water Quality Control Board in accordance with the Clean Water Act. This project would be covered by Nationwide Permit No. 12 which regulates all activities required for the construction of utility lines and associated facilities within waters of the U.S. This Nationwide Permit covers all projects that do not exceed 0.5 acre of impact resulting from construction of the utility lines and associated access roads. This project meets that threshold by impacting a maximum of 0.21 acre of jurisdictional waters.

2.2.6.2 Cultural Resources

1. Identification and evaluation of historic properties and resolution of adverse effects would be determined through consultation by the Bureau of Land Management, California State Historic Preservation Officer, and consulting parties, pursuant to Section 106 of the National Historic Preservation Act and implementing regulations at 36 CFR 800.

2. The applicants would assist the BLM in consulting (pursuant to the National Historic Preservation Act) with Indian tribes to determine whether there are

properties of religious and cultural significance to the tribes within the Area of Potential Effect. The applicants would document their consultation efforts and would provide this in writing to the BLM. This documentation may be submitted as part of the cultural resource survey report or as an addendum to that report.

3. The applicants would implement the treatment plan for resolving adverse effects on historic properties that would be affected by the undertaking.

4. The BLM would ensure that all historic preservation work is carried out by or under the direct supervision of a person or persons (the Principal Investigator) meeting at a minimum the standards set forth in the Secretary of the Interior's Professional Qualifications (48 FR 44738-9).

5. Archaeological monitoring would be conducted for any subsurface construction or ground-disturbing activity in areas determined by the Principal Investigator and BLM to be archaeologically sensitive in accordance with a monitoring and discovery plan approved by the BLM and SHPO.

6. The Principal Investigator and monitors would attend a preconstruction meeting. The construction contract would state the need for the meeting, and project construction plans would be marked with requirements for monitoring. The meeting would allow the archaeological monitors to establish their roles and responsibilities, and protocol and point of contact information with the construction contractors.

7. Cultural properties discovered during construction would be reported and treated in accordance with a monitoring and discovery plan approved by the BLM and SHPO.

8. If human remains or funerary objects are discovered during construction, construction would cease immediately in the area of discovery and the BLM would be notified by telephone followed by written confirmation. In accordance with the monitoring and discovery plan and Native American Graves Protection and Repatriation Act, the BLM would notify and consult with Indian tribes to determine treatment and disposition measures.

9. BLM would ensure that all materials and records resulting from the treatment program are curated in accordance with 36 CFR 79.

2.2.6.3 Paleontological Resources

The applicants agree to accept the following conditions to the grant of right-of-way agreement with the BLM:

1. A paleontologist approved by the BLM would be retained prior to the beginning of construction and would be responsible for carrying out the mitigation program.

2. The consulting paleontologist would review project plans and site information and determine those areas of the site where excavations may have the potential to encounter significant fossils (areas of paleontological sensitivity).

3. Areas of paleontological sensitivity would be monitored when excavations or any other activities that could expose subsurface formations are occurring. Paleontological monitors approved by the consulting paleontologist would monitor such activities. Areas of paleontological sensitivity would be marked on project plans used by the construction contractor.

4. The consulting paleontologist would attend at least one preconstruction meeting with the construction contractor to explain the monitoring requirements and procedures to be followed if fossils are discovered.

5. The construction contractor would keep the consulting paleontologist informed of the construction schedule and would perform periodic inspections of construction.

6. In the event that fossils are discovered, the paleontological monitor would immediately inform the consulting paleontologist. The monitor would have the authority to temporarily halt, redirect, or divert construction activities to allow the recovery of fossil material.

7. Any fossil materials collected would be cleaned, sorted, and cataloged and then donated to an institution approved by the BLM with a research interest in the materials.

8. Within six weeks of the completion of construction, the consulting paleontologist would prepare a report on the results of the monitoring effort and would submit the report to the BLM and, if fossils have been recovered, to the institution to which the fossils have been donated.

2.3 Alternative Locations

Other alternative locations were considered by the applicants, but were not considered reasonable, as described below.

2.3.1 West of SDG&E Transmission Line

The applicants considered locating either the BCP or SER transmission lines, or both, west of the SDG&E transmission line in the United States. This location, like the