CALIFORNIA ENERGY COMMISSION
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CALPEAK POWER-BORDER, LLC
STAFF ASSESSMENT FOR EMERGENCY PERMIT
DOCKET # 01-EP-14

EXECUTIVE SUMMARY

The Energy Commission staff has performed a fatal flaw analysis of Calpeak Power-Border, LLC, electric generation facility and recommends that the project be approved by the Energy Commission with the Conditions of Certification proposed by staff. Staff further recommends that the certification be for the life of the project provided that at the end of the power purchase agreement with either the California Independent System Operator or the California Department of Water Resources the project owner can verify that the project meets certain continuation criteria. These recommendations are based on the Energy Commission staff's independent assessment of the emergency permit application, independent studies and site evaluation, and consultation with agencies that would normally have permitting authority over the project except for the Energy Commission's emergency permitting authority provided by the Emergency Executive Orders of the Governor.

On June 14, 2001, CalPeak Power-Border, LLC (CalPeak) filed an emergency permitting application for the Border Project. CalPeak submitted supplemental application information on June 15, and June 18, 2001. The Border application was deemed complete on June 20, 2001. The application is available in Adobe PDF format at the documents portion of the project website, at http://www.energy.ca.gov/sitingcases/peakers/border.

CalPeak Power-Border, LLC proposes to construct a 49.5 megawatt (MW) electricity generating facility utilizing one FT8 Pratt & Whitney Twinpac gas fired turbine system consisting of two engines connected to a common generator. The system, as proposed, will be configured to operate in simple-cycle mode, and will utilize Selective Catalytic Reduction (SCR) to reduce NOx emissions to 2 ppm averaged over one year.[1] The proposed facility will be located near the intersection of Airway Road and Sanyo Avenue, West of Highway 905, in the Otay Mesa area of the City of San Diego, San Diego County, California.

A PDF file showing the regional location of this facility is included as Figure 1 in the files for this staff assessment. The project vicinity map, Figure 2, as well as a site plan for the proposed facility are also available. These files may be downloaded from the project's web site at: http://www.energy.ca.gov/sitingcases/peakers/border/documents.

[1] Potential To Emiit Emissions (PTE) Study in Appendix G of AFC.

EMERGENCY PERMITTING AUTHORITY

This project is being considered outside of the Energy Commission's normal power plant permitting process. Under Public Resources Code Section 25705, if the legislature or the Governor declares a state of energy emergency, the Commission has emergency authority to order the construction and use of generating facilities under terms and conditions it specifies to protect the public interest. This authority can be invoked only if the Legislature or Governor declares a state of emergency and the Commission determines that all reasonable conservation, allocation, and service restriction measures may not alleviate an energy supply emergency.

Governor Gray Davis declared a state of emergency on January 17, 2001. On February 8 and March 7, 2001, the Governor issued several executive orders and declared that all reasonable conservation, allocation, and service restriction measures may not alleviate an energy supply emergency.

In Executive Order D-26-01, and Executive Order D-28-01 the Governor ordered the Energy Commission to expedite the processing of applications for peaking and renewable power plants that can be on line by September 30, 2001. The Governor also declared that these projects are emergency projects under Public Resources Code section 21080(b)(4), and are thereby exempt from the requirements of the California Environmental Quality Act (CEQA). A summary of the emergency permitting process, including the proposed schedule, and a checklist showing the information required in an application, can be found on the web at:
http://www.energy.ca.gov/sitingcases/peakers/documents/index.html.

NEED FOR EMERGENCY PERMITTING

SUPPLY

The electric generation system must have sufficient operating generating capacity to supply the peak demand for electricity by consumers (including the transmission and distribution losses associated with power delivery). Also, an additional amount of reserve power plant capacity must be operational to act as instantaneous back-up supplies should some power plants or transmission lines unexpectedly fail. According to the Western Systems Coordinating Council (WSCC), to reliably deliver power, control area operators should maintain operating reserves of seven percent of their peak demand (including losses). If operating reserves decline below that level, customers that have agreed to be interrupted in exchange for reduced rates may be disconnected. If operating reserves get as low as one and a half percent, firm load will likely be shed locally, resulting in rotating blackouts, to avoid system-wide blackouts.

Current estimates by Energy Commission staff of consumer peak demand for electricity and reserve requirements, and of the expected availability of electricity capacity supplies for the summer of 2001, indicate that existing capacity supplies are not adequate to maintain a seven percent operating reserve margin particularly if summer

temperatures rise above levels that have as much as a 10 percent chance of occurring. Therefore, additional capacity resources or demand reductions are needed now and by next summer to maintain a seven percent operating reserve margin under temperature conditions that have about a 10 percent chance of occurring.

Many efforts to reduce peak demand and supply new capacity are currently under way. More than 2,500 MW of new generation may be operational by the end of July 2001. These projects include power plants already certified by the Energy Commission that are currently under construction; various upgrades, rerates and returns-to-service of existing power facilities; and new renewable generation responding to Energy Commission incentive programs. The emergency approval of new simple-cycle power plants at numerous locations throughout the state is also important to respond to peak summer demand and provide local electricity system reliability.

Staff assumes that power plant outages of about 3,000 MW will occur throughout the summer. If power plant outages this summer turn out to be greater than assumed, new capacity resources, such as peaking power plants, can help maintain an adequate reserve margin, and help avoid or shorten the duration of rotating blackouts.

PUBLIC HEALTH AND SAFETY

There is a reliability benefit associated with locating generation resources near the significant load centers. When load and generation are seriously out of balance, as they are in most service areas, the potential for system separation, islanding and cascading outages are significantly increased (U.S. Congress, Office of Technology Assessment, June 1990). If additional simple-cycle projects are not licensed and built, this reliability benefit will be foregone until additional larger baseload generation is built in such areas. Although it is impossible to accurately calculate the likelihood of system outages, such outages are certainly plausible and are much greater without new generation resources in most California service areas. Power outages frequently occur during, and are often precipitated by, periods of extreme heat. Extreme summer heat creates extreme demand primarily from air conditioning loads. In fact, it has been demonstrated that demand in California is particularly sensitive to small increases in maximum summer temperature (CEC 1999). In the summer of 1998 the system demand in California increased by 4,000 MW as a result of a five-degree increase in temperature as compared to more typical maximums.

When major outages occur, there is an increased risk of significant public health and safety impacts. Fatalities and injuries associated with many types of accidents may result from outages, such as traffic accidents from signal and lighting failures, falls down unlighted stairways, fires caused by use of candles for lighting and unconventional open-flame cooking, loss of life support equipment in medical clinics, and electrical shock from improper use of portable electric generators. However, a much more serious risk is the potential morbidity and mortality associated with summer heat waves. Behind major epidemics, heat waves in California rank among the worst of all other natural disasters in the history of California for excess mortality. Heat waves have caused more fatalities in individual events than the 1906 earthquake (452 deaths), the

San Francisquito Dam collapse of 1928 (450 deaths) and the Port Chicago explosion in 1944 (322 deaths) (Oechsli and Buechley 1970). The mortality associated with one California heat wave in 1955 resulted in 946 deaths (before air conditioning was in common use). Fortunately the mortality associated with such events is completely preventable (Semenza 1995). One of the most effective ways of avoiding mortality during heat waves is to spend time in air conditioned environments during the hottest parts of the day (CDC 2000). However, artificial climate control (air conditioning) may be mandatory to avoid fatalities when temperatures change abruptly (Bridger and Helfand 1968).

The availability of air conditioning has significantly reduced the mortality associated with heat waves in California and throughout the nation. It was estimated that increased use of air conditioning during the 1963 Los Angeles heat wave saved over 800 lives (Oechsli and Buechley 1970). Sensitive populations are often dependent on air conditioning to avoid aggravation of chronic health conditions such as chronic obstructive pulmonary disease or acute health effects such as heat stroke. It is widely recognized that hot weather conditions can significantly increase both morbidity and mortality, particularly among sensitive populations such as the very young, the elderly, and those with chronic diseases (Bridgerand and Heland 1968) (Schickele1947) (Oechsli and Buechley 1970) (Kalkstein et al 1989, 1993, 1997, 1998). Thus, shortages of electricity can impose risk of very serious impacts on the public, potentially increasing the risk of deaths due to heat waves. The vast majority of those who die in heat waves are at home without air conditioning and are elderly. Based on evaluation of the public health and safety risks associated with new projects, staff concludes that new generating projects are much more likely to reduce public health and safety risks than increase them.

AIR EMISSIONS OF BACK UP GENERATORS COMPARED WITH EMERGENCY PERMIT POWER PLANTS

California generation is among the cleanest in the country. This is due to negligible coal and oil use as generation fuel, the BARCT and Best Available Control Technology (BACT) rules, and a robust mix of geothermal, renewable, nuclear and hydroelectric generation. With the generation shortfalls California has experienced in recent months due to abnormal forced and unforced outage rates and shortages of instate and out of state generation capacity, several options have been considered to supply additional generation without compromising public health and safety.

One option is to utilize the existing fleet of diesel engines that are used as backup or standby generators for facilities such as hospitals, businesses, and essential services such as telephone, water, sewer, police and fire. Most of these generators are exempt from permitting as they are designed to only run when the grid fails to deliver electricity. That fleet is older and uncontrolled. It could represent 11,500 units, producing as much as 5,000 MW. However, as little as 1,200 MW may be compatible with operating in parallel with the grid. Most units are designed to only operate when isolated from the grid, and only with enough power for essential load at the facility.

Another option is to rely on a small number of diesel or natural gas engines that are permitted with emission control equipment as prime engines. Their emissions are in the range of 10 LB NO_x/MWhr. However, they may not be tied to a generator (e.g., they may operate a pump or compressor) or are already operating at or near baseload, so they may not be able to supply much electricity to the grid. Other California generation options are less than 1.0 LB NOx/MWhr, but few are cleaner than the system NO_x averages with the exception of demand reduction, solar, wind, and expensive fuel cells. The generation system emission averages will continue to decrease as the BARCT rules are fully implemented and the new generation with BACT installed comes online. The generation system emission average should approach 0.1 LB NOx/MWhr by 2005.

DIFFERENCES IN AIR EMISSIONS

Emission rates, rather than the sheer number of generators of any one type, are key to comparing emissions from different generation sources. For example, if there is a need for 1000 MW over 10 hours, or 10,000 MWhrs, then the NOx emissions are simply a product of the emission rate multiplied by 10,000. Diesel standby engine use would result in 150 tons of NO_x over 10 hours, versus 1.5 tons from 1000 MW of natural gas-fired generation over the same period of time. A new simple-cycle power plant, such as the FT8 Pratt & Whitney Twinpac proposed for the CalPeak Power-Border project, would produce 0.62 tons of NO_x during the 202 hours it would operate to produce the same 10,000 MWh (the Preliminary Air Quality permit requires CalPeak Power-Border not to exceed 6.18 pounds per hour).

The location and configuration of a source are also significant factors in assessing the effect on air quality. If the 1000 MW is concentrated in one location (e.g., a 1000 MW combustion turbine or combined cycle project), and then the emission will be of relatively low concentration, will be buoyant, and will be emitted at a relatively high elevation from a stack. If the 1000 MW consists of 1,000 one-MW diesel standby generators, the emissions will be emitted near ground level, at relatively high concentrations, and probably over a wide region or even throughout the state. Similarly, a dispersed set of peakers (e.g., twenty 50MW General Electric LM6000s) could be located throughout the state. Without knowing their exact locations, their effects on air quality are not entirely known. A peaking power plant located next to a hill or mountain, because of the terrain or topography, or in an area that is already heavily polluted, could result in violations whereas the other 1000 MW “configuration” might not.

EMISSION REDUCTION CREDIT BANK

The Governor’s Executive Order D-24-01, charges the California Air Resources Board with the responsibility of creating a state emission reduction credit bank for the purpose of providing offsets for new or expanded peaking facilities that could add new power by this summer. This bank was initially funded with recent NO_x reductions generated through the CARB’s Carl Moyer Program, an incentive program. The incentives are grants that cover the incremental cost of cleaner on-road, off-road, marine, locomotive and stationary agricultural pump engines, as well as forklifts and airport ground support

equipment. Because the new or expanded peaking facilities will operate under short term entitlements, for the purpose of responding to the energy crisis, the use of these mobile emission reductions are intended to provide NO_x and particulate matter offsets for these peaking facilities.

These emission reduction credits (ERCs) are available through the Board to peaking power plants that need emission offsets in order to add new or expanded peaking capacity that will be on-line by September 30, 2001. These credits are intended to fully satisfy offset requirements of these power plants. The ERCs available from this bank are nitrogen oxides (NO_x) and particulate matter less than 10 microns (PM_{10}). Where needed, these ERCs will be issued to qualified power plant applicants for a three-year period. These ERCs will expire on November 1, 2003, to ensure that these credits will be available for three full summer peak seasons. The amount of NOx ERCs needed for this project is directly related to the emission control level of 5 parts per million NO_x and the number of hours of operation. The CARB bank will make up to 21 tons per year available for purchase for each 50 MW power plant up to 100 MW total. Prior to the expiration of the CARB short term ERCs, applicants who use these credits will be required to secure permanent emission reductions for the remaining life of the power plant peaking units if the applicant desires to continue to operate the unit.

Heavy-duty engines are a significant source of smog-forming pollutants. About 525,000 heavy-duty diesel trucks are driven throughout the state, with another 680,000 diesel-fueled engines used in construction and agriculture. Together, diesel engines contribute about 40 percent of all NO_x emissions from mobile sources. NO_x is one of the main contributors to ground-level ozone, one of the most health-damaging components of smog. In addition, the fine particulate matter exhaust from heavy-duty diesel engines is a toxic air contaminant. The Carl Moyer incentive program focuses on reducing emissions of smog-forming oxides of nitrogen (NO_x), but will also reduce particulate emissions.

Particulate matter includes many carbon particles (also called soot) as well as other gases that become visible as they cool. In 1998, California identified diesel particulate matter (diesel PM) as a toxic air contaminant based on its potential to cause cancer and other adverse health effects. In addition to PM, emissions from diesel-fueled engines include over 40 other cancer causing substances. Overall, emissions from diesel engines are responsible for the majority of the potential airborne cancer risk in California. Several studies have confirmed that the cancer risk from diesel particulate is greater than the risk from all other identified toxic air contaminants combined. Given these findings, using the proposed emission reduction credit strategy will be an effective means to offset peaking power plant emissions as an interim measure.

STAFF ANALYSIS OF THE CALPEAK POWER-BORDER PROJECT

SITE DESCRIPTION

The proposed project (CalPeak Power – Border, LLC) would occupy a 5.6-acre parcel (APN 646-130-46) located south of Old Otay Mesa Road East, north of Airway Road, east of Route 905 and west of Sanyo Avenue in an area planned for industrial development. The site is generally level and has an elevation of approximately 500 feet above mean sea level. It has historically been used for agricultural production (tomato crops), and has recently been plowed. Existing vegetation is dominated by non-native species, primarily mustard.

The east side of Sanyo Avenue is a light industrial area that includes the Casio and Sanyo buildings. To the west of the site and adjacent to State Route 905 (SR 905) is undeveloped open space (inactive agriculture). The Wildflower power plant facility is currently under construction to the north of the site, on the south side of Otay Mesa Road East. Directly to the south of the Wildflower facility are San Diego Gas & Electric's (SDG&E's) Border Substation and gas regulator station. Undeveloped open space is located adjacent to the site. This open space extends from the site northwest to existing facilities (approximately 700 feet), to the north to Otay Mesa Road East, to the east to Sanyo Avenue (approximately 600 feet), to the south to Airway Road (approximately 650 feet) and to the west to State Route 905 (approximately 300 feet).

The project's construction laydown area will be located on 1.75 acres between the western boundary of the site and State Route 905. Site access would involve the construction of a 600-foot long, 30-foot wide paved driveway located adjacent to the southeast corner of the site and extending to Sanyo Avenue. This roadway would be elevated in the east to accommodate the higher elevation of Sanyo Avenue. Fill excavated from the site would be used for this improvement. A new SDG&E easement would also be located in this roadway.

Linear facilities for the project will consist of an overhead electric transmission line, an underground natural gas pipeline, underground water pipeline, and an access road. Approximately 1,700 feet of transmission line will be constructed between the project site and an existing major SDG&E corridor that connects into connects to the SDG&E substation. In addition, SDG&E will construct an underground natural gas pipeline approximately 600 feet from the meter station near the eastern boundary of the project. The alignment would be located under the access road between the project site and the existing SDG&E gas line on Sanyo Avenue. The eight-inch natural gas line would extend for a distance of approximately 780 feet between Sanyo Avenue and the project site. The water source would be available via an interconnect from an existing 12-inch water line located on Sanyo Avenue.

The project site is owned by CIF Holdings, L.P. A long-term lease and option to buy has been executed between the property owner and the applicant.

LAND USE

The Project site is located in the Otay Mesa Development District, a planned district and one of the City's largest industrial areas. The zoning designation for the Project site is Otay Mesa Industrial Subdistrict (OMDD-I). Major utilities and services (including central electric plants and public utility electric substations) are specifically permitted in the OMDD-1 zone, in accordance with the San Diego Municipal Code §103.1103(a)(7). The project would be consistent with this code and zoning designation and is a permitted use in this zone.

As shown in the Draft Comprehensive Land Use Plan for Brown Field Airport, the Project is not located within the Brown Field Airport Influence Area.

The only height limitation in the Otay Mesa Development District is a 150-foot height limit within the Brown Field Airport Influence Area. Therefore, the 50-foot stack height proposed for the power plant will not exceed any height restriction.

The Project site lies in an area designated for industrial use. The site parcel is located between Otay Mesa Road East to the north, Airway Road to the south, State Route 905 to the west, and Sanyo Avenue to the east. The east side of Sanyo Avenue is a light industrial area that includes the Casio and Sanyo buildings. Adjacent to State Route 905, to the west, is undeveloped open space (inactive agriculture). This open space extends from the site northwest to the SDG&E facilities (approximately 700 feet), to the north to Otay Mesa Road East, to the east to Sanyo Avenue (approximately 600 feet), to the south to Airway Road (approximately 650 feet) and to the west to State Route 905 (approximately 300 feet). Since adjacent lands are not developed, but have been deemed by the city as appropriate for industrial development, the project would be consistent with existing land uses.

The project's construction 1.75-acre laydown area will be located on-site between the western boundary of the site and State Route 905. The site access road and the SDG&E gas easement and water pipeline will run from the southeast corner of the facility east to Sanyo Avenue.

To the north of the site, on the south side of Otay Mesa Road East, the Wildflower power plant facility is currently under construction. Directly to the south of the Wildflower facility are SDG&E's Border Substation and gas regulator station.

The project site and adjacent land are all within the OMDD-1 zoning designation. Therefore, the proposed project and linear facilities would be consistent with proposed land uses.

Parking is discussed in the **Traffic and Transportation** section; landscaping and setbacks are addressed in more detail in the **Visual Resources** section. Further discussion regarding potential construction-related impacts and land use consistency can be found in the **Noise, Biological Resources, Traffic and Transportation** and **Cultural Resources** sections.

The applicant has indicated that all local, state and federal land use requirements would be met. This would be assured by the imposition of Conditions of Certification **LAND-1**, which would ensure that all applicable laws, ordinances, regulations and standards (LORS) have been met.

With implementation of the above conditions of certification the project's impact on land use would be less than significant.

AIR QUALITY

The analysis of the air quality impacts of emergency permit applications is performed by the California Air Resources Board and the local air pollution control district, the San Diego County Air Pollution Control District (SDAPCD). Construction as well as operation air quality are of concern to the California Energy Commission as well as to the affected community and surrounding area.

Staff has proposed conditions of certification, which require the applicant to limit fugitive dust emissions during construction and to comply with the authority to construct issued by the SDAPCD. Standard Condition of Certification **AQ-1** insures that construction impacts are minimized and mitigated where appropriate.

The operation of power plants, especially when in close proximity to communities, focuses attention on the impacts, and potential impacts upon air quality. Residents of San Diego, and the Otay Mesa area have expressed questions and concerns regarding several air quality issues: 1. analysis of cumulative impacts from the existing, currently being constructed, and proposed plants for the area; 2. concerns about long-term air quality in the South Bay area; and 3. concerns regarding gas curtailment and the burning of liquid fuels at the South Bay base-load plant and at the newly constructed Larkspur peaker plant. Each of these questions has been addressed by the SDAPCD, and they continue to apply their analytical and monitoring efforts to clarifying these issues and addressing concerns.

Cumulative impacts are of special concern for two reasons: San Diego County and the South Bay area have particular meteorological and geographic conditions which tend to "trap" and restrict upper air movements. This movement would normally dissipate substances that lower air quality (oxides of nitrogen, sulfur dioxide, small paticulate matter, and ozone formed by interactions of these and other components of our atmosphere). A second concern is that the region hosts numerous sources producing these chemical components, chief among these are large numbers of vehicles, agricultural and industrial processes including power plants.

The Federal government, the State, and the air districts are generally concerned with the following components of emissions from the above sources: Oxides of nitrogen (NOx), sulfur dioxide (SO_2), and particulate matter smaller than 10 microns (PM_{10}). In addition, there are toxic chemicals and heavy metals which find their way into the air and are of concern as they also have the potential to produce negative health impacts

through breathing and becoming components of water and soil. All of these are factors in the analysis done by the SDAPCD, and in the continuous monitoring required by federal, state and local air districts.

To insure compliance with air quality standards by the CalPeak Border project, continuous emissions monitoring systems (CEMS) must be in place and the results reported on a regular basis. To assist in insuring regulatory compliance, the **AQ-2,** and **AQ-3** conditions of certification are applied to this, and all, California Energy Commission approved projects. These demand compliance with air district conditions for construction and operation of a power plant.

The cumulative impact on air quality including the concentrations of toxins is a focus of the analysis of the impacts of the proposed CalPeak Border project. Assessing impacts requires a base against which to compare changes caused by individual and multiple sources of emissions-in this case power plants. SDAPCD analysis of the Border project was included in an expanded analysis, which looked at all existing and proposed power plants in the region. This includes the existing South Bay plant, the planned 510 megawatt (MW) Otay Mesa plant, as well as five small power plants built or planned for the region.

Findings by the District are that the CalPeak Border project will not have significant emissions impacts. The applicant proposes the addition of Selective Catalytic Reduction (SCR) as a component of the project. SCR is considered as BACT (Best Available Control Technology). The proposed NO_x emission rate is 2 ppm on an annual basis, which is lower than the 5 ppm allowed with SCR. This is among the lowest emission ratings available. Carbon Monoxide (CO) emissions will be maintained at 6 ppm, and particulate matter smaller than 10 microns (PM_{10}) will be at 3.33 lb/MMcf, approximately 50 percent of the allowable rate. These proposed conditions are stated in the Preliminary Authority to Construct letter for the CalPeak Border project contained in Appendix A.

At the public hearing on June 28, questions were again raised regarding 13 days of fuel oil burning at the South Bay facility due to gas supply curtailment in December 2000 and January 2001. As discussed at previous meetings relating to other projects in the area, this situation was incorporated into the background data and was considered in modeling the potential impacts of the CalPeak Border project along with the cumulative impacts of all of the other new projects in the area (see June 11, 2001 letter from Daniel Speer of the SDAPCD).

Background data is inclusive of air quality information from a variety of locations, taken at regular intervals over a long time period, and is inclusive of all real measured conditions and impacts. This data is the actual ambient air quality environment against which proposed or new projects are modeled. Concerns regarding cumulative impacts of the increased numbers of electric facilities usually center around the existence of two plants, South Bay and the new Otay Mesa facility. According to Matt Layton, CEC and confirmed by D. Speer of the APCD, emission plumes from these two large plants do not have significant interaction. This reduces the local cumulative impacts of key pollutants and PM_{10}, though regional air quality analysis reflects the combined impacts.

In addition, the SDAPCD defined a "worse case scenario" for modeling emissions impacts. In this scenario the assumption was that due to gas curtailment and electrical demand that the South Bay plant was operating 33 percent on fuel oil, and that the RAMCO Chula Vista and Larkspur-Otay Mesa each had one turbine operating on fuel oil.

Reporting the results on June 26, 2001, the SDAPCD determined that…"The results of the modeling, including worst-case monitored background concentrations, indicate that California and Federal standards for CO, SO_2 and NO_2 will not be exceeded due to the operation of these facilities as described" (R. DeSiena, June 26, 2001). This memorandum, including detailed results, may be viewed in Appendix A of this Staff Assessment.

Modeling of the PM_{10} impacts of CalPeak Border and all other existing and planned projects also indicated that neither California or Federal PM_{10} standards would be exceeded.

SDAPCD verbally reported the cumulative toxin analysis for the projects as being well within acceptable limits. Health risks, and acute non-cancer impacts are below the acceptable level of 1.0, reaching a levels of 0.77 and 0.148 respectively. For the Cancer health risk, the combined projects rated 1.16 where 10.0 is the standard. (D. Speer, personal communication 6-12-01; and, M. Lake, presentation on June 28, 2001 at the CalPeak Border hearing).

External to the plant operations is the concern regarding gas supply in the San Diego region. As previously noted, in December 2000 and January 2001 the South Bay facility was forced to operate for 13 days using fuel oil instead of gas. This was due to curtailment of the gas supply. In testimony before the CEC on June 5, 2001, Michael Murray of Sempra Energy indicated that events of last winter causing brief curtailment were more a result of market place actions catching the industry by surprise, having expected no sharp increase in demand. This foreknowledge, increased storage, coupled with infrastructure improvements to the transmission system in Southern California, should greatly alleviate the potential for curtailment of customers in the region. Should curtailment occur, the plan is to rotate gas availability among the plants to best insure maximum electrical availability to the grid, while minimizing potential impacts from force reliance on liquid fuels.

Appendix A contains the initial Air Quality Impact Analysis and Rule 1200 Evaluation, and documents from the SDAPCD that reflect the careful analysis of impacts from the CalPeak Border project with the cumulative impact studies that have been done.

Please Note: In reviewing the early SDAPCD analysis documents the CalPeak Border project is synonymous with LONESTAR.

BIOLOGICAL RESOURCES

BIOLOGICAL SITE DESCRIPTION

CalPeak PowerLLC. has submitted plans to build a peaker power plant in the Otay Mesa area of the City of San Diego, San Diego County, California. The proposed project site has historically been used for agricultural tomato production but has been fallow for several years. The majority of the site has been plowed within the last few months and is characterized by barren soil and non-native plant species. The project site, including a 600 foot long, 30 foot wide paved access road to be build, is 5.6 acres. This includes the 1.75 acre construction laydown area located in the western portion of the site, which occurs within the same fallow field.

The transmission line corridor spans 1700 feet and consists of non-native grassland, disturbed wetland, and fallow field. In addition, the project includes a natural gas pipeline and water line extending approximately 780 feet along the peaker plant's proposed access road to Sanyo Road. These linears along with the access road occur within fallow field.

Helix environmental Planning (Helix) has prepared a Biological Technical Report for the 20.7 acre study area that encompasses the proposed project site. This can be found in Appendix J of the application.

DESIGNATED CRITICAL HABITAT

Non-native grassland (NNG) occurs within the transmission line corridor and the Helix study area. This NNG is dominated by non-native grasses, including Italian ryegrass (*Lolium multiflorum*), two species of canary grass (*Phalaris minor* and *P. paradoxa*), bromes (*Bromus sp*.), wild oats (*Avena sp*.), and a small component of mustard (*Brassica sp*.). This vegetation community is known to provide foraging habitat for raptors and other wildlife, and typically requires mitigation for its loss in San Diego County. Impacts to NNG include the removal of 0.4 acres at the facility siting location, and approximately 0.01 acres on the transmission line corridor (CalPeak Power, llc, 2001).

Wetlands occur adjacent to the northern study area boundary and within the transmission line corridor. Four wetlands were delineated by Bob Faught for Pacific Views on June 8, 2000, and one 0.21 acre disturbed wetland was delineated by Helix on May 10-11, 2001. There are no anticipated impacts to wetlands as the transmission line will span all wetland areas.

SENSITIVE PLANTS

According to an in-house database search, thirty-six sensitive plant species were identified by Helix as having the potential to occur onsite. A list of these species can be

found as Appendices C & D of Appendix J (CalPeak Power, LLC, 2001). All of the species were listed by Helix as low to no potential to occur. A separate California Natural Diversity Database (CNDDB) search conducted by California Energy Commission (CEC) staff noted eight additional sensitive species located within the Otay Mesa 7.5 minute Quad (California Department of Fish & Game (CDFG), 2000). However, suitable habitat is not present for any of these species.

On May 18, 2001, Sally Trnka of Helix conducted a site visit to map vegetation communities and inventory plant and animal species at the proposed facility site. During these surveys, the San Diego County viguiera (*Viguiera laciniata*) a California Native Plant Society List 4; R-E-D 1-2-1 species was identified at the intersection of Old Otay Mesa Road and Sanyo Road. This area was surveyed as an alternate transmission line route. CalPeak, however, has no plans to construct in this location.

Natasha Nelson (CEC biologist) provided notice that the US Fish & Wildlife Service (USFWS) has designated critical habitat for the Otay Tarplant (*Deinandra conjugens*). This area is located approximately 1.5 miles to the east of the CalPeak Border site. This species is known to grow in non-native grasslands and along the edges of agricultural fields, but was not observed by Helix biologists during surveys (Nelson, 2001).

SENSITIVE WILDLIFE

A total of thirty-four sensitive wildlife species were evaluated by Helix for their potential to occur onsite. A list of these species can be found as Appendix F of Appendix J (CalPeak Power, dLLC, 2001). All of the species listed were considered to have no to low potential for occurrence on the site. A separate CNDDB search conducted by CEC staff noted four additional sensitive species located within the Otay Mesa 7.5 minute Quad (CDFG, 2000). However, suitable habitat is not present for any of these species.

Helix conducted separate protocol surveys for the Quino checkerspot butterfly (*Euphydryas editha quino*) and its habitat. The checkerspot and its habitat were not present at the study site; however, habitat does exist within southern San Diego County. The USFWS is concerned with nitrogen deposition from plant emissions fertilizing the growth of weedy plant species at the exclusion of the checkerspot host plant species. The Applicant and the USFWS are currently in consultation regarding this issue.

CDFG biologists have expressed concern that appropriate surveys were not conducted for nesting sensitive bird species, including raptors, and recommends conducting surveys 300 feet around the project site, (Lucas, 2001). These surveys should document suitable nesting trees, and shall focus on potential nesting habitat for sensitive species such as Northern harrier (*Circus cyaneus*) and Least Bell's Vireo (Vireo bellii pusillus).

Harriers are often found nesting, foraging, and roosting in marshes and grasslands from April to September, and peak reproductive activity occurs in June and July. A search of the Breeding Bird Survey Database has revealed nesting harriers within southern San

Diego County (Patuxent Wildlife Research Center, 2001). Also, a harrier was observed flying over the site during biological surveys conducted by Helix.

The Least Bell's Vireo inhabits low, dense riparian growth along water or along dry parts of intermittent streams. It is typically associated with willow, cottonwood, baccharis, wild blackberry, or mesquite habitats (Gaines, 1990). Although prime habitat in large tracts is not present onsite, the wetland areas contain willows and other brush that could be utilized for nesting. Also, the CNDDB lists a Least Bell's Vireo occurrence within the Otay River approximately 2 miles away (CDFG, 2000).

In accordance with the San Diego Municipal Land Development Code Biological Guidelines for developing on Environmentally Sensitive Lands (ESL) (City of San Diego, 1999), the Applicant has proposed mitigation for the loss of NNG (0.4 acres for the generating site. The CDFG has requested that NNG loss from the placement of any transmission line poles (0.01 acre) also be included in the total acreage considered for mitigation (Lucas, 2001) (**BIO 7**).

The CDFG requested surveys for nesting sensitive bird species, including raptors at the project site and the surrounding habitat within 300 feet of the project boundary (Lucas, 2001) (**BIO 8**). Surveys methodologies will allow for a thorough search of these areas to identify potential arboreal and/or ground nesting species, including the harrier and Least Bell's Vireo.

The Applicant has proposed no mitigation for wetlands. Staff, the City of San Diego (the City), and the CDFG are concerned with potential indirect impacts from stormwater runoff during construction and operation. The Biological Guidelines of the City recommend a minimum 100 foot buffer adjacent to all wetlands. The width of the buffer may be either increased or decreased as determined on a case-by-case basis in consultation with the CDFG, the USFWS, and the Army Corp of Engineers (ACOE) (San Diego, 1999). This 100 foot buffer can be adequately maintained for the construction laydown area and the generator site. Two transmission poles, however, will be placed adjacent to the wetlands in order to span the area. Taking into account the small footprint of the pole pads, the CDFG has determined a 25-50 foot buffer is acceptable for construction of the transmission line (Lucas, June 28, 2001) (**BIO 9**). There are to be no direct impacts, by CalPeak, to the wetlands, and wetland buffers will be clearly flagged.

During operations the Applicant proposes to direct stormwater runoff through a culvert located underneath Highway 905. Concentrated stormwater flows to this culvert may create scouring problems within the adjacent wetland. Best Management Practice's and other anti-erosion measures to address this concern are discussed in the **Soil & Water** section of this analysis.

MITIGATION

According to the Landscape Concept Plan (Appendix A of the application) for the proposed project, *Schinus molle* would be planted. This species is considered invasive

by the California Exotic Pest Plant Council (CalEPPC, 1999), and shall not be used for landscaping (Lucas, 2001). The Applicant is consulting with CDFG and finalizing the Landscape Concept Plan (**BIO 10**), and will contact the Compliance Project Manager (CPM) when finalizing the landscape work plan.

SOILS AND WATER

WATER

WATER SUPPLY

The proposed CalPeak Border peaker facility will use approximately 10-gpm of water at peak use for evaporative cooling, which is used when the ambient air temperature exceeds 80 degrees Fahrenheit. Water from the Otay Water District (OWD) will be used at a rate of 38-gpm for the time required to fill a 47,000-gallon demineralized water storage tank. CalPeak has received a Will Serve Letter from the Otay Water District indicating that they will be able to meet the water demands of the facility. Before utilization, all process water will be treated by a portable demineralization system.

WASTEWATER

The plant will not discharge any wastewater to a sewer system. All wastewater generated by the demineralization process will be disposed of by the contractor supplying the system. Process wastewater will be filtered onsite and reused in the evaporative cooler. Wastewater from equipment wash down will be collected and pumped to a storage area, then collected by a tank truck for disposal at an appropriate facility. No sanitary sewage service will be required, the plant will use a portable chemical toilet, which will be emptied of waste as needed.

NATIONAL DISCHARGE ELIMINATION PERMITS

GENERAL NPDES FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

The total project area exceeds five acres (5.6 acres) and will require a National Pollution Discharge Elimination System (NPDES) permit to address Storm Water Runoff from Construction Activities. Part of the NPDES permitting process is the submission to the Regional Water Quality Control Board (RWQCB), of a Notice of Intent (NOI) application and the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will include an erosion control and stormwater management plan that identifies Best Management Practices (BMPs) to be implemented during construction activities.

A NPDES permit for Storm Water Discharges Associated with Industrial Activities would not be required based on the activity occurring at the site. However, through the California Regional Water Quality Board, San Diego Region, Order No. 2001-01

(Order), as of February 21, 2001, each municipality listed in the Order as a Co-permittee must develop local permits, plans, and ordinances, such that they (a) prohibit the discharge of pollutants and non-stormwater into the MS4 (municipal storm sewer system); and (b) require the routine use of BMP's to reduce pollutants in site runoff.

To comply with the order the City of San Diego is reviewing construction plans as well as operations in order to insure that stormwater discharges standards will be met.

SOILS

During project construction and operation, wind and water action can erode unprotected surfaces. Areas of impervious surfaces (paved, compacted, etc.) can create increased runoff conditions, thereby resulting in potential erosion on unprotected down-gradient surfaces. CalPeak has identified the need to develop an Erosion Prevention and Sediment Control Plan (EPSCP). The EPSCP has several parts that need to be addressed at various stages of the project. The first is the design of plans to address stormwater control. These plans identify potential areas of erosion, and detail the installation of interim and permanent stormwater runoff control measures. The second phase is the preparation of a SWPPP for construction, along with the filing of a NOI with the RWQCB for a NPDES general permit for construction activities. The SWPPP has two main functions; the first is to identify sources of pollutants associated with construction activities that may affect the quality of stormwater discharges from the site. The second function is to identify and implement site specific BMPs to reduce or prevent pollutants associated with construction activities from entering stormwater discharge.

CalPeak has not supplied a draft EPSCP. The EPSCP will need to be completed and various key components approved by the Compliance Project Manager (CPM) prior to ground disturbance (refer to standard conditions of certification).

Calpeak has supplied a draft grading plan, which identifies stormwater management methods. California Department of Fish and Game (CDFG) has submitted a comments letter and one of the concerns is that stormwater flows will be changed from sheet flows to, concentrated, high volume and high velocity flows. These flows entering the adjacent drainage, may result in damage to the habitat. CDFG has expressed their willingness to work with Calpeak on the drainage plan to try and maintain sheet flows and reduce impacts to the adjacent wetlands to an insignificant level. Based on the supplied grading plans, there is the potential for impacts to the wetlands. Calpeak should assess the proposed plans and make changes as necessary to reduce the potential for impacts to the adjacent wetlands. Reducing the amount of impervious surfaces will lower the volume of stormwater that will be discharged from the site, this is mainly accomplished by the use of decomposed granite instead of paving, where appropriate.

SPILL PREVENTION/ WATER QUALITY PROTECTION

The main source of potential spills is from lubricating and hydraulic oil stored and used onsite. The total quantity of oil onsite exceeds the threshold quantity, so a Spill Prevention Control and Countermeasures Plan (SPCC), per 40 CFR 112, is required. The Transformer area will have a secondary containment that will provide containment in the event of a transformer leak, in addition a oil water separator will be installed on the stormwater discharge line as a safeguard against stormwater contamination.

The proposed project will also use aqueous ammonia in the Selective Catalytic Reduction (SCR) system to control Nitrogen Dioxide (NO_x) emissions. The ammonia will be stored in a 12,000-gallon storage tank with a concrete secondary containment capable of holding 110 percent of the tanks volume. All chemicals stored onsite will be in closed containers and will include secondary containment to prevent the flow of chemicals into adjacent waterways.

HAZARDOUS MATERIALS MANAGEMENT

The proposed project involves the use of aqueous ammonia and will involve use of natural gas. Ammonia will be used for control of NO_x emission in an SCR system. The proposed project will utilize 19.5 percent aqueous ammonia solution that has a very low vapor pressure. The use of aqueous ammonia precludes any potential for significant impact at the nearest residences which more than about 3000 feet from the proposed project. There are light industrial/commercial properties located adjacent to the proposed facility. It is staff's belief that the probability of serious impacts associated with an accidental release is insignificant at these adjacent properties.

Natural gas will not be stored at the site but will be handled in significant quantities. However, the systems used to handle natural gas at the facility will comply with all applicable engineering design codes and fire protection codes. It is staff's opinion that compliance with applicable standards will virtually preclude the potential for impact on the public as a result of natural gas handling associated with the proposed facility.

The proposed project will also utilize require construction of a 780 foot long natural gas pipeline. The natural gas pipeline will be designed and operated in compliance with all applicable codes. It is staff's opinion that compliance with such codes will reduce the risk of public impact resulting from accidental release to insignificant levels.

Staff recommends that all standard conditions regarding hazardous materials handling be imposed for this project.

CULTURAL RESOURCES

The proposed Calpeak Power-Border, LLC would occupy a 5.6-acre portion of an approximately 30-acre parcel located south of Old Otay Mesa Road East, north of

Airway Road, east of State Route 905, and west of Sanyo Avenue in San Diego County, California. The northwestern corner of this 30-acre parcel is occupied by the Wildflower Energy-Larkspur Peaker facility, which is currently under construction. Immediately south of the Wildflower Energy-Larkspur Peaker facility are San Diego Gas & Electric's (SDG&E) Border Substation and gas regulation station. The proposed project would occupy the southern portion of the 30-acre parcel immediately south of the SDG&E substation. The proposed site area is has historically been used for agricultural production and has recently been plowed. The existing vegetation is dominated by non-native species, primarily mustard.

Kyle Consulting, of San Diego, California, has been contracted to perform cultural resource records searches and field surveys of the proposed project area, laydown area, and associated linear features. The literature and records searches also covered the area within a one-mile radius of the project site.

Kyle Consulting conducted a literature review and records search of the project site at the South Coastal Information Center (SCIC) at San Diego State University and the San Diego Museum of Man in May 2001. The literature review and records searches show that the project area has previously been surveyed by Carrico (1974), Wade (1985), Hector (1987), and Kyle and Gallegos (1987). No cultural resources were identified in these studies. The literature search noted one prehistoric site, CA-SDI-10072, on maps of the SCIC. Although the location was recorded, no site form was filled out. This site has been renamed and combined with three other sites (CA-SDI-5352, CA-SDI-9974, and CA-SDI-10735) as CA-SDI-12337. The site forms for CA-SDI-5353, CA-DSI-9974, and CA-10735 characterize the sites as sparse lithic scatters. Most of the sites identified within a one-mile radius of the project area are part of a sparse lithic scatter that covers Otay Mesa. The lithic scatter has been extensively tested and identified as not significant.

Kyle Consulting conducted a pedestrian field survey on May 11 and 16, 2001. No cultural resources were identified in the proposed project area, laydown area or linear features during this survey.

CEC Emergency Siting staff conducted a site visit on June 25, 2001. The project site was found to be seriously disturbed by previous agricultural uses. The dense vegetation had been recently cut and allowed for good ground visibility. No cultural resources, either historic or prehistoric were identified during the site visit.

The records search and field survey performed by Kyle Consulting have not indicated the presence of any sensitive cultural resources within the project APE. Kyle Consulting conclude that no further mitigation, including on-site cultural resource monitoring is necessary for this project. Staff concurs with this conclusion. Because of the low possibility of encountering archaeological sites in the project area, no on-site cultural resource monitoring is required for this project. However, if buried cultural resources are encountered during construction a qualified cultural resource specialist will evaluate the finding.

PALEONTOLOGICAL RESOURCES

The Applicant states that the project is underlain by the Otay Formation, which consists primarily of nonmarine volcaniclastic sediments. Significant terrestrial vertebrate fossils are known from these rocks in the Chula Vista area of San Diego County (City of San Diego, 1996).

Staff understands that construction of the power plant will involve grading and excavation to depths of about 4 feet within the 2.75 acre pad for the power plant. In addition, construction of footings for the electric transmission line will involve excavation of nine 8-foot holes about 30 inches in diameter.

The Applicant recognizes that these activities have the potential to disturb paleontologic resources, and has proposed to have a paleontologist on-call to monitor construction activities. Staff incorporates this proposed mitigation measure in its standard condition **PALEO-2**.

NOISE

Existing noise sources in the vicinity of the project include industrial uses and traffic from nearby roadways.

Noise information provided by the applicant indicates that the nearest sensitive receptor includes three single-family residences located approximately 3,000 feet northeast of the project site along Otay Mesa Road. The ambient noise level at the closest residence is approximately 61dBA (all noise measurements presented by the applicant are one-hour averages), based on noise measurements made on the afternoon of May 22, 2001. The ambient sound level on-site was 63 dBA, primarily the result of traffic along SR 905.

The primary noise generating equipment from the project would include two turbines, a generator, two gas compressors, main transformer, the SCR catalyst and exhaust stack, and a hydraulic start unit. Most of the equipment would be located within enclosures with exhaust and intake silencers.

The City of San Diego, through its Noise Ordinance (Section 59.5.0401), has established property line sound level limits for various land use zones. The land use zone and the time of day determine the applicable sound level limit. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

The most conservative residential standards provided include a maximum of 50 dBA at the property line between the hours of 7 a.m. to 7 p.m., 45 dBA between 7 p.m. and 10 p.m., and 40 dBA between the hours of 10 p.m. to 7 a.m. The City Noise Ordinance states that the sound level limit on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two land uses. Because the residences

are located adjacent to land designated for industrial development (and are in fact located in a mixed-use designation), the applicable one-hour average standard will be 62.5 dBA from 7:00 a.m. to 7:00 p.m., 60 dB from 7:00 p.m. to 10:00 p.m., and 57.5 dBA from 10:00 p.m. to 7:00 a.m.

The existing residences along Otay Mesa Road are located within San Diego County. Therefore, the County's noise ordinance limits are also utilized in this study. The residential properties are located within Specific Plan Zone (S-88). The specific plan for the area designates that the properties are to be developed with mixed-industrial uses. The County of San Diego noise ordinance states that the sound level limit on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. The County's noise ordinance limits for the existing residences along Otay Mesa Road are that the 1-hour average sound level shall not exceed 62.5 dBA between the hours of 7:00 a.m. to 10:00 p.m. and 60 dBA between the hours of 10:00 p.m. to 7:00 a.m.

Staff, however, recommends the application of the more conservative city noise standards to this project, because the noise-generating source would be in this jurisdiction.

As noted above, ambient noise level at the residence is approximately 61dBA in the afternoon. Due to distance from the proposed site and the intervening rows of industrial buildings located on the east side of Sanyo Avenue, project noise at the resident boundary will attenuate to less than 40 dBA at the closest residence, which would not significantly increase existing noise levels. This would be consistent with the city ordinance, and could therefore not be considered significant.

Industrial uses and vacant land are located adjacent to the project site. The city has established 75 dBA as the noise threshold limit at the property line for all industrial land uses (excluding agricultural) at any time. The proposed project would generate a one-hour average sound level of approximately 60 dBA at the northern property boundary, 62 dBA at the western property boundary, 57 dBA at the eastern property boundary and 73 dBA at the southern property boundary. These noise levels would comply with the city’s 75 dBA industrial zone noise ordinance criteria.

The City Noise Ordinance (Section 59.5.0404) limits operation of construction equipment to the hours of Monday through Saturday between 7:00 a.m. and 7:00 p.m. At no time can a piece of construction equipment or combination of equipment be operated so as to cause noise in excess of an average sound level limit greater than 75 dBA during the 12-hour period from 7:00 a.m. to 7:00 p.m. except emergency work.

Grading the project site and pipeline route would create the highest noise levels, but would comply with these requirements. Activities such as site survey, electrical wiring or similar low-volume actions that do not require operation of construction equipment may occur during evening and nighttime hours. Staff assumed that nighttime construction would occur, and has provided Condition of Certification **NOISE-4** to address potential impacts. With regard to conformance with the relevant construction noise ordinances, this is considered an emergency project, under the governor’s

executive order. Therefore, nighttime construction could be allowed, but would be subject to the 75 dBA noise limit.

The project is not expected to generate significant traffic, and will therefore not generate a significant increase in noise from mobile sources. See the**Traffic and Transportation** section for more information. Maintaining appropriate noise levels would be assured by the implementation of the following standard Conditions of Certification.

NOISE-1 requires that the project owner monitor actual project noise contribution at the property line of the nearest residence. If the project noise at that location exceeds 62.5 dBA from 7:00 a.m. to 7:00 p.m., 60 dBA from 7:00 p.m. to 10:00 p.m., and 57.5 dBA from 10:00 p.m. to 7:00 a.m, or 75 dBA at the project site property line, the project owner will be required to retrofit the project with mitigation measures that will reduce noise to this level. Such mitigation measures could include, but not be limited to, the addition of mufflers, and the addition of natural or man-made sound barriers, such as berms or sound walls. **NOISE-2** requires that, prior to construction, the applicant notify all residents within one mile of the project site of the construction schedule. **NOISE-3** requires that the project owner document, investigate and mitigate all project-related noise impacts. Implementation of these Conditions of Certification would ensure that impacts associated with noise are less than significant. With regard to construction, **NOISE-4** requires that nighttime construction activities be permitted only if noise levels from construction are consistent with local noise ordinances by limiting construction activities to those that will not exceed the local standard (75 dBA at the property line).

VISUAL RESOURCES

The project site is in a partially developed industrial area. The project site itself would be surrounded by undeveloped land. To the east across Sanyo Avenue is an industrial facility that is landscaped and has a neat appearance. Views of the site from this eastern area are somewhat limited because this area is approximately 20 feet above the elevation of the site.

The area to the south of the project site is approximately 20 feet in elevation above the project site in the southeast. In addition, a berm located along the southern portion of the block containing the site obscures views of the site from eye level, especially towards the west. An industrial/office development currently under construction in the area south of the project site across Airway Road that would have views of the project site from the upper levels. Airway Road is well used and views of the site are available, especially from higher vantage points in offices being constructed and large trucks.

State Route 905 (SR 905) is located west of the project site. SR 905 is well used, and the project site is clearly visible to motorists. West of SR 905 is undeveloped land and beyond that, in the distance is industrial development that would have distant views of the site.

Within the same block of land as the project and to the north but south of Otay Mesa Road East is an existing SDG&E natural gas regulator station that has an appearance of an unscreened industrial facility. North of the gas plant the Wildflower power plant facility is currently under construction.

While the project site area itself is mostly undeveloped the visual quality of the surrounding area is of moderate quality mainly due to the existing SDG&E gas plant north of the site and development around the block including the project site.

Development of the project will introduce an industrial use with a stack approximately 50 feet tall and buildings of similar scale to the SDG&E facility and the Wildflower facility to the north. The project will also include a raised roadway entry. Views of the power plant and elevated roadway will be available from all surrounding roadways where not obscured by elevation, berms or existing structures. The proposed power line extension along the east-side of SR 905 will be visible especially from SR 905 to the west. The applicant would landscape the power plant and entry roadway views with perimeter trees. Comments from the California Department of Fish and Game (DFG) indicate that the landscape plans include the use of Schinus molle. This species is considered invasive by the California Exotic Pest Plant Council. DFG recommends that nonnative species be prohibited, and directs the applicant to refer to the Exotic Pest Plants of Greatest Concern in California (October 1999), and would be available to the applicant to assist with the selection of appropriate landscaping species.

Compliance with City of San Diego perimeter landscaping requirements and the proposed landscaping concept would reduce the views of the power plant and roadway by screening them from view. **VIS-3** requires the applicant to comply with the City of San Diego landscape requirements. **VIS-3** also includes language that would prohibit the use of invasive species. Implementation of **VIS-1** would help ensure that the proposed project ‘s impacts on views are minimized. These conditions of certification would ensure that the proposed project does not result in major visual impacts and complies with local LORS.

Safety and security lighting installed as a part of the proposed project could increase the night lighting in the area. Compliance with **VIS-2** would ensure that night lighting is kept to a minimum and does not create glare on adjacent property.

Standard conditions of Certification **VIS-1**, **VIS-2**, and **VIS-3** are recommended. No additional conditions of certification would be necessary.

TRAFFIC AND TRANSPORTATION

Site access is available via State Route 905 (SR 905), continuing eastbound on Otay Mesa Road to Old Otay Mesa Road East to Sanyo Avenue, then right on Sanyo Avenue to the site access road. SR 905 is freeway to approximately one mile east of the junction with SR 905, where it becomes Otay Mesa Road. Airway Road may also be utilized to access the site.

During operation of the project, traffic would be minimal, as the power plant would be unmanned except for maintenance and repairs. A maximum average of154 trips per day is anticipated during project construction. This includes associated traffic for construction workers, equipment and a maximum of 20 vendor deliveries. During the construction period, parking for vehicles that access the site (cars, trucks, equipment) will be provided on the project site, primarily on the 1.75-acre laydown area.

The Otay Mesa Road widening project, completed in December 1999, upgraded the road to six lanes from the end of the freeway east to Old Otay Mesa Road East, where State Route 905 continues south to the Otay Mesa International Port of Entry.

A level of service (LOS) analysis was conducted in conjunction with the San Diego Circulation Element of the General Plan. The projected LOS after the widening of Otay Mesa is LOS C, which is higher than the LOS D threshold considered acceptable for city streets. Operational impacts would be negligible. Construction-related trips would be disbursed throughout the day. Even during maximum construction activities, the 154 total daily trips would not reduce the LOS to below LOS D. Therefore, impacts would not be significant.

SDG&E will construct an eight-inch natural gas line to deliver natural gas to the project site. This line will be constructed within a new easement between Sanyo Avenue and the project site. During construction, access to businesses along the roadway will be maintained by SDG&E. The temporary increase in traffic loads/direction related to Project construction will not be considered substantial in relation to existing traffic loads and street system capacity.

To minimize impacts to traffic flow during construction, the applicant would develop and implement a standard traffic control plan (TCP) consistent with the size and scope of construction activities. Some of these safety measures include: signage, traffic control measures (TCMs), and roadway crossings in accordance with Caltrans and City requirements; scheduling traffic lane or road closures during off-peak hours whenever possible; limiting vehicular traffic to approved access roads, construction yards and construction sites. The project will obtain all permits required by Caltrans to transport oversize, overweight, overheight and overlength vehicles on State highways (in compliance with California Vehicle Code Section 35780; Streets and Highways Code Sections 117 and 660-711; and 21 California Code of Regulations 1411.1 to 1411.6). The applicant has indicated that equipment transport would be in compliance with California Vehicle Code Section 31300 et seq. regarding the transport of hazardous materials.

Implementation of a TCP would reduce most construction traffic impacts to a less than significant level along area roadways. This would be reinforced by the implementation of Conditions of Certification **TRANS-1** and **TRANS-3**. Conditions of certification **TRANS-2** and **TRANS-4** (which refer to encroachment and damage to public roadways) would also be required because development the project would require off-site improvements to linear facilities.

With implementation of the above conditions of certification the project's impact on traffic and transportation would be less than significant.

PUBLIC SERVICES

The City of San Diego Fire Department has indicated it will be able to serve the Project. A will serve-letter for the project was written by the applicant and has been signed by the Fire Department. The nearest fire station is Fire Station #43, located at Otay Mesa Road and La Media Road, approximately one-mile west of the Project site. This station is staffed 24 hours per day, 7 days per week. A response time was not provided.

The City of San Diego Fire Department has been contacted, but did not respond.

Initially, one person will staff the monitoring/control station 24 hours a day. In the future, the monitoring station may be staffed only during peak hours when all seven of the planned CalPeak facilities begin to operate as true peakers. If and when this should happen, during times when there are no personnel at the monitoring station, key alarms will automatically generate pages directly to the appropriate service technicians from the central monitoring/control station system.

Once operational, the power facility will be unmanned. The generating plant will be operated without onsite personnel, but it will be remotely monitored from a central monitoring/control station in San Diego. As appropriate, calls will be made from the monitoring station to 911 and/or service technicians. Response time for the service technicians will be 1 hour.

Staff does not impose standard Conditions of Certification for Public Services. Since a will-serve letter has been provided, no additional conditions are required.

ENVIRONMENTAL JUSTICE

For all siting cases, including the emergency permitting process, Energy Commission staff follows the federal guidelines' two-step screening process. The process assesses:

- whether the potentially affected community includes minority and/or low-income populations; and

- whether the environmental impacts are likely to fall disproportionately on minority and/or low-income members of the community.

Year 2000 estimates by Claritas show that the majority of the census tracts within six miles of the project site contain more than 50 percent minority population. Year 1990 Census data show only two census tracts within six miles of the project site with a 25-49.9 percent low-income population. The population of these tracts in 2000 is less than 8,000 of the more than 70,000 for which data is available.

Additionally it must be noted that approximately 40 percent of the area within the 6-mile radius is across the U.S. border with Mexico.

Mike Lake of the San Diego County Air Pollution Control District indicated that air movement in the border area tended to be across the border south to north which would mean that air quality would be impacted very little, if at all, by the Otay Mesa Projects.[2]

The only potential adverse effects of the project on this population would be air quality or public health impacts. Staff has determined that the impacts from this project, with the implementation of staff's recommended conditions of certification, will not result in a significant adverse impact to the surrounding community. Staff finds that there are no environmental justice issues associated with this project.

FACILITY DESIGN

The project will be designed and constructed in compliance with the California Building Code (CBC) and all other applicable engineering LORS (see Condition of Certification **GEN-1** below). This will be assured by the Commission's delegate Chief Building Official (CBO), whose duties are prescribed under the CBC. These duties include the review of project designs by qualified engineers and the inspection of project construction by qualified inspectors. The CBO's performance, in turn, will be ensured through monitoring by the Commission's Compliance Project Manager.

TRANSMISSION SYSTEM ENGINEERING

The CalPeak Border facility will connect to the SDG&E border substation via a 1,700 foot 69 kV transmission line. CalPeak will add a circuit to an existing 69 kV line connecting to the Border substation. There are no significant transmission issues. Based on the results of the interconnection study the operation CalPeak Border will not immediately require significant downstream electric facilities. However, the interconnection of the plant does result in the off-peak overload of one transmission line under normal conditions, the overload of several lines under n-1 contingency conditions and the overstress of two 69 kV circuit breakers. These overloads will require the mitigation measures discussed in the SDG&E Interconnection Study.

- The off-peak overload conditions will require either reinforcing the overloaded lines or the implementation of a generator tripping scheme that trips the CalPeak Border facility under certain conditions. This is a temporary solution and the Cal-ISO is recommending that the necessary system upgrades be completed next year. Staff expects the California Public Utilities Commission (CPUC) or a local agency will complete the CEQA review for these transmission facility upgrades.

[2] Personal Communication June 28, 2001

- The n-1 overloads will require the CalPeak Border facility to participate in a remedial action scheme that will trip the generator when the specified contingencies occur.

- The short circuit analysis found two 69 kV circuit breakers at the South Bay power plant that overload and will require either replacement or the installation of current limiting fuses at the CalPeak Border plant. Because the short-circuit analysis did not include projects ahead of Larkspur in the SDG&E interconnection queue but with online dates after 2001, other circuit breaker overloads may be identified.

The Cal-ISO has given the CalPeak Border project preliminary interconnection approval but will not grant final approval until a plan for mitigating line overloads by next summer is developed. The interconnection of the CalPeak Border power plant will require the future construction of downstream facilities. These facilities will be reviewed for CEQA compliance by the CPUC or a local agency. Thus, there are no significant transmission issues and the CalPeak Border Generating Station will comply with safety standards[3].

CONCLUSION

The CalPeak Power-Border, LLC project, if built and operated in compliance with the proposed conditions of certification included in this staff assessment, will be available in time to help alleviate the current emergency. In addition, it adds resources at a critical time in an area that has been identified as at risk during this summer season.

The Staff believes that the proposed conditions of certification serve to protect the public interest and the environment. The Staff recommends approval of this project.

STAFF CHECKLIST

The following Emergency Permit Evaluation Checklist is designed to provide an easy-to-follow guide to the application and staff's analysis of project impacts. Included in the Checklist are the Application Requirements, a determination by staff of whether or not the material was provided, and the location of the information in the applicant's document. The checklist then shows staff's analysis of significant issues, any special conditions needed to resolve those issues, and any required comments or references.

[3] CPUC General Order 95, CPUC Rule 21, Title 8, Articles 35, 36 and 37, Title 8 CCR, Sections 2700-2974, CPUC Decision 93-11-013, Federal Communications Commission Part 15, Public Resources Code 4292-4296, and the National Electric Code.

CALPEAK POWER-BORDER, LLC
EMERGENCY PERMIT EVALUATION CHECKLIST
CALIFORNIA ENERGY COMMISSION

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
1 Project Description					
1.1 Project owner/operator (Name, title, address, phone)	Yes	Page 1			
1.2 Overview of power plant and linear facilities	Yes	Page 1			
1.3 Structure demensions (size and height), plan and profile	Yes	Page 4; Figure 6; Appendix A			
1.4 Full size color photo of the site and rendering of proposed facility if available	Yes	Page 4; Figures 3, 5, 7, 8, 9, 10,11			
1.5 Maximum foundation depth, cut and fill quantities	Yes	Pages. 4-5; Figures 1, 2, 3			
1.6 Conformance with California Building Code	Yes	Page 5		GEN-2	
1.7 Proposed operation (hours per year)	Yes	Page 5			Up to 8760 hours/year
1.8 Expected on-line date	Yes	Page 5			September 30, 2001
1.9 Proposed duration of operation (years)	Yes			10 years per DWR proposed contract	Agreement to be signed by 7/20/01
1.10 Identify transmission interconnection facilities	Yes	Memo from TRC to Bob Worl Dated 6/21/01	No significant issues		Approximately 1,700 foot line to Border substation

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
1.11 Transmission interconnection application	Yes	Appendix B is study			
1.12 "Down-stream" transmission facilities, if known	Yes	Attachment 2	Currently no significant downstream facilities. However facilities may be required in the future. Additional circuit breakers beyond those identified in study may need to be replaced.	Circuit breakers should be sized to comply with a short-circuit analysis. TSE-1: Requires compliance with State, and Federal regulations. TSE-2 : Requires notice to ISO prior to sychronizing with the California Transmission System	Several projects that are in San Diego Gas and Electric's service territory but with online dates after the Larkspur plants were not modeled in service for the short circuit study. Further studies may identify other breakers that will need to be replaced.
1.13 Fuel interconnection facilities	Yes	Page 7			
1.14 Fuel interconnection application	Yes	Page 7; Appendix C			
1.15 Water requirements and treatment	Yes	Page 8			
1.16 Water interconnection facilities (supply/discharge)	Yes	Page 8			Project will use 38 gpm to fill supply vessel
1.17 Source and quality of water supply	Yes	Page 8			Operation use at 10 gpm during 80 F temps.
1.18 Water supply agreement/ proof of water supply	Yes	Page8; Appendix D			

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
2 Site Description					
2.1 Site address (street, city, county)	Yes	Page 9			
2.2 Assessor's parcel number	Yes	Page 9			
2.3 Names and addresses of all property owners within 500 feet of the project site or related facilities in both hard copy and electronic mail merge format.	Yes	Page 9; Appendix E			
2.4 Existing site use	Yes	Page 9			Fallow agricultural
2.5 Existing site characteristics (paved, graded, etc.)	Yes	Page 9			
2.6 Layout of site (include plot plan)	Yes	Page 9; Figure 6; Appendix A			
2.7 Zoning and general plan designations of site and linear facilities	Yes	Page 10			
2.8 Ownership of site (Name, address, phone)	Yes	Page 10			
2.9 Status of site control	Yes	Page 10; Appendix F			
2.10 Equipment laydown area – size and location	Yes	Page 10; Figure 3			

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
3 Construction Description					
3.1 Construction schedule	Yes	Page 11; Table 1	Hours of Operation lengthened, this is consistent with LORS		Applicant requested 24 hour operation to insure on-time completion.
3.2 Workforce requirements (peak, average)	Yes	Page 11			
4 Power Purchase Contract (DWR, ISO, other)					
4.1 Status of negotiations and expected signing date	Yes	Page 12			Expected signing by 7-20-01
5 Air Emissions					
5.1 Nearest monitoring station (location, distance)	Yes	Page 12			
5.2 Provide complete self certification air permit checklist	Yes	Page 12			Preliminary ATC issued; AQIA is appended.
5.3 Provide complete air permit application	Yes	Page 12; Appendix G			
5.4 Status of air permit application with air district	Yes	Page 12; Appencix H			ATC will issue upon CEC approval of AFC

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
5.5 Status of offsets and/or mitigation fees, as required	Yes	Page 12; Appendix G			None required except CAA Acid Rain, Title IV.
6 Noise					
6.1 Local noise requirements	Yes	Page 14; Table 2		Noise 1: Requires the project to comply with local noise standards	
6.2 Nearest sensitive receptor (type, distance)	Yes	Page 16; Appendix I		Noise-2, Noise-3 and Noise 4 address construction impacts.	
6.3 Project noise level at nearest property line	Yes	Page 16; Appendix I			
6.4 Proposed mitigation if required	Yes	Page 17; Appendix I		Noise-3: Requires owner to address all noise complaints.	
7 Hazardous Materials					
7.1 Type and volume of hazardous materials on-site	Yes	Page 18		HAZ-1 requires CPM approval prior to use of any not in AFC	
7.2 Storage facilities and containment	Yes	Page 18		HAZ-2 requires BMP, consultation with CPM, and Fire Department	

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
8 Biological resources					
8.1 Legally protected species* and their habitat on site, adjacent to site and along right of way for linear facilities *(*threatened or endangered species on State or federal lists, State fully protected species)*	Yes	Page 19; Appendix J	CDFG requested surveys prior to site mobilization. Applicant initiated and completed these.		
8.2 Designated critical habitat on site or adjacent to site (wetlands, vernal pools, riparian habitat, preserves)	Yes	Page 19	There will be take of Non-native grassland. All impacts to wetlands must be avoided.	Bio-7: Requires mitigation, provides instruction. BIO-9: Requires monitoring and flagging	
8.3 Proposed mitigation as required	Yes	Page 19	Adequate surveys for nesting sensitive species must be done. Landscape plans should not include pest plants.	Bio 8 & 10	Surveys complete 7/5/01 Working with CDFG to Revise vegetation plan
9 Land Use					
9.1 Local land use restrictions (height, use, etc.)	Yes	Page 20		LAND-1: Requires veification to CPM of compliance with LORS	
9.2 Use of adjacent parcels (include map)	Yes	Page 20; Figures 4,13,14			All adjacent uses are industrial

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
9.3 Ownership of adjacent parcels – site and linears	Yes	Page 21; Appendix E			
9.4 Demographics of census tract where project is located (most current available)	Yes	Page 21; Table 3			CEC 6 mile radius review also done
10 Public Services					
10.1 Ability to serve letter from Fire District	Yes	Page 22; Appendix K			
10.2 Nearest fire station	Yes	Page 22			
11 Traffic and Transportation					
11.1 Level of Service (LOS) measurements on surrounding roads – a.m. and p.m. peaks	Yes	Page 23, 24 Tables 4, 5			
11.2 Traffic Control Plan for roads during construction period	Yes	Page 25		TRANS-1, 2, and 3 support the TCP; TRANS-4: Requires mitigating impacts on affected roads	Night schedule will reduce impacts of equipment delivery
11.3 Traffic impact of linear facility construction	Yes	Page 25; Figures 3, 6			
11.4 Equipment transport route	Yes	Page 25; Figure 4		TRANS-1: Requires appropriate permits	

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
11.5 Parking requirements – workforce and equipment	Yes	Page 25; Figure 3			
12 Soil and Water Resources					
12.1 Wastewater volume, quality, treatment	Yes	Page 26 Appendix D			No Process discharge proposed
12.2 Status of permits for wastewater discharge or draft permit (WDR/NPDES)	Yes	Page 26, 27	Site over 5 acres NPDES required		Applicant getting permits
12.3 Draft Erosion Prevention and Sedimentation Control Plan or Mitigation Strategy	Yes	Page 27	CDFG suggests maintaining sheet flow for storm water	SOIL&WATER-2: Requires CPM approved plan	
12.4 Spill Prevention/Water Quality Protection Plans	Yes	Page 27		SOIL&WATER-1: Requires CPM approval of SWPPP	
13 Cultural Resources					
13.1 Identification of known historic/prehistoric sites	Yes	Pages 28-29	No significant cultural resources have been identified within the project area.	No special conditions are required for this project	Notification of Native Americans has been performed by the applicant.
13.2 Proposed mitigation if required	Yes	Page 29	No mitigation, including cultural resource monitoring is required for this project.	No special conditions are required for this project CUL-1: Insures no harm to resources found during construction	

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
14 Paleontological Resources					
14.1 Identification of known paleontologic resources	**No**	Page 30			No specific locations are provided, but the AFC recognizes the fossiliferous nature of the underlying Otay Mesa Formation.
14.2 Proposed mitigation if required	Yes	Page 31		PALEO-2	
15 Visual resources					
15.1 Plan for landscaping and screening to meet local requirements	Yes	Landscape Concept Plan	Initial proposal proposed using invasive species.	VIS-3: Modified to prohibit invasive or pest species at the site	Applicant working with CDFG revising pallete of vegitation
15.2 Full size color photo of the site and rendering of proposed facility with any proposed visual mitigation if available	Yes	Figures 6 to 11			

Application Requirement	Y/N	Application pages	Significant Issues	Special Conditions	Comments
16 Transmission System Engineering					
16.1 Conformance with Title 8, High Voltage Electrical Safety Orders, CPUC General Order 95 (or NESC), CPUC Rule 21, PTO Interconnection Requirements, and National Electric Code	Yes	Page 32			

CALPEAK POWER-BORDER, LLC
GENERAL CONDITIONS INCLUDING COMPLIANCE MONITORING AND CLOSURE PLAN

INTRODUCTION

General conditions (and the Compliance Plan) have been established as required by Public Resources Code section 25532. The plan provides a means for assuring that the facility is constructed, operated and closed in accordance with applicable environmental and public health and safety laws, ordinances, regulations, and standards, and with conditions of certification as approved by the California Energy Commission (Energy Commission).

The Compliance Plan is comprised of general conditions and technical (environmental and engineering) conditions as follows:

General conditions that set forth the duties and responsibilities of the Compliance Project Manager (CPM), the project owner, and delegate agencies; the requirements for handling confidential information and maintaining the compliance record; procedures for settling disputes and making post-certification changes; administrative procedures to verify the compliance status; and requirements for facility closure plans.

Specific conditions for each technical area contain the measures required to mitigate potential adverse impacts associated with construction, operation and closure to an insignificant level. Specific conditions may also include a verification provision that describes the method of verifying that the condition has been satisfied.

DEFINITIONS

To ensure consistency, continuity and efficiency, the following terms, as defined, apply to all technical areas, including Conditions of Certification:

Site Mobilization

Moving trailers and related equipment onto the site, usually accompanied by minor ground disturbance, grading for the trailers and limited vehicle parking, trenching for utilities, installing utilities, grading for an access corridor, and other related activities. Ground disturbance, grading, etc. for site mobilization are limited to the portion of the site necessary for placing the trailers and providing access and parking for the occupants. Site mobilization is for temporary facilities and is therefore not considered construction.

Ground Disturbance

Onsite activity that results in the removal of soil or vegetation, boring, trenching or alteration of the site surface. This does not include driving or parking a passenger vehicle, pickup truck, or other light vehicle, or walking on the site.

Grading

Onsite activity conducted with earth-moving equipment that results in alteration of the topographical features of the site such as leveling, removal of hills or high spots, or moving of soil from one area to another.

Construction

[From Public Resources Code section 25105.] Onsite work to install permanent equipment or structures for any facility. Construction does **not** include the following:

a. The installation of environmental monitoring equipment.

b. A soil or geological investigation.

c. A topographical survey.

d. Any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility.

e. Any work to provide access to the site for any of the purposes specified in a, b, c, or d.

TERM OF CERTIFICATION

Certification is for the life of the project if at the end of the power purchase agreement with either the California Independent System Operator or the California Department of Water Resources the project owner can verify that the project meets the following continuation criteria:

- the project is permanent, rather than temporary or mobile in nature;
- the project owner demonstrates site control;
- the project owner has secured permanent emission reduction credits (ERCs) to fully offset project emissions for its projected run hours prior to expiration of any temporary ERCs;
- the project is in current compliance with all Energy Commission permit conditions specified in the final decision;

- the project is in current compliance with all conditions contained in the Permit to Construct and Permit to Operate issued by The San Diego County Air Pollution Control District (SDAPCD) for the project; and

- the project continues to meet BACT requirements under SDAPCD and California Air Resources Board (CARB) requirements.

The project shall expire if these continuation criteria are not met. At least six months prior to the expiration of the power purchase agreement with the Department of Water Resources (DWR), or prior to the expiration of the Summer Reliability Agreement with the California Independent System Operator if no DWR contract is signed, the project owner shall provide verification that these conditions have been meet.

In addition, the project owner shall submit a report after completion of the first three years in operation, as described below.

COMPLIANCE PROJECT MANAGER (CPM) RESPONSIBILITIES

A CPM will oversee the compliance monitoring and shall be responsible for:

1. ensuring that the design, construction, operation, and closure of the project facilities is in compliance with the terms and conditions of the Commission Decision;

2. resolving complaints;

3. processing post-certification changes to the conditions of certification, project description, and ownership or operational control;

4. documenting and tracking compliance filings; and

5. ensuring that the compliance files are maintained and accessible.

The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies and the Energy Commission when handling disputes, complaints and amendments.

The Commission has established a toll free compliance telephone number of **1-800-858-0784** for the public to contact the Commission about power plant construction or operation-related questions, complaints or concerns.

Pre-Construction and Pre-Operation Compliance Meeting

The CPM may schedule pre-construction and pre-operation compliance meetings prior to the projected start-dates of construction, plant operation, or both. The purpose of these meetings will be to assemble both the Energy Commission's and the project owner's technical staff to review the status of all pre-construction or pre-operation

requirements contained in the Energy Commission's conditions of certification to confirm that they have been met, or if they have not been met, to ensure that the proper action is taken.

Energy Commission Record

The Energy Commission shall maintain as a public record, in either the Compliance file or Docket file, for the life of the project (or other period as required):

1. All documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;

2. All complaints of noncompliance filed with the Energy Commission; and

3. All petitions for project modifications and the resulting staff or Energy Commission action taken.

PROJECT OWNER RESPONSIBILITIES

It is the responsibility of the project owner to ensure that the general compliance conditions and the conditions of certification are satisfied. The general compliance conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, compliance conditions, or ownership. Failure to comply with any of the conditions of certification or the general compliance conditions may result in reopening of the case and revocation of Energy Commission certification, an administrative fine, or other action as appropriate.

Access

The CPM, responsible Energy Commission staff, and delegate agencies or consultants, shall be guaranteed and granted unrestricted access to the power plant site, related facilities, project-related staff, and the records maintained on site, for the purpose of conducting audits, surveys, inspections, or general site visits. Although the CPM will normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced visits at any time.

Compliance Record

The project owner shall maintain project files on-site or at an alternative site approved by the CPM, for the life of the project. The files shall contain copies of all "as-built" drawings, all documents submitted as verification for conditions, and all other project-related documents for the life of the project, unless a lesser period is specified by the conditions of certification.

Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files.

Compliance Reporting

The project owner shall submit status reports to the CPM every two weeks indicating its progress in meeting milestones for procuring necessary project components and all required approvals for construction and operation of the facility by September 30, 2001. The first of these reports will be due two weeks after certification of the project by the Energy Commission.

Start of Operations

The CalPeak Power-Border project shall be on-line by not later than September 30, 2001. If The project is not operational by September 30, 2001, the Energy Commission will conduct a hearing to determine the cause of the delay and consider what sanctions, if any, are appropriate. If the Energy Commission finds that the project owner failed to proceed with due diligence to have CalPeak Power-Border in operation by September 30, 2001, the Energy Commission will set a specific date by which CalPeak Power-Border must be brought on-line as a condition precedent to continue the certification.

Three-Year Review

No later than 15 days after completion of the first three years in operation, the project owner shall submit to the Energy Commission a report of operations that includes a review of the project's compliance with the terms and conditions of certification, the number of hours in operation, and the demand for power from the facility during the three year period.

Compliance Verifications

Conditions of certification may have appropriate means of "verification". The verification describes the Energy Commission's procedure(s) to ensure post-certification compliance with adopted conditions. The verification procedures, unlike the conditions, may be modified, as necessary by the CPM, without full Energy Commission approval.

Verification of compliance with the conditions of certification can be accomplished by:

- reporting on the work done and providing the pertinent documentation in monthly and/or annual compliance reports filed by the project owner or authorized agent as required by the specific conditions of certification;

- appropriate letters from delegate agencies verifying compliance;

- Energy Commission staff audits of project records; and/or

- Energy Commission staff inspections of mitigation and/or other evidence of mitigation.

A cover letter from the project owner or authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. The cover letter subject line shall identify the involved condition(s) of certification by condition number and include a brief description of the subject of the submittal.

All submittals shall be addressed as follows:

Compliance Project Manager
California Energy Commission
1516 Ninth Street (MS-3000)
Sacramento, CA 95814

Confidential Information

Any information, which the project owner deems confidential shall be submitted to the Energy Commission's Docket with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505(a). Any information, which is determined to be confidential, shall be kept confidential as provided for in Title 20, California Code of Regulations, section 2501 et. seq.

Reporting of Complaints, Notices, and Citations

Prior to the start of construction, the project owner must send a letter to property owners living within one mile of the project notifying them of a telephone number to contact project representatives with questions, complaints or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering, with date and time stamp recording. The telephone number shall be posted at the project site and easily visible to passersby during construction and operation.

The project owner shall report and provide copies of all complaint forms, notices of violation, notices of fines, official warnings, and citations, within 10 days of receipt, to the CPM.

GENERAL CONDITIONS FOR FACILITY CLOSURE

In order to ensure that a planned facility closure does not create adverse impacts, plant closure must be consistent with all applicable laws, ordinances, regulations, standards (LORS), and local/regional plans in existence at the time of closure. To ensure adequate review of a planned project closure, the project owner shall submit a proposed facility closure plan to the Energy Commission for review and approval at least three months prior to commencement of closure activities (or other period of time agreed to by the CPM).

DELEGATE AGENCIES

To the extent permitted by law, the Energy Commission may delegate authority for compliance verification and enforcement to various state and local agencies that have expertise in subject areas where specific requirements have been established as a condition of certification. If a delegate agency does not participate in this program, the Energy Commission staff will establish an alternative method of verification and enforcement. Energy Commission staff reserves the right to independently verify compliance.

In performing construction and operation monitoring of the project, the Energy Commission staff acts as, and has the authority of, the Chief Building Official (CBO). The Commission staff retains this authority when delegating to a local CBO. Delegation of authority for compliance verification includes the authority for enforcing codes, the responsibility for code interpretation where required, and the authority to use discretion, as necessary, in implementing the various codes and standards.

ENFORCEMENT

The Energy Commission's legal authority to enforce the terms and conditions of its Decision is specified in Public Resources Code sections 25534 and 25900. The Energy Commission may amend or revoke the certification for any facility, and may impose a civil penalty for any significant failure to comply with the terms or conditions of the Commission Decision. The specific action and amount of any fines the Commission may impose would take into account the specific circumstances of the incident(s). This would include such factors as the previous compliance history, whether the cause of the incident involves willful disregard of LORS, inadvertence, unforeseeable events, and other factors the Commission may consider.

Moreover, to ensure compliance with the terms and conditions of certification and applicable laws, ordinances, regulations, and standards, delegate agencies are authorized to take any action allowed by law in accordance with their statutory authority, regulations, and administrative procedures.

NONCOMPLIANCE COMPLAINT PROCEDURES

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a complaint will be subject to review by the Energy Commission pursuant to Title 20, California Code of Regulations, section 1230 et. seq., but in many instances the noncompliance can be resolved by using the informal dispute resolution process. Both the informal and formal complaint procedures, as described in current State law and regulations, are described below. They shall be followed unless superseded by current law or regulations.

INFORMAL DISPUTE RESOLUTION PROCEDURE

The following procedure is designed to informally resolve disputes concerning interpretation of compliance with the requirements of this compliance plan. The project owner, the Energy Commission, or any other party, including members of the public, may initiate this procedure for resolving a dispute. Disputes may pertain to actions or decisions made by any party including the Energy Commission's delegate agents. This procedure may precede the more formal complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1230 et. seq., but is not intended to be a substitute for, or prerequisite to it. This informal procedure may not be used to change the terms and conditions of certification as approved by the Energy Commission, although the agreed upon resolution may result in a project owner proposing an amendment.

The procedure encourages all parties involved in a dispute to discuss the matter and to reach an agreement resolving the dispute. If a dispute cannot be resolved, then the matter must be referred to the full Energy Commission for consideration via the complaint and investigation process. The procedure for informal dispute resolution is as follows:

Request for Informal Investigation

Any individual, group, or agency may request the Energy Commission to conduct an informal investigation of alleged noncompliance with the Energy Commission's terms and conditions of certification. All requests for informal investigations shall be made to the designated CPM.

Upon receipt of a request for informal investigation, the CPM shall promptly notify the project owner of the allegation by telephone and letter. All known and relevant information of the alleged noncompliance shall be provided to the project owner and to the Energy Commission staff. The CPM will evaluate the request and the information to determine if further investigation is necessary. If the CPM finds that further investigation is necessary, the project owner will be asked to promptly investigate the matter and within seven (7) working days of the CPM's request, provide a written report of the results of the investigation, including corrective measures proposed or undertaken, to the CPM. Depending on the urgency of the noncompliance matter, the CPM may conduct a site visit and/or request the project owner to provide an initial report, within forty-eight (48) hours, followed by a written report filed within seven (7) days.

Request for Informal Meeting

In the event that either the party requesting an investigation or the Energy Commission staff is not satisfied with the project owner's report, investigation of the event, or corrective measures undertaken, either party may submit a written request to the CPM for a meeting with the project owner. Such request shall be made within fourteen (14)

days of the project owner's filing of its written report. Upon receipt of such a request, the CPM shall:

1. Immediately schedule a meeting with the requesting party and the project owner, to be held at a mutually convenient time and place and secure the attendance of appropriate Energy Commission staff and staff of any other agency with expertise in the subject area of concern as necessary;

2. Conduct such meeting in an informal and objective manner; and,

3. After the conclusion of such a meeting, promptly prepare and distribute copies to all in attendance and to the project file, a summary memorandum which fairly and accurately identifies the positions of all parties and any conclusions reached.

FORMAL DISPUTE RESOLUTION PROCEDURE-COMPLAINTS AND INVESTIGATIONS

If either the project owner, Energy Commission staff, or the party requesting an investigation is not satisfied with the results of the informal dispute resolution process, such party may file a complaint or a request for an investigation with the Energy Commission's General Counsel. Disputes may pertain to actions or decisions made by any party including the Energy Commission's delegate agents. Requirements for complaint filings and a description of how complaints are processed are in Title 20, California Code of Regulations, section 1230 et. seq.

The Chairman, upon receipt of a written request stating the basis of the dispute, may grant a hearing on the matter, consistent with the requirements of noticing provisions. The Commission shall have the authority to consider all relevant facts involved and make any appropriate orders consistent with its jurisdiction (Title 20, California Code of Regulations, sections 1232 - 1236).

POST CERTIFICATION CHANGES TO THE COMMISSION DECISION: AMENDMENTS, INSIGNIFICANT PROJECT CHANGES

The project owner must petition the Energy Commission, pursuant to Title 20, California Code of Regulations, section 1769, to 1) delete or change a condition of certification; 2) modify the project design or operational requirements; and 3) transfer ownership or operational control of the facility.

A petition is required for **amendments** and for **insignificant project changes**. In all cases, the petition or letter requesting a change should be submitted to the Commission's Docket in accordance with Title 20, California Code of Regulations, section 1209. The criteria that determine which type of change process applies are explained below.

EXECUTIVE ORDER

Executive Order D-25-01 issued by the Governor of the State of California, which accelerates processing of certain project modifications, will be applied to all qualifying project modifications requested until December 31, 2001.

AMENDMENT

A proposed project modification will be processed as an amendment if it involves a change to a condition of certification, an ownership or operator change, or a potential significant environmental impact.

INSIGNIFICANT PROJECT CHANGE

The proposed modification will be processed as an insignificant project change if it does not require changing the language in a condition of certification, have a potential for significant environmental impact, and cause the project to violate laws, ordinances, regulations or standards.

VERIFICATION CHANGE

Changes to condition verifications require CPM approval and may require either a written or oral request by the project owner. The CPM will provide written authorization of verification changes.

TECHNICAL AREA CONDITIONS OF CERTIFICATION

AIR QUALITY

AQ-1 Prior to the commencement of project construction, the project owner shall prepare a Construction Fugitive Dust Mitigation Plan that will specifically identify fugitive dust mitigation measures that will be employed for the construction of the project and related facilities.

Measures that should be addressed include the following:

- the identification of the employee parking area(s) and surface of the parking area(s);
- the frequency of watering of unpaved roads and disturbed areas;
- the application of chemical dust suppressants;
- the stabilization of storage piles and disturbed areas;
- the use of gravel in high traffic areas;
- the use of paved access aprons;
- the use of posted speed limit signs;
- the use of wheel washing areas prior to large trucks leaving the project site;
- the methods that will be used to clean tracked-out mud and dirt from the project site onto public roads; and
- for any transportation of borrowed fill material, the use of covers on vehicles, wetting of the material, and insuring appropriate freeboard of material in the vehicles.

Verification: The project owner shall submit to the CPM a letter attesting to compliance with the above and shall report any violations to the CPM.

AQ-2 The project owner shall comply with the terms and conditions of the Authority to Construct and the Permit to Operate issued by San Diego County Air Pollution Control District.

Verification: In the event that the air district finds the project to be out of compliance with the terms and conditions of the Authority to Construct, the project owner shall notify

the CPM of the violation, and the measures taken to return to compliance, within five (5) days.

AQ-3 The project owner shall operate the project in compliance with all Best Available Control Technology (BACT) standards imposed by the Air District in its Authority to Construct. Failure to meet these standards will result in a finding that the project owner is out of compliance with the certification.

BIOLOGICAL RESOURCES

BIO-1 The project permitted under this emergency process will avoid all impacts to legally protected species and their habitat on site, adjacent to the site and along the right of way for linear facilities.

BIO-2 The project permitted under this emergency process will avoid all impacts to designated critical habitat (wetlands, vernal pools, riparian habitat, preserves) on site or adjacent to the site.

BIO-3 The project permitted under this emergency process will avoid all impacts to locally designated sensitive species and protected areas.

BIO-4 The project permitted under this emergency process will reduce risk of large bird electrocution by electric transmission lines and any interconnection between structures, substations and transmission lines by using construction methods identified in "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996" (APLIC 1996).

BIO-5 The project biologist, a person knowledgeable of the local/regional biological resources, and CPM will have access to the site and linear rights-of-way at any time prior to and during construction and have the authority to halt construction in an area necessary to protect a sensitive biological resource at any time.

BIO-6 Upon decommissioning the site, the biological resource values will be reestablished at preconstruction levels or better.

Verification: If the Designated Biologist halts construction, the action will be reported immediately to the CPM along with the recommended implementation actions to resolve the situation or decide that additional consultation is needed. Throughout construction, the project owner shall report on items one through six above if identified resources are found or impacted.

BIO-7 Prior to operations, the applicant will submit a report of any impacted sensitive habitat, including NNG and wetlands, to the CPM for review and approval. The applicant will then develop mitigation compensation plans using the following table:

		Inside MHPA	Outside MHPA
Wetlands	2:1		
NNG		0.5:1	1:1

BIO-8 Prior to any project-related activities a qualified biologist will conduct sensitive bird species surveys of the project site and surrounding habitats within 300 feet of the project boundary. Survey methodologies will allow for a thorough search of these areas to identify potential arboreal and/or ground nesting raptor species.

Verification: The qualified biologist shall submit a report of the findings to the CPM prior to construction. If special status nesting birds or other TES species are found the CPM may recommend additional agency consultation.

BIO-9 The project biologist, prior to site mobilization, will flag buffers on all potentially affected wetlands. The project biologist will then be present onsite during construction of the transmission poles and lines or until determined by the CPM.

Verification: The project biologist, prior to site mobilization, shall submit documentation to the CPM confirming compliance with Condition of Certification BIO-9.

BIO-10 Landscaping of the Border Project Site will contain no species of tree or plant considered invasive or having pest status. The project landscape specialist shall confer with the California Department of Fish and Game and the CalEPPC, 1999.

Verification: The landscape speicialist shall provide documentation of the results of the consultation, and a vegetation plan to the CPM for review and approval prior to beginning any landscape activities.

The applicant will submit verification of the results of this consultation to CPM for approval prior landscape activities.

CULTURAL RESOURCES

CUL-1 The project certified under this emergency process shall not cause any significant impact to cultural resources on the power plant site or linear rights of way. No significant cultural resources have been identified in the Area of Potential Effect (APE). No on-site cultural resource monitoring is required for this proposed site. In the event of an inadvertent cultural find the following conditions apply:

- The presence of subsurface archaeological resources is always a possibility in areas where only surface inspection has taken place. In the unlikely event that sub-surface archaeological remains are discovered during ground disturbing activities (i.e., grading and/or excavation), work in the area must halt and a qualified Cultural Resource Specialist (CRS) will be contacted immediately to evaluate the significance of the find. The project manager, construction manager, and the Compliance Project Manager (CPM) will be notified if the resource is judged to be potentially significant, and the archaeologist may recommend further study.

- In the event that suspected human remains are encountered, work must stop immediately within a radius of 100 feet (30 meters) of the discovery, and the San Diego County Coroner's Office will be notified within 24 hours of the find. If the skeletal remains are determined to be prehistoric, the Coroner's Office will contact the Native American Heritage Commission (NAHC) to identify the Most Likely Descendents (MLD). The MLD will be notified and will determine the most appropriate disposition of the remains and any associated artifacts.

CUL-2 will not apply to this project as no cultural resource monitoring has been required.

No special cultural resource conditions are required for this project.

FACILITY DESIGN

GEN-1 The project owner shall design, construct and inspect the project in accordance with the 1998 California Building Code (CBC) and all other applicable LORS in effect at the time initial design plans are submitted to the CBO for review and approval.

Verification: Within 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) after receipt of the Certificate of Occupancy, the project owner shall submit to the CPM a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation and inspection

requirements of the applicable LORS and the Energy Commission's Decision have been met. The project owner shall provide the CPM a copy of the Certificate of Occupancy within 30 days of receipt from the CBO [1998 CBC, Section 109 – Certificate of Occupancy.] The project owner shall keep copies of plan checks and CBO inspection approvals at the project site.

GEN-2 Prior to submittal of the initial engineering designs for CBO review, the project owner shall furnish to the CPM and to the CBO a schedule of facility design submittals, a Master Drawing List, and a Master Specifications List. The schedule shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures and equipment.

Verification: At least 15 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the Master Drawing List, and the Master Specifications List of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in **Table 1** below. Major structures and equipment shall be added to or deleted from the Table only with CPM approval.

Table 1: Major Structures and Equipment List

Equipment/System
Combustion Turbine Generator Foundations and Connections
CT Inlet Air Plenum Structures, Foundations and Connections
CT Inlet Air Evaporative Cooler Structures, Foundations and Connections
SCR Unit Transition Ducts from CTGs – Structure
SCR Unit Structure, Foundation and Connections
SCR Unit Exhaust Stack, Foundation and Connections
Electrical/Control Room Structure, Foundation and Connections
CT Mechanical Accessory Compartment Foundation and Connections
Switchgear Equipment Building Structure, Foundation and Connections
Step-Up Transformer Foundation and Connections
Auxiliary Transformer Foundation and Connections
Grading and Drainage Plan
Building Energy Conservation Systems
Temperature Control and Ventilation Systems
HVAC and Refrigeration Systems
Electrical and Plumbing Systems
Prefabricated Tank Foundations and Connections
Field-Erected Storage Tanks, Foundations and Connections
Natural Gas Pipeline
Occupied Buildings — Structure, Foundation and Connections

HAZARDOUS MATERIALS MANAGEMENT

HAZ-1 The project owner shall not use any hazardous material in reportable quantities except those identified by type and quantity in the Application for Certification unless approved by the CPM.

Verification: The project owner shall provide in the Annual Compliance Report a list of hazardous materials used at the facility in reportable quantities.

HAZ-2 The project owner shall submit both the Business Plan and Risk Management Plan to the CPM for review and comment, and shall also submit these plans and/or procedures to the County Fire Department for approval.

Verification: 30 days (or a CPM-approved alternative timeframe) prior to the initial delivery of any hazardous materials in reportable quantities to the facility, the project owner shall submit the Business and Risk Management Plan to the CPM for review and comment. At the same time, the project owner shall submit these plans to the County Fire Department for approval. The project owner shall also submit evidence to the CPM that the County Fire Department approved of these plans, when available.

LAND USE

LAND–1 The project permitted under this emergency process will conform to all applicable local, state and federal land use requirements, including general plan policies, zoning regulations, local development standards, easement requirements, encroachment permits, truck and vehicle circulation plan requirements, Federal Aviation Administration approval, and the Federal Emergency Management Agency National Flood Insurance Program.

Verification: Prior to start of construction, the project owner will submit to the CPM documentation verifying compliance with the above referenced land use requirements.

NOISE

NOISE-1 The project permitted under this emergency process shall be required to comply with applicable community noise standards.

Verification: Within 30 days of the project first achieving a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey, utilizing the same monitoring sites employed in the pre-project ambient noise survey as a minimum. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints. Steam relief valves

shall be adequately muffled to preclude noise that draws legitimate complaints. If the results from the survey indicate that the project noise levels at the closest sensitive receptor are in excess of 62.5 dBA from 7:00 a.m. to 7:00 p.m., 60 dB from 7:00 p.m. to 10:00 p.m., and 57.5 dB from 10:00 p.m. to 7:00 a.m., or above 75 dBA at the project site property lines additional mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.

NOISE-2 Prior to the start of rough grading, the project owner shall notify all residents within one mile of the site of the start of construction and will provide a complaint resolution process.

Verification: The project owner shall provide the CPM with a statement, attesting that the above notification has been performed.

NOISE-3 Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project related noise complaints.

Verification: Within 30 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the County Environmental Health Department, and with the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.

NOISE-4 Night construction activities may be authorized by the CPM if they are consistent with local noise ordinances. Night construction, or specific night construction activities may be disallowed by the CPM if it results in significant impact to the surrounding community.

Verification: The applicant has indicated that it would not perform construction activities that would exceed the City's noise standards (e.g., pile driving and steam blows) during the hours of 10 PM to 7 AM. Noise monitoring and surveys may be conducted if complaints are reported by residence in the surrounding area of the project site.

PALEONTOLOGICAL RESOURCES

PALEO-1 This standard condition does not apply to this project**.**

PALEO-2 The project owner shall ensure the completion of the following actions/activities:

- Provide a paleontology specialist who will have access to the site and linear rights-of-way at any time prior to and during ground disturbance.

- The paleontology specialist will provide training to appropriate construction personnel at the site, will install avoidance measures (as necessary), and will be present during appropriate ground disturbing activities. The paleontology specialist has the authority to halt construction at a location if a significant paleontologic resource is found. If resources are discovered and the specialist is not present, the project owner will halt construction at that location and will contact the specialist immediately. The specialist will consult with the CPM and a decision will be made by the CPM within 24-hours as to how to proceed.

- The project owner shall allow time for the paleontology specialist to protect significant resource finds, and pay all fees necessary to protect any significant resources.

Verification: Throughout construction, the project owner shall inform the CPM concerning any substantive activity related to items 1 through 3 above.

SOIL & WATER RESOURCES

SOIL&WATER-1 Prior to ground disturbance, the project owner shall obtain CPM approval of a Storm Water Pollution Prevention Plan (SWPPP) as required under the General Storm Water Construction Activity Permit for the project.

Verification: Prior to ground disturbance, the project owner will submit a copy of the Storm Water Pollution Prevention Plan for the project to the CPM.

SOIL&WATER-2 Prior to ground disturbance, the project owner shall obtain CPM approval of an Erosion Prevention and Sedimentation Control Plan. The plan will maintain natural drainage patterns to the extent possible, minimizing any potential impacts to the adjacent drainage.

Verification: The Erosion Control and Storm Water Management Plan for the project shall be submitted to the CPM prior to ground disturbance.

SOIL&WATER-3 Prior to site mobilization, the project owner shall submit to the CPM, a copy of a valid water service agreement for water supplies for the project from an authorized water purveyor, or a copy of a valid well permit for the project from the appropriate licensing agency.

Verification: The water service agreement or well permit shall be submitted to the CPM prior to site mobilization.

SOIL& WATER-5 Prior to construction, the project owner shall submit to the CPM, a copy of the completed geo technical report.

Verification: The geo-technical report for the project shall be submitted to the CPM prior to ground disturbance.

TRAFFIC AND TRANSPORTATION

TRANS-1 The project permitted under this emergency process shall comply with Caltrans and City/County limitations on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

Verification: The project owner shall keep copies of any oversize and over-weight ransportation permits received at the project site.

TRANS-2 The project permitted under this emergency process shall comply with Caltrans and City/County limitation for encroachment into public rights-of-way and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.

Verification: The project owner shall keep copies of any encroachment permits received at the project site.

TRANS-3 The project permitted under this emergency process shall ensure that permits and/or licenses are secured from the California Highway Patrol and Caltrans for the transport of hazardous materials.

Verification: The project owner shall keep copies of all permits/licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances at the project site.

TRANS-4 Following completion of construction of the power plant and all related linear facilities, the project owner shall return all roadways to original or as near original condition as possible.

TRANSMISSION SYSTEM ENGINEERING, SAFETY AND RELIABILITY

TSE-1 The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to requirements listed below:

The power plant switchyard, outlet line and termination shall meet or exceed the electrical, mechanical, civil and structural requirements of CPUC General Order 95, CPUC Rule 21, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the, "High Voltage Electric Safety Orders", Title 8 CCR, Sections 2700-2974, CPUC Decision 93-11-013, Federal Communications Commission Part 15, Public Resources Code 4292-4296, and National Electric Code (NEC).

Verification: Within 15 days after cessation of construction the project owner shall provide a statement to the CPM from the registered engineer in responsible charge (signed and sealed) that the switchyard and transmission facilities conform to the above listed requirements.

TSE-2 The Applicant shall provide the following Notice to the California Independent System Operator (ISO) prior to synchronizing the facility with the California Transmission System:

1. At least one (1) week prior to first synchronizing the facility with the grid for testing, provide the California ISO a letter stating the proposed date of synchronization. This letter should also affirm that all the electrical facilities necessary to connect the new facility to the grid have been installed and successfully tested; and

2. At least one (1) business day prior to synchronize the facility with the grid for testing, provide telephone notification to the ISO Outage Coordination Department, Monday through Friday, between the hours of 0700-1530 at (916) 351-2300.

Verification: The applicant shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one (1) week prior to initial synchronization with the grid. A report of conversation with the California ISO shall be provided electronically to the CPM one (1) day before synchronizing the facility with the California transmission system for the first time.

VISUAL

VIS-1 Project structures treated during manufacture and all structures treated in the field, which are visible to the public, shall be painted in a neutral color consistent with the surrounding environment.

Verification: Prior to painting exposed services, the project owner shall identify the selected color for CPM approval.

VIS-2 The project owner shall design and install all lighting such that light bulbs and reflectors are not visible from public viewing areas and illumination of the vicinity and the nighttime sky is minimized. Lighting shall be directed on-site to the extent practicable. Lighting must also be installed consistent with any local requirements.

Within 30 days of certification, the project owner shall submit plans for lighting to the local planning department and the CPM. The lighting plan must be consistent with all applicable LORS.

VIS-3 The project owner shall prepare and submit to the local planning department for review and comment, and to the CPM for review and approval a landscaping plan which provides for any or all of the following, as appropriate, to screen the project from view: berms, vegetation and trees, and slats in fencing.

Verification: Within 30 days of certification, the project owner shall submit the landscaping plan to the local planning department and the CPM, who will review the plans for consistency with LORS. Landscaping plans must include a species list. Invasive non-native species will not be permitted.

WASTE

WASTE-1 The project owner shall obtain a hazardous waste generator identification number from the Department of Toxic Substances Control prior to producing any hazardous waste.

Verification: The project owner shall keep its copy of the identification number on file at the project site.

WASTE-2 The project owner shall have an environmental professional available for consultation during soil excavation and grading activities. The environmental professional shall be given full authority to oversee any earth moving activities that have the potential to disturb contaminated soil. The environmental professional shall meet the qualifications of such as defined by the American Society for Testing and Materials designation E 1527-97 Standard Practice for Phase I Environmental Site Assessments.

Verification: If potentially contaminated soil is unearthed during excavation at either the proposed site or linear facilities, the environmental professional shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination,

and make a recommended course of action. The environmental professional shall have the authority to suspend construction activity at that location. If, in the opinion of the environmental professional, remediation is to be required, the project owner shall consult with the CPM and a decision will be made by the CPM within 24 hours as to how to proceed.

WORKER AND FIRE SAFETY

WORKER SAFETY-1 The project owner must comply with all requirements in Title 8 of the California Code of Regulations, beginning with Part 450 (8 CCR Part 450 et seq).

Verification: The project owner shall submit to the CPM a letter attesting to compliance with the above and shall report any violations to the CPM.

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APPENDIX A, PART 1

AIR QUALITY IMPACT ANALYSIS AND RULE 1200 COMPLIANCE EVALUATION.

SUBMITTED TO THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT MAY 14, 2001

▪ AIR QUALITY IMPACT ANALYSIS AND
▪ RULE 1200 EVALUATION

Prepared for:

CalPeak Power, LLC
CalPeak Lonestar No. 4 Site

▪

SRA Scientific Resources Associated
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1.0 INTRODUCTION

As described in the Equipment Description, CalPeak Power, LLC (CalPeak) is proposing to construct a Pratt & Whitney FT-8 Twin Pac simple-cycle, natural gas-fired peaking unit at an undeveloped site on Otay Mesa near the U.S.-Mexican border. The rated electric power output for the Twin Pac unit is 49.5 MW. The AQIA and Rule 1200 evaluations are based on the assumption that the project will operate for 8760 hours per year, and natural gas will be the only fuel used in the turbine. The purpose of the new gas turbine will be to generate electricity for sale on the California Independent System Operator (CalISO) grid.

According to Rule 20.3, New Source Review, an AQIA is required for new or modified facilities that result in an emissions increase above the AQIA trigger levels in Table 20.3-1, as shown below:

Table 1
Rule 20.3
AQIA Trigger Levels

	TRIGGER LEVELS		
AIR CONTAMINANT	lb/hr	lb/day	tons/yr
Particulate Matter (PM10)	--	100	15
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	--	3.2	0.6

Emission estimates for the FT-8 Twin Pac turbines were provided by Pratt & Whitney. For the purpose of conducting the AQIA, it was conservatively assumed that the unit will be equipped with an SCR that will control NOx emissions to no more than 5 ppm at 15% O_2. Actual proposed NOx emission limits are: 2.0 ppm (annual average of hours operated), 2.5 ppm (24-hour average), and 3.0 ppm (3-hour average). As the BACT analysis indicates, the unit will also be equipped with an oxidation catalyst with a guaranteed emission rate for CO of 6 ppm at 15% O_2. The oxidation catalyst will also reduce emissions of VOCs. In addition, natural gas firing and efficient combustion practices will be used to minimize PM10, SOx, and VOC emissions. Based on these assumptions for the emission estimates, the annual emissions of NOx are above the AQIA trigger level, and an AQIA is therefore required for NOx. The emission estimates are shown in Table 2 below.

Table 2
Emission Estimates
FT-8 Twin Pac

	Emissions			
Air Contaminant	**lb/hr**	**lb/day**	**tons/yr**	**AQIA Triggered?**
Particulate Matter (PM10)	3.33	79.9	14.6	No
Oxides of Nitrogen (NOx)	10.3	247.2	45.11	Yes
Oxides of Sulfur (SOx)	1.70	40.8	7.4	No
Carbon Monoxide (CO)	7.54	181.0	33.0	No
Lead and Lead Compounds	N/A	N/A	N/A	N/A

In addition to the evaluation of the potential impacts with controlled emissions, the San Diego Air Pollution Control District has also requested that CalPeak evaluate the potential impacts with uncontrolled emissions. Based on emission estimates for uncontrolled emissions, the requirement for an AQIA will be triggered for NOx and CO.

Because the requirement for an AQIA is triggered by the NOx emissions on a basis of 5 ppmv NOx, and for NOx and CO emissions under an uncontrolled operational scenario, an AQIA has been performed for $NO_2$and CO to demonstrate that the proposed project will not:

(A) cause a violation of a state or national ambient air quality standard anywhere that does not already exceed such standard, nor

(B) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor

(C) cause additional violations of a state ambient air quality standard anywhere the standard is already being exceeded, except as provided for in Subsection (d)(2)(v), nor

(D) prevent or interfere with the attainment or maintenance of any state or national ambient air quality standard.

The relevant ambient air quality standards are shown in Table 3 below.

TABLE 3

Ambient Air Quality Standards

POLLUTANT	Averaging Time	CAAQS	NAAQS Primary	NAAQS Secondary
O_3	1 Hour	180	235	235
CO	8 Hour	10,000	10,000	
	1 Hour	23,000	40,000	
NO_2	Annual Average		100	100
	1 Hour	470		
SO_2	Annual Average		80	
	24 Hour	105	365	
	3 Hour			1,300
	1 Hour	655		
PM_{10}	Annual Geometric Mean	30		
	24 Hour	50	150	150
	Annual Arithmetic Mean		50	50
Sulfates	24 Hour	25		
Pb	30-Day Average	1.5		
	Calendar Quarter		1.5	1.5
Hydrogen Sulfide	1 Hour	42		
Vinyl Chloride	24 Hour	26		
Visibility Reducing Particles	8 Hour	Extinction Coefficient > 0.23 per kilometer		

In addition to conducting an AQIA, in accordance with the requirements of San Diego APCD Rule 1200, the facility must demonstrate that the increase in maximum incremental cancer risk at every receptor location is equal to or less than one in one million for any project for which new, relocated, or modified emission units that

increases maximum incremental cancer risk are not equipped with T-BACT; or the increase in maximum incremental cancer risk at every receptor location is equal to or less than ten in one million provided the emission units are equipped with T-BACT. Furthermore, the provisions of Rule 1200 require that the increase in the total acute noncancer health hazard index at every receptor must be equal to or less than one, and that the total chronic noncancer health hazard index at every receptor must be equal to or less than one, unless the Air Pollution Control Officer determines than an alternate total hazard index is sufficiently health protective.

The following sections present the background ambient air quality and attainment status with regard to NO_2 and CO; the meteorological data and a discussion of its representativeness for the Lonestar site; the results of the ambient air quality analysis, including a discussion of the approach in conducting the analysis; and the results of the Rule 1200 health risk analysis.

2.0 BACKGROUND AMBIENT AIR QUALITY

According to the requirements for conducting an AQIA, the initial step is to ascertain the existing background ambient air quality for the pollutants that are to be considered in the AQIA. The nearest monitoring station to the Lonestar facility is the Otay Mesa-Paseo International monitoring station. However, the San Diego Air Pollution Control District recommends the use of Chula Vista monitoring data to represent the background ambient air quality, as the Otay Mesa monitoring station is located directly at the international border crossing and is influenced by vehicular emissions. Table 4 presents the NO_2 and CO background ambient air quality for 1997-1999 for the Chula Vista monitoring station.

Table 4
Highest Background Ambient Air Quality
(micrograms/cubic meter)

Monitoring Station	1997	1998	1999	CAAQS	NAAQS
Nitrogen Dioxide					
1-Hour					
Chula Vista	205	195	190	470	N/A
Annual Average					
Chula Vista	36	34	36	N/A	100
Carbon Dioxide					
1-Hour					
Chula Vista	6171	4685	6171	23,000	40,000
8-Hour					
Chula Vista	3429	3085	4342	10,000	10,000

The background ambient air quality data indicate that the San Diego Air Basin is currently attaining the National Ambient Air Quality Standard (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for NO_2 and CO.

3.0 METEOROLOGICAL DATA

The CalPeak Lonestar site is located on Otay Mesa south of Otay Mesa Road and just east of Harvest Road. The climate of the site, and all of San Diego, is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Because of the site's inland location, surface meteorological data collected at the Marine Corps Air Station (MCAS) Miramar site were used to conduct the air quality impact analysis. Upper air data from MCAS Miramar were used for the mixing height, as Miramar is the closest upper air station at which mixing heights are measured.

Figure 1 presents a wind rose from MCAS Miramar. The wind rose indicates the general wind direction at the site. Three sequential years of meteorological data (1992 through 1994) were used in the air dispersion modeling. Because the meteorological data do not vary substantially from year to year, the data were considered to be representative of meteorological conditions at the site.

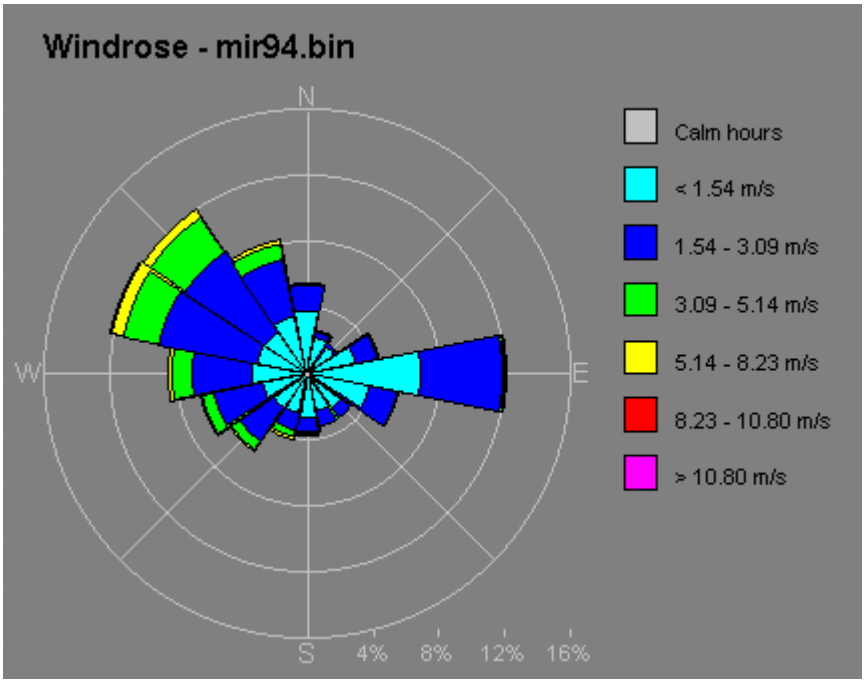


Figure 1. Wind Rose – MCAS Miramar

4.0 AIR QUALITY IMPACT ANALYSIS

This section presents the results of the AQIA that was conducted to demonstrate that the proposed project would not cause or contribute to a violation of an ambient air quality standard.

4.1 MODELING APPROACH AND ASSUMPTIONS

Table 5 presents the stack parameters for the FT-8 Twin Pac that were used in the AQIA, and the modeling parameters for the proposed project. For the purpose of conducting the AQIA, the worst case operating scenario for NOx emissions was chosen to evaluate the maximum potential impacts associated with the facility's operations.

Table 5
Stack Parameters
CalPeak Lonestar No. 4 Facility

PARAMETER	VALUE
Average High Heating Value of Fuel	1,020 BTU/SCF
Stack Height	50 feet minimum
Stack Diameter	12 feet
Stack Exit Temperature	700 F
Stack Exit Volumetric Flow	786,547 ACFM
Stack Exit Velocity	115.91 ft/s
Fuel Flow	0.492 MSCF/hr

The Industrial Source Complex Short Term 3 (ISCST3) model, version 10100, was used for the AQIA. The ISCST3 model receptor grid was set up as follows: 50-meter spacing along the property boundary and from the facility boundary to 200-meter distance; 100-meter spacing from 200 meters to 1 kilometer; and 200-meter spacing from 1 kilometer to 5 kilometers. The receptor grid was sufficiently large to include areas of high terrain, including higher elevations east of Otay Mesa. In addition, a 50-meter grid was sited where the initial modeling effort indicated the maximum impacts would be predicted. Table 6 presents the ISCST3 model option settings that were used in the modeling effort.

Table 6
ISCST3 Model Option Settings

MODEL OPTION	SETTING
Model Calculates	Concentration
Receptor Grid System	Cartesian
Terrain Elevations Read	Yes
Calm Processing Used	Yes
Dispersion Coefficients	Rural
Stack Tip Downwash	Yes
Gradual Plume Rise	Yes
Buoyancy-Induced Dispersion	Yes
Wind Profile Exponent Values	Default
Vertical Potential Temperature Gradient	Default
Building Downwash	Included

Because the site is located in a developed area, rural dispersion coefficients were appropriate for the proposed facility. A review of land use within 3 km of the site

indicates that less than 50% of the area is developed, and therefore the area would not experience urban effects.

Building downwash was taken into account using the USEPA's BPIP model (USEPA 1995) which is the most recent version of the building downwash model available. In accordance with USEPA guidelines, building downwash must be considered if the stack heights are less than "Good Engineering Practice" (GEP) heights. GEP heights can be calculated by the following equation:

$$H_s = H_b + 1.5L$$

Where

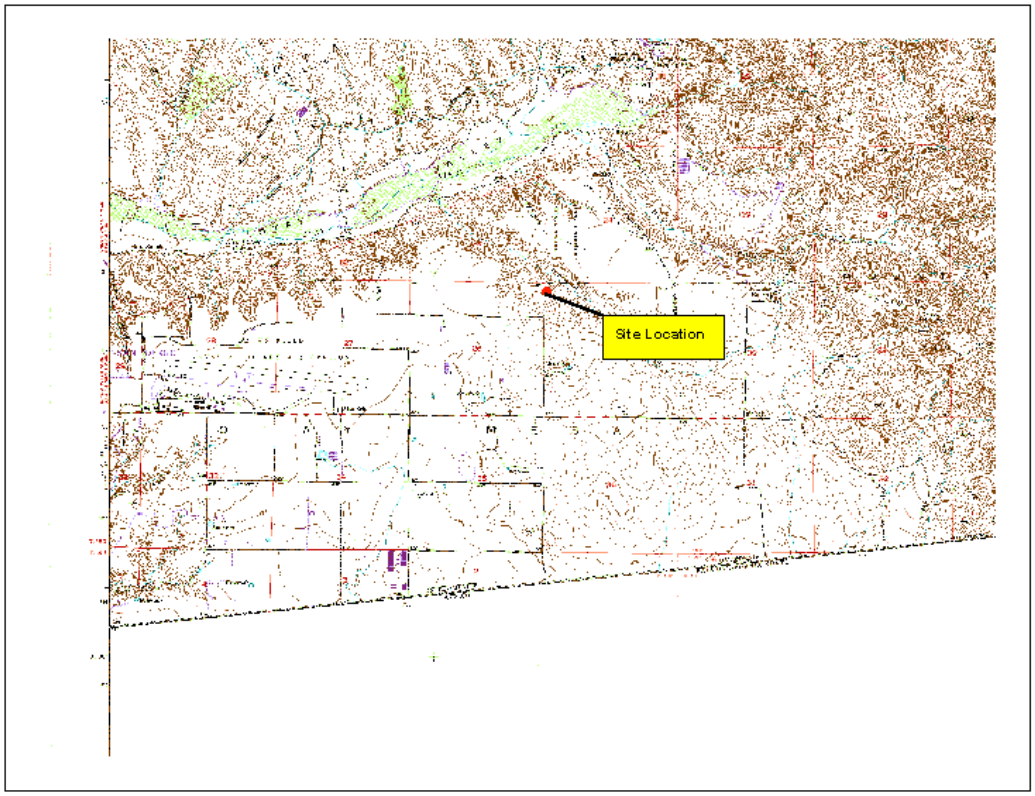
H_s = GEP stack height

H_b = building height

L = lowest of building height, width, or length

The GEP formula indicates whether emissions from a stack will be affected by downwash associated with nearby buildings. Building dimensions were obtained from the existing facility, surrounding buildings, and Pratt & Whitney information regarding the turbine housing and configuration. The facility location is shown in Figure 2. The proposed minimum stack height of 52.5 feet is below the GEP stack height, and building downwash must be considered.

In accordance with USEPA guidelines, all buildings within 5L should be included in the building downwash modeling, where L = the lesser of the building width and length. Because the SCR housing would dominate any downwash effects expected, the SCR housing was the only structure that was included in the modeling analysis. The other structures on or near the stack would be small support structures that would not exceed 1 story in height. The SCR housing was assumed to be a rectangular structure with dimensions 14 ft. wide X 67 ft. long X 42 ft. high.



1 0 1 2 Miles

N
W E
S

CalPeak Lonestar No. 4 Site
Facility Location

SRA Scientific Resources Associated	**Figure 2**

4.2 Model Results

This section presents the results of the AQIA for NO_2 and CO as required under Rule 20.3.

To evaluate compliance with the ambient air quality standards, NO_2 impacts were modeled for 1-hour and annual averaging times. CO impacts were modeled for 1-hour and 8-hour averaging times. Table 7 presents the results of the AQIA for operational impacts for the FT-8 Twin Pac. The maximum predicted concentrations of NO_2 and CO were added to the highest ambient background NO_2 and CO concentrations, respectively, to obtain an estimate of the maximum impacted predicted. As shown in the table, allimpacts are below the CAAQS and NAAQS. Therefore, the AQIA indicates that the project will comply with the requirements of Rule 20.3.

Table 7
AQIA Modeling Results
µg/m^3

Pollutant	Averaging Time	Maximum Predicted Impact[1]	Impact + Background[2]	NAAQS	CAAQS
CONTROLLED, 5 PPM NOX					
NO_2	Annual	0.04	35.7	100	
	1 Hour	8.08	212.8		470
UNCONTROLLED					
NO_2	Annual	0.32	36.0	100	
	1 Hour	62.88	267.6		470
UNCONTROLLED[3]					
CO	8 Hour	102.6	4,445	10,000	10,000
	1 Hour[4]	276.5	6,448	40,000	23,000

[1]Default ARM of 0.75 assumed for annual impacts to account for ozone-limited conversion of NO to NO_2.

[2]Maximum background concentration from 1997-1999 for the Chula Vista monitoring station.

[3]Based on worst-case uncontrolled emissions at 75% load.

[4]Maximum background concentration from 1997-1999 for the Chula Vista monitoring station.

5.0 RULE 1200 EVALUATION

Under the requirements of San Diego APCD Rule 1200, new sources must demonstrate that emissions of toxic air contaminants (TACs) do not exceed specified health risk limits at all off-site receptor locations where the public may be exposed to the emissions. The locations of concern include residences, businesses, schools, day care centers, hospitals, government facilities, retirement homes or any location where public access is possible. Rule 1200 requires an evaluation of both cancer and noncancer chronic health risks, and of acute noncancer risks. Rule 1200 requires that the excess cancer risks associated with facility TAC emissions are less than one in one million without implementation of toxics best available control technology (TBACT), and less than ten in one million with implementation of TBACT. Rule 1200 also requires that the noncancer hazard indices for both chronic and acute noncancer risks be below 1.0.

To determine whether the proposed project would be in compliance with the requirements of Rule 1200, a health risk evaluation of TAC emissions from the project was conducted. The first step in the evaluation was to estimate emissions of TACs from the project's operations. The second step in the evaluation was to estimate the maximum impacts associated with TAC emissions using air quality modeling. The final step in the evaluation was to compare the estimated health risks associated with exposure to the maximum concentrations of TACs predicted for the project's operations.

5.1 TOXIC AIR CONTAMINANT EMISSION ESTIMATES

The FT-8 Twin Pac proposed for the CalPeak Lonestar facility will be fired exclusively with natural gas. TAC emission factors for gas turbines were obtained by reviewing relevant databases for turbines firing natural gas. In accordance with San Diego APCD guidance for simple-cycle gas turbines with SCR, impacts associated with ammonia and organic compounds are required to be evaluated.

To estimate emissions of organic compounds from natural gas combustion, the U.S. EPA's AP-42 emission factors (AP-42, Section 3.1, Stationary Gas Turbines, Table 3.1-3) were used. For PAHs, discussions with the San Joaquin Valley Unified Air Pollution Control District indicate that the PAH factor published by the EPA includes naphthalene. Because naphthalene is noncarcinogenic, the naphthalene portion of the PAHs (from the EPA's AP-42 emission factors, which were derived from the same source test data as the general PAH emission factor) was subtracted from the PAH emission factor. Source test data has been requested from the San Joaquin Valley Unified Air Pollution Control District and will be forwarded to the District upon receipt. Furthermore, the emission factors from AP-42 are conservative because they are for natural gas combustion in uncontrolled turbines. The turbines will be equipped with SCR and an oxidation catalyst. The oxidation catalyst will reduce the emissions of all organic compounds as well as CO and VOCs. An emission estimate for ammonia was calculated assuming 10 ppm slip from SCR and project heat rate conditions at 100% operating capacity.

Table 8
Toxic Air Contaminant Emissions

TAC	Emission Factor, lb/MMBTU	Maximum Hourly Emissions, lbs/hr	Maximum Hourly Emissions, g/s	Annual Emissions, lbs/yr	Annual Emissions, g/s
Ammonia	10 ppm slip	7.6	0.958	6.6E+04	0.958
Acetaldehyde	4.0E-05	2.01E-02	2.53E-03	176	2.53E-03
Acrolein	6.4E-06	3.2E-02	4.05E-04	28.2	4.05E-04
Benzene	1.2E-05	6.03E-03	7.59E-04	52.8	7.59E-04
1,3-Butadiene	4.3E-07	2.16E-04	2.72E-05	1.89	2.72E-05
Ethylbenzene	3.2E-05	1.61E-02	2.02E-03	141	2.02E-03
Formaldehyde	7.1E-04	3.56E-01	4.49E-02	3,120	4.49E-02
Naphthalene	1.3E-06	6.53E-04	8.22E-05	5.72	8.22E-05
PAHs	9.0E-07	4.52E-04	5.69E-05	3.96	5.69E-05
Propylene Oxide	2.9E-05	1.46E-02	1.83E-03	128	1.83E-03
Toluene	1.3E-04	6.53E-02	8.22E-03	572	8.22E-03
Xylenes	6.4E-05	3.21E-02	4.05E-03	282	4.05E-03

5.2 Health Risk Assessment

To estimate the potential health risks associated with exposure to TACs emitted from the project, it was first necessary to estimate the concentrations of TACs at the maximum impact point. The approach used to estimate maximum concentrations is the same as the approach that was used to conduct the air dispersion modeling for the AQIA, and is described in Section 4 above.

The source emission rate in the ISCST3 model was assumed to be 1 gm/sec. As a result, for each source, model predicted concentrations at each receptor location is a dilution factor, X/Q (chi over Q), or a predicted concentration per 1 gm/sec of emission. For each TAC, cancer risk is the annual average TAC emission rate multiplied by the X/Q, the cancer unit risk factor. For multipathway pollutants (in this case, PAHs), a multipathway factor was included in the risk calculations to account for the potential for multipathway health effects (i.e., effects due to oral exposure and routes other than inhalation). For conservative purposes, the multipathway factor recommended by Tom Weeks of the San Diego Air Pollution Control District for benzo(a)pyrene was used to estimate multipathway effects from all PAHs. The multipathway factor is 7.12, and is multiplied by the inhalation excess cancer risk to estimate a total risk due to exposure to PAHs. The chronic HI is the annual average TAC emission rate multiplied by the X/Q, then divided by the chronic REL. The acute HI is the maximum one-hour TAC emission rate multiplied by the X/Q, then divided by the acute REL.

The cancer unit risk factors (URF) and noncancer reference exposure levels (RELs) were obtained from the most recent-approved values released by the California Office of Environmental Health Hazard Assessment (OEHHA) in February 1999 (acute RELs), June 1999 (URFs), and May 2000 (chronic RELs). Table 9 presents a summary of the TACs and their corresponding toxicity factors and target organ systems for noncancer risks.

Table 9
Toxicity Values
Toxic Air Contaminants

TAC	URF, $(\mu g/m^3)^{-1}$	Chronic REL, $\mu g/m^3$	Chronic Target Organ(s)[1]	Acute REL, $\mu g/m^3$	Acute Target Organ(s)[1]
Ammonia	N/A	200	RES	3200	RES
Acetaldehyde	2.7E-06	9	RES	N/A	
Acrolein	N/A	2.0E-02		0.19	RES, EYE
Benzene	2.9E-05	200	CNS, REP, CV	3200	REP
1,3-Butadiene	1.7E-04	N/A		N/A	
Ethylbenzene	N/A	2000	REP, LIV, KID	N/A	
Formaldehyde	6.00E-06	3	RES, EYE	94	RES, EYE
Naphthalene	N/A	9	RES	N/A	
PAHs	1.7E-03	N/A		N/A	
Propylene Oxide	3.7E-06	30	RES	3100	RES, EYE
Toluene	N/A	300	CNS, RES, REP	37000	CNS, RES
Xylenes	N/A	700	CNS, RES	22000	RES, EYE

[1]RES=respiratory system; CV=cardiovascular system; CNS=central nervous system; IMM=immunological system; KID=kidney; LIV=liver, alimentary system; REP=reproductive system, developmental system; EYE=eyes; SK=skin

To be conservative, the maximum annual average and maximum hourly concentrations at any receptor location (grid or fence line) due to emissions from the turbine were selected as the location of the point of maximum impact or maximum exposed individual (MEI). The selection was made without considering whether anyone actually lives or works at that location. Health risk calculations were conducted for the MEI to determine whether the estimated health risks are below the Rule 1200 criteria for acceptable risks. For conservative purposes, the excess cancer risks and hazard quotients calculated for individual pollutants were summed over all pollutants regardless of toxic endpoint.

The health risk modeling results indicated that the risks were below the Rule 1200 criteria for excess cancer risks, chronic noncancer risks, and acute noncancer risks. The results of the health risk evaluation are presented in Table 10. The excess cancer risks based on the emission factors from AP-42 and the conservative assumptions inherent in the emission estimate for uncontrolled sources as well as the use of the multipathway factor for benzo(a)pyrene to represent the multipathway health effects of all PAHs leads to the conclusion that the excess cancer risks are likely overestimated. The risks presented in Table 10 are based on 8760 hours of operation per year.

Table 10
Results of Health Risk Calculations

	Risk Estimate	Rule 1200 Criterion	Above Criterion?
Excess Cancer Risk	0.042 in 1 million	1 in 1 million	No
Chronic HI	0.0017	1	No
Acute HI	0.018	1	No

As shown in Table 10, the risks associated with emissions from the CalPeak Lonestar No. 4 facility are below the Rule 1200 thresholds for uncontrolled sources to utilize TBACT. Therefore, the project will be in compliance with Rule 1200 and no further controls are required.

APPENDIX A, PART 2

JUNE 26, 2001 MEMO FROM RALPH DESIENA, SDAPCD TO MIKE LAKE, SDCPCD:

SOUTH BAY AND OTAY MESA CUMULATIVE IMPACTS ANALYSIS FOR CRITERIA POLLUTANTS

TO: MIKE LAKE, CHIEF, ENGINEERING

FROM: Ralph DeSiena, Associate Meteorologist

SOUTH BAY AND OTAY MESA CUMULATIVE IMPACTS ANALYSIS FOR CRITERIA POLLUTANTS

I have performed modeling in support of a cumulative impact analysis for the five proposed gas fired Peaker turbines, the Otay Mesa Generating Facility (510 MW) and the South Bay Generating Facility in the Chula Vista/Otay Mesa region. The modeling scenario included the South Bay facility operating at 33% oil (gas curtailment), the proposed new (62.4 MW) turbine at the RAMCO facility and continuous liquid fuel firing (gas curtailment) of one LARKSPUR facility turbine. The modeling scenario assumed all other facilities operating on gas at full load with control equipment operating. Hourly varying emissions and emission release parameters for all 4 units at the South Bay facility were input to the model.

The EPA's regulatory approved refined model, ISC, was used to determine predicted maximum cumulative 1-Hour and 8-Hour CO concentrations, 1-Hour and Annual NO_2 concentrations, 1-Hour, 24-Hour and annual SO_2 and 24-Hour and Annual PM10 concentrations in the Chula Vista/Otay Mesa region. The modeling was performed in accordance with EPA and District guidance. Regulatory default settings were used and building downwash was considered. Three years of meteorological data (1993-1995) for Miramar NAS, CA were used for the modeling. The receptor grid was sufficiently dense (12,017 Receptors) to identify maximum impacts. USGS digital terrain data was used to determine receptor elevations. The modeling assumed 24 Hr/day and 365 days/year operations for all facilities.

A review of the Chula Vista monitoring station data for 1996-1998 indicated worst-case 1-Hour and 8-Hour background CO concentrations of 6.5 mg/m^3 and 4.4 mg/m^3 respectively. Worst-case 1-Hour and Annual NO_2 concentrations were 207 $\mu g/m^3$ and 36 $\mu g/m^3$ respectively. Worst-case 24-Hour, Annual Arithmetic and Annual Geometric PM10 concentrations were 62 $\mu g/m^3$, 28 $\mu g/m^3$ and 27 $\mu g/m^3$ respectively. Worst-case 1-Hour, 24-Hour and Annual SO_2 concentrations were 236 $\mu g/m^3$, 63 $\mu g/m^3$ and 10 $\mu g/m^3$ respectively.

The results of the modeling, including worst-case monitored background concentrations, indicate that California and Federal standards for CO, SO_2 and NO_2 will not be exceeded due to the operation of these facilities as described. Tables 1 through 9 summarize the predicted impacts for All facilities, South Bay Generating facility only and South Bay and Peaker Turbines combined.

Table 1
CO Impacts and Air Quality Standards –All Facilities

Average Period	Predicted Impact mg /m^3	Background mg/m^3	Total Impact mg /m^3	California Standard Mg /m^3	Federal Standard mg /m^3
1-Hour	.78	6.5	7.28	23	40
8-Hour	.26	4.4	4.66	10	10

Table 2
CO Impacts and Air Quality Standards—South Bay Generating

Average Period	Predicted Impact mg /m^3	Background mg/m^3	Total Impact mg /m^3	California Standard mg /m^3	Federal Standard mg /m^3
1-Hour	.78	6.5	7.28	23	40
8-Hour	.26	4.4	4.66	10	10

Table 3
CO Impacts and Air Quality Standards—South Bay and Peaker Turbines

Average Period	Predicted Impact mg /m^3	Background mg/m^3	Total Impact mg /m^3	California Standard mg /m^3	Federal Standard mg /m^3
1-Hour	.78	6.5	7.28	23	40
8-Hour	.26	4.4	4.66	10	10

Table 4
NO2 Impacts and Air Quality Standards—All Facilities

Average Period	[1]Predicted Impact μg/m^3	Background μg/m^3	Total Impact μg/m^3	California Standard μg/m^3	Federal Standard μg/m^3
1-Hour	208.7	207	415.7	470	None
Annual	3.35	36	39.35	None	100

[1] Assumes $NO_x = NO_2$

Table 5
NO2 Impacts and Air Quality Standards—South Bay Generating

Average Period	[1]Predicted Impact μg/m^3	Background μg/m^3	Total Impact μg/m^3	California Standard μg/m^3	Federal Standard μg/m^3
1-Hour	208.7	207	415.7	470	None
Annual	3.03	36	39.03	None	100

[1] Assumes $NO_x = NO_2$

Table 6
NO2 Impacts and Air Quality Standards—South Bay and Peaker Turbines

Average Period	[1]Predicted Impact $\mu g/m^3$	Background $\mu g/m^3$	Total Impact $\mu g/m^3$	California Standard $\mu g/m^3$	Federal Standard $\mu g/m^3$
1-Hour	208.7	207	415.7	470	None
Annual	3.35	36	39.35	None	100

[1] Assumes $NO_x = NO_2$

Table 7
SO2 Impacts and Air Quality Standards –All Facilities

Average Period	Predicted Impact $\mu g/m^3$	Background $\mu g/m^3$	Total Impact $\mu g/m^3$	California Standard $\mu g/m^3$	Federal Standard $\mu g/m^3$
1-Hour	309.6	236	545.6	655	None
24-Hour	41.5	63	104.5	105	365
Annual	4.2	10	14.2	None	80

Table 8
SO2 Impacts and Air Quality Standards—South Bay Generating

Average Period	Predicted Impact $\mu g/m^3$	Background $\mu g/m^3$	Total Impact $\mu g/m^3$	California Standard $\mu g/m^3$	Federal Standard $\mu g/m^3$
1-Hour	309.6	236	545.6	655	None
24-Hour	41.5	63	104.5	105	365
Annual	4.2	10	14.2	None	80

Table 9
SO2 Impacts and Air Quality Standards—South Bay and Peaker Turbines

Average Period	Predicted Impact $\mu g/m^3$	Background $\mu g/m^3$	Total Impact $\mu g/m^3$	California Standard $\mu g/m^3$	Federal Standard $\mu g/m^3$
1-Hour	309.6	236	545.6	655	None
8-Hour	41.5	63	104.5	105	365
Annual	4.2	10	14.2	None	80

Cumulative PM10 emissions were modeled assuming all facilities were operating 24/day and 365 days/year. Three years of meteorological data (1993-1995) for Miramar NAS, CA were used with the ISC model. The maximum predicted 24-Hour impact for all facilities and for all 3 years modeled was 26.2 $\mu g/m^3$. The maximum predicted impact contribution from the Otay Generating facility at the maximum impact location was

22.3 $\mu g/m^3$ or 85% of the predicted cumulative 24-Hour concentration. Since the 24-hour California Standard is exceeded by background concentrations in the project area an evaluation of whether addition exceedances would be caused by operation of these facilities would need to be conducted. Based upon the ISC modeling results this evaluation would require modeling all days within the period with 24-hour concentrations $\geq$ 24 $\mu g/m^3$ but $\leq$ 50 $\mu g/m^3$, the California Standard. An alternative approach would be to perform this analysis using EPA's proposed new refined model, AERMOD, which tends to yield less conservative predicted impacts in complex terrain as compared to the ISC model, which has been demonstrated to over predict. This would likely reduce the number of days required for the analysis of additional California Standard exceedances resulting from the proposed operation of these facilities in the region.

Without performing this additional modeling some assumptions of the expected results may be made based upon the Otay Generating project analysis. The AERMOD modeling conducted for that analysis predicted a maximum 24-Hour PM10 concentration of 4.96 $\mu g/m^3$ for this facility only. Therefore, all days within the modeled period with 24-hour concentrations $\geq$ 45 $\mu g/m^3$ but $\leq$ 50 $\mu g/m^3$ were individually modeled to determine whether additional California Standard violations occurred. The maximum predicted impact for all of these days was 1.6 $\upsilon g/m^3$ and the maximum background concentration was 48 $\mu g/m^3$. Adjusting this predicted impact to include all facilities based upon the above ISC results (Otay Generating = 85% of the total impact) and then adding that result to this background (1.9 + 48= 49.9 $\mu g/m^3$) would not result in an exceedance of the California standard. This analysis can be verified by additional modeling using AERMOD if necessary. Results for the Annual standard analysis for all facilities are presented in Table 10.

Table 10
PM10 Impacts and Annual Air Quality Standards--All Facilities

Average Period	**Predicted Impact $\mu g/m^3$**	**Background $\mu g/m^3$**	**Total Impact $\mu g/m^3$**	**California Standard $\mu g/m^3$**	**Federal Standard $\mu g/m^3$**
Annual Geometric	[1]1.2	27	28.2	30	
Annual Arithmetic	1.2	28	29.2		50

[1] Arithmetic Average

A summary of the modeling results and the emissions and emission release parameters for each facility used for this analysis are attached.

RALPH DESIENA

APPENDIX A, PART 3

LETTER FROM DAN SPEER, SDAPCD TO BOB ELLER, CEC REGRADING CUMULATIVE CRITERIA POLLUTANT IMPACT OF NEW AND EXISTING ENERGY PROJECTS IN THE CHULA VISTA/OTAY MESA AREA OF SAN DIEGO COUNTY

July 3, 2001

MR. BOB ELLER
CALIFORNIA ENERGY COMMISSION
1516 9TH ST
SACRAMENTO CA 95814-5540

Cumulative Criteria Pollutant Impact of New and Existing Energy Projects in the Chula Vista/Otay Mesa Area of San Diego County

Enclosed is an air quality impact analysis (AQIA) prepared by the San Diego County Air Pollution Control District for the cumulative criteria pollutant impacts from five new small power plants, the Otay Mesa Generating Facility and The Duke Energy South bay Power plant in the Chula Vista/Otay Mesa Area. Impacts from the South Bay Power Plant included assuming 33 percent operation on fuel oil.

This cumulative analysis assumes these plants operating at full capacity and all except the Duke Energy and Larkspur plants fueled exclusively on natural gas. Results indicate that emissions from the subject installations with corresponding operational assumptions will not result in an exceedance of applicable California and Federal Ambient Air Quality Standards.

The results of this additional analysis is included herein.

If you have any questions please call me at (858) 650-4607, Ralph DeSiena at (858) 650-4641 or Michael Lake at (858) 650-4590.

DANIEL A. SPEER
Senior Air Pollution Control Engineer

APPENDIX A, PART 4

PRELIMINARY AUTHORITY TO CONSTRUCT LETTER FROM THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT. (6 PAGES)

NOTE: THIS LETTER WILL BE FINALIZED UPON THE ACTION OF THE CALIFORNIA ENERGY COMMISSION TO APPROVE THE CALPEAK POWER-BORDER, LLC APPLICATION FOR CERTIFICATION.

PRELIMINARY

CHARLES C HINCKLEY PROJECT DIRECTOR
CALPEAK POWER LLC
701 B STREET SUITE 340
SAN DIEGO, CA 92101 8197

After examination of your Application No. 976502 (CalPeak Power No. 4, Border) for an Air Pollution Control District Authority to Construct two simple cycle gas turbines with common generator & exhaust (the "Twin Pac") at the intersection of Harvest Road and Interstate 905, (the "facility"), San Diego, California the District has decided on the following action:

Authority to Construct is granted pursuant to Rule 20 of the Air Pollution Control District Rules and Regulations for a:

Pratt & Whitney 49.5 MW (at ISO conditions) Model FT-8 (DLN) "Twin Pac" (two simple cycle gas turbines with common generator & exhaust), total 500 MM Btu/hr, natural gas fired, Peerless Manufacturing Company SCR (Haldor catalyst) and oxidation catalyst (Engelhard catalyst) system.

This Authority to Construct is granted with the following conditions:

(*General Requirements*)

1. The applicant shall provide access, facilities, utilities, and any necessary safety equipment for source testing and inspection upon the request of the Air Pollution Control District.

2. The Twin Pac shall be fired on Public Utility Commission (PUC) quality natural gas only. The applicant shall maintain, on-site, quarterly records of the natural gas sulfur content (grains of sulfur compounds per 100 dscf of natural gas) and the higher and lower heating values (Btu/scf) of the natural gas; and provide such records to District personnel upon request.

3. Permittee shall submit a complete Acid Rain permit application (including a *monitoring* plan) prior to commencement of construction *in accordance with* 40 CFR part 72 to the *EPA* Administrator, *and copy to the District*.

4. Sufficient SO_2 trading allowances will be purchased by the permittee to offset potential SO_2 *emissions* following the requirements described in 40 CFR 73. Permittee *shall* hold allowances, as of the allowance transfer deadline, in the facility's (Department of Energy's Office of Regulatory Information System

5. "*ORIS" code for each unit, the Twin Pac is a "unit"*) compliance sub-account (after deductions under 40 CFR 73.34 (c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit.

6. All records required by this permit shall be kept on site for a minimum of five years and made available to District personnel upon request.

7. Within one year of commencing commercial operation at the site, the plant operator shall submit a 40 CFR 70 permit application (Title V) to the District pursuant to District Regulation XIV. (*This reference to "commercial" operation and submitting a Title V permit application comes from the Title IV 40CFR72.2. …commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.*)

(*Emission limits*)

8. The NOx, CO and VOC limits defined in the following conditions (Nos. 7 through 15) shall not apply during the first continuous 30 minutes immediately following a cold start-up or during the 30 continuous minutes immediately preceding a shutdown. Startup is defined as the time when fuel flow begins. Shutdown is defined as the moment fuel flow to the Twin Pac ceases. These events shall be recorded by the Data Acquisition System (DAS) required by 40CFR75.

9. Emissions of oxides of nitrogen (NO_x), calculated as nitrogen dioxide, from the Twin Pac exhaust stack shall not exceed 3 parts per million volume on a dry basis (ppmvd) corrected to 15 % oxygen and averaged over each continuous rolling 3-hour period. Compliance with this limit shall be demonstrated at the time of the initial compliance test and continuously thereafter.

10. Emissions of oxides of nitrogen (NO_x), calculated as nitrogen dioxide, from the Twin Pac exhaust stack shall not exceed 2.5 parts per million volume on a dry basis (ppmvd) corrected to 15 % oxygen and averaged over a continuous rolling 24-hours. NO_x emissions shall also not exceed 2 ppmvd corrected to 15 % oxygen and averaged over all operational hours in the calendar year.

11. Emissions shall not exceed 6.18 pounds per hour of nitrogen oxides (NOx) averaged over any 3-hour period. Compliance with this limit shall be demonstrated at the time of the initial compliance test and continuously thereafter.

12. Emissions of carbon monoxide (CO) from the Twin Pac exhaust stack shall not exceed 6 parts per million volume on a dry basis (ppmvd) corrected to 15 % oxygen and averaged over each continuous rolling 3-hour period. Compliance with this limit shall be demonstrated at the time of the initial compliance test and continuously thereafter.

13. Emissions shall not exceed 7.54 pounds per hour of carbon monoxide (CO) averaged over any 3-hour period. Compliance with this limit shall be demonstrated at the time of the initial compliance test and continuously thereafter.

14. Mass Emission limits: NOx emissions from the Twin Pac shall not exceed 6.18 pounds per hour (3 hour average); 123.60 pounds in any calendar day; 18.05 tons in any calendar year. CO emissions from the Twin Pac shall not exceed 7.54 pounds per hour (3 hour average); 180.96 pounds in any calendar day; 33.03 tons in any calendar year.

15. Emissions of volatile organic compounds (VOCs), calculated as methane, shall not exceed 2 parts per million volume on a dry basis (ppmvd) corrected to 15 % oxygen (3 hour rolling average). Compliance with this limit shall be demonstrated at the time of the initial compliance test and annually thereafter.

16. Ammonia emissions from the gas turbine shall not exceed 10 ppmvd @ 15 % oxygen. Compliance with this limit shall be demonstrated at the initial compliance test and annually thereafter.

(*Monitoring and recordkeeping*)

17. An operating log *or Data Acquisition System (DAS) records* shall be maintained on site to record actual times and durations of all startups, shutdowns, quantity of fuel used, hours of daily operation, and total cumulative hours of operation during each calendar year.

18. A Continuous Emission Monitoring System (CEMS) shall be installed and calibrated to measure and record the concentrations of oxides of nitrogen (NOx) and carbon monoxide (CO) in the exhaust gas on a dry basis (ppmvd) corrected to 15% oxygen, and oxygen (O_2) in the exhaust gas. Upon initial firing and prior to final approval of the permanent CEMS system, a portable CEMS, which has been properly calibrated, shall be used to continuously measure and record these conditions. The portable CEMS shall remain in full operation at all times when the turbine is in operation until the permanent CEMS has been properly installed and certified. The permanent CEMS shall thereafter be in full operation at all times when the Twin Pac is in operation.

19. All CEMs shall be installed, certified, and maintained pursuant to applicable federal regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75, and a CEMS protocol approved by the District. At least 60 days prior to the operation of both the portable and permanent CEMS,

the applicant shall submit a CEMs operating protocol to the District for written approval.

20. The District shall be notified in writing at least two (2) weeks prior to any changes made in the CEMs software which affects the measurement, calculation or correction of data displayed and/or recorded by the CEMs.

21. On and after initial startup, the Twin Pac shall be equipped with continuous parametric monitors to measure (or calculate) and to record the following operational characteristics:

    hours of operation (hours),

    natural gas flow rate (scfh),

    exhaust gas temperature (˚F),

    ammonia injection rate (lbs/hr),

    molar ratio of ammonia injection rate to turbine NOx emission rate at SCR inlet (instantaneous), inlet temperature of the SCR and oxidation catalyst beds, and power output (MW).

These monitors shall be installed, calibrated, and maintained in accordance with the manufacturer's recommended procedures and a protocol approved by the District. Such protocol shall be submitted to the District for written approval at least 60 days prior to initial startup. This protocol shall include, at a minimum, a description of the equipment used for direct measurement of operating characteristics and the methodology used to calculate the remaining operating characteristics. All monitors shall be in full operation at all times when the Twin Pac is in operation.

22. The natural gas fuel input rate shall be continuously measured and recorded using District-approved calibrated fuel flow meters. Monthly and annual fuel use records, shall be made available to the District upon request.

23. A monitoring plan in conformance with 40 CFR 75.53 shall be submitted to EPA Region 9 and the District at least 45 days prior to the initial source test, as required in 40 CFR 75.62.

(*Source Test Requirements*)

24. The Twin Pac exhaust stack shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with San Diego Air Pollution Control District Method 3A, Appendix Figure 2, and approved by the District.

25. No later than 90 days after the Twin Pac commences commercial operation (*40CFR70.4(b)(2)*), a Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the permanent CEMs in accordance with 40 CFR Part 75 Appendix A performance specifications. At least 45 days prior to the test date, the applicant shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 45 days prior to the test so that observers may be present. Within 30 days of completion of this test, a written test report shall be submitted to the District for approval.

26. Within 60 days after the initial startup of this equipment, an initial source test shall be conducted by an independent, ARB approved tester or the District, at the applicant's expense, to determine initial compliance with the emission standards of this Authority to Construct. A source test protocol shall be submitted to the District for approval prior to the issuance of a Shakedown Authorization. The source test protocol shall comply with the following requirements:

    a. Measurements of outlet oxides of nitrogen (NOx), carbon monoxide (CO), and stack gas oxygen content (O_2%) shall be conducted in accordance with the San Diego County Air Pollution Control District Method 100, as approved by the U.S. Environmental Protection Agency (EPA).

    b. Measurements of outlet volatile organic compounds (VOCs) shall be conducted in accordance with the San Diego Air Pollution Control District Methods 18 and 25A.

    c. Measurements of outlet ammonia shall be conducted in accordance with Bay Area Air Quality Management District (BAAQMD) test method ST-1B.

    d. Source testing shall be performed at no less than 80% of the turbine rated load.

27. Within 30 days after completion of the initial source test, a final test report shall be submitted to the District for review and approval.

28. In the event the initial source test results do not demonstrate compliance with District emissions standards to the satisfaction of the District, the applicant shall take corrective action to meet these standards. Any proposed corrective action that would result in a modification to the equipment shall require an application for modification and a District Authority to Construct for such modification.

29. This equipment shall be source tested on an annual basis to demonstrate compliance with the outlet NOx, outlet CO, outlet VOC, and outlet ammonia emission standards of this Authority to Construct, using District approved methods, unless otherwise directed in writing by the District.

PRELIMINARY

30. Based on source testing additional monitoring parameters may be established to ensure compliance.

(*Construction Completion Notice*)

31. This Authority to Construct authorizes temporary operation of the above specified equipment. This temporary permit to operate shall take effect upon written notification to the District that construction has been completed in accordance with this Authority to Construct. This temporary permit to operate will remain in effect, unless withdrawn or modified by the District, until the equipment is inspected by the District and a revised temporary permit (Startup Authorization) is issued or a Permit to Operate is granted or denied.

32. Upon completion of construction in accordance with this Authority to Construct and prior to commencing operation, the applicant must complete and mail, deliver, or fax the enclosed Construction Completion Notice to the District. After mailing, delivering, or faxing the Notice, the applicant may commence operation of the equipment. Operation must be in compliance with all of the conditions of this Authority to Construct and applicable District rules.

This Authority to Construct shall be posted on or within 25 feet of the above described equipment, or maintained readily available at all times on the operating premises.

This Air Pollution Control District Authority to Construct does not relieve the holder from obtaining permits or authorizations which may be required by other governmental agencies.

Within thirty (30) days after receipt of this Authority to Construct, the applicant may petition the Hearing Board for a hearing on any conditions imposed herein in accordance with Rule 25.

This Authority to Construct is not transferable and will expire on July 11, 2002.

If you have any questions regarding this action, please contact the undersigned at (858) 650-4611.

ALTA STENGEL
Associate Air Pollution Control Engineer

AFS:

Enclosure
cc: Compliance Division