STATE OF CALIFORNIA
Energy Resources Conservation
And Development Commission

In the Matter of:	)	Docket No. 07-AFC-06
	)	
Application for Certification for the	)	
Carlsbad Energy Center Project	)	
	)	
	)	

DOCKET
07-AFC-6
DATE JAN 14 2010
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STAFF'S PREHEARING CONFERENCE STATEMENT

This statement is filed to respond to the Committee's December 21, 2009, Revised Notice of Prehearing Conference.

Topic Areas Complete. Staff believes that all areas are complete and can proceed to hearing.

Topic Areas Disputed. Staff believes, based on the pre-filed testimony, that the subjects of Air Quality, Greenhouse Gas Emissions, Public Health, Worker and Fire Safety, Visual Resources, and Land Use will require adjudication. Other issues may require adjudication as well, but this will not be known until they are identified at the Prehearing Conference.

Witness Identities. The staff witnesses are identified in the Final Staff Assessment. In addition, Mike Conway and Paul Marshall have replaced Richard Latteri as witnesses for Water Resources, as Mr. Latteri has retired from the agency. Jim MacIntosh will be sponsored by staff to present testimony from the California Independent System Operator (CAISO) on issues that pertain to greenhouse gas emissions from the electric power system. In addition, Steve McClary will present testimony for staff on electric system operation and greenhouse gases.

Testimony by Phone. Due to severe resource constraints, staff requests that only those witnesses who are central to controverted areas be required to attend the hearing. The City of Carlsbad (City) has indicated that it has only limited cross-examination for staff's water witnesses, and that these witnesses can testify by phone. Staff may request that some other witnesses be allowed to do so.

Cross-examination Topics. Staff will cross-examine the witnesses identified in the City's opening testimony. The time for cross-examination will be as much as thirty minutes per witness, but should normally be less.

Exhibits. Staff will make the FSA, the CAISO, and McClary testimony exhibits, as well as the air district's Determination of Compliance.

Schedule Issues and Proposals. Because of the strain on resources, staff requests that the Committee make every effort to conclude the evidentiary hearings during the days scheduled, so that Staff will not have to attend additional distant hearings. Staff counsel will be briefing complicated issues from one of the solar AFCs immediately following the hearing, and thus requests that Opening Briefs not be required before early March.

Date: January 14, 2010

Respectfully submitted,

/s/ Richard C. Ratliff

RICHARD C. RATLIFF
Staff Counsel IV

This testimony responds to certain technical and regulatory Air Quality issues raised by the following intervenors: Terramar Neighborhood Association (Terramar), Center for Biological Diversity, Power of Vision (POV), and the City of Carlsbad (City). Rebuttal testimony is organized by issue raised, exhibit number, or both. Staff has not attempted to answer questions or issues that should be responded to by the applicant or by the San Diego Air Quality Management District (issues concerning the FDOC). The intervenors issues and questions have been rewritten as necessary for clarity and brevity.

Terramar

Exhibit 306:

a) *What construction restrictions exist to limit 24-hour construction?*

Response: The City of Carlsbad limits disturbing or offensive construction noise to 7 am to sundown on weekdays and 8 am to sundown on Saturdays and prohibits such noise on Sundays and 7 holidays. Due to the low background noise at night this effectively limits night time construction activities and would not allow the use of noisy equipment. Exemptions are allowed by the City Manager.

b) *What restrictions exist relative to train deliveries?*

Response: See the above response.

Exhibit 307, 308, 312, and 328: *Has staff completed an adequate cumulative impacts analysis?*

Response: Yes, staff's cumulative impact assessment includes a summary of projects and identification of AQMP compliance for the project and the District as a whole and an air dispersion modeling analysis of cumulative ongoing project operating impacts. This modeling analysis includes: 1) very conservative background concentrations; and 2) maximum operation of the Encina and CECP facilities. In its conservative cumulative impacts assessment staff has not factored in significant expected reductions in automobile/truck emissions factors, nor other projections for background concentration reductions. Staff recognizes that there are other projects that will be constructed near/adjacent the CECP site. However, while short-term adverse impacts may occur, a cumulatively considerable amount of emissions and impacts are not expected from these projects due to the relative difference in the release and impact locations, and the limited period of emissions near the project site for these linear projects.

Exhibit 309: *What is staff recommending other than regional mitigation and pollution credits to offset the project?*

Response: Staff's recommended mitigation measure AQ-SC10 has a preference for the creation of new local emission reductions, if possible, first at the site and second in the local area surrounding the project site rather than the use of District wide emission reductions.

Exhibit 310: *Were significant impacts determined during shore line or inversion breakup fumigation conditions?*

Response: No, the concentration of pollutants during fumigation conditions, due to the configuration of the stacks and the temperature of the exhausts, were not found to be higher than those during normal operations.

Exhibit 311: *Are particulate emissions/ground level impacts forecast to be higher during initial commissioning?*

Response: No, particulate emissions during initial commissioning are not forecast to be higher in emission rate or have higher ground level impacts than under normal operation. This is why particulate impacts were not mentioned on p. 4.1-40, the initial commissioning modeling/impact analysis (as noted on page 4.1-39) is limited to only those modeled pollutants, NO_2 and CO, that have higher than normal emissions during initial commissioning and the corresponding potential for higher ground level impacts.

Exhibit 320: *Are there Greenhouse Gas laws or norms that the proposed plant would violate?*

Response: No, the project would meet the SB 1368 EPS, and staff has found that this project would be consistent with AB 32 and other state policies and goals for GHG emission reduction from the electricity sector.

Exhibit 322

Q: What are the global climate change consequences to society of the proposed plant?

A: Staff has not quantified the benefits to California or the global climate from the GHG reductions from the integration of this project into the WECC generation system. Staff has determined that the project would be consistent with state policies and goals for GHG emission reduction from the electricity sector. As is discussed in Appendix AIR-1, this would occur directly through the displacement of energy from high green house gas emitting generation, and by enabling the integration of greater amounts of intermittent renewable energy.

Exhibit 324: *Can the project owner request higher operating capacity and what are the statutory requirements?*

Response: Yes, and any changes to the annual criteria pollutant emission limits would require a permit revision from SDAPCD and an amendment from the Energy Commission. Both processes include public participation.

Would the project meet the SB 1368 EPS?

Response: Yes, as noted in the FSA the project's GHG emissions are well below the EPS standard of 0.5 metric tonne CO_2/MWh.

Exhibit 325: *Could Units 1, 2, and 3 be brought back on line?*

Response: No, staff believes that there is no reasonable scenario where Units 1-3 could be brought back on line once their permits are surrendered. The shutdown of Units 1-3 provide the majority of the required offset mitigation for the new CECP, so the air quality permitting issues, among other potential issues such as once-through cooling, would likely be too large to overcome. Returning these units to service would require the District to issue them new permits, including BACT and offsets.

Exhibit 326: *Can the three hour averaging period for the 2 ppm NOx emission limit allowed under transient operations create significant NO_2 impacts?*

Response: No. Although the NOx emissions allowed under start-up conditions and other non-steady state operating conditions are much higher than allowed for other transient operations, no exceedances of the NO_2 standard was determined for any of these higher emitting non-steady state operating conditions.

Exhibit 327: *What assurances can the CEC give the public that the facts provided by the applicant in the FSA are legitimate and truthful?*

Response: For air quality, staff completed a thorough review of the information provided in the AFC by the applicant and during the discovery period found many issues that required that the applicant revise emission estimates, remodel pollutant impacts, re-evaluate baseline emissions, etc. Staff is confident that all major air quality issues have been discovered and that the resulting analysis represents staff's understanding of the project, technology, and air quality issues to the extent knowable at this time.

If the plant is built and emissions are found to be higher than stated in the FSA what actions will the CEC take?

Response: First, the CEC and the District will attempt to get the project owner to comply with the emission limits by technical means (tuning, SCR grid refinement, etc.). In the event that emissions are still higher than the permit, the owner would be required to formally amend their permit, analyze emissions and impacts, and provide offset mitigation. However, under no circumstances can a project circumvent BACT requirements.

Exhibit 329: *While NRG didn't ramp up use of Units 1-3 to obtain a greater emission netting, shouldn't there be rules that would limit the ability to the use of less efficient units for such a purpose?*

Response: Staff does not disagree with this concept; however, currently there are no such legal requirements, or environmental dispatch for power generation. There is a cost to an owner running the less efficient units that very well could be more punitive than buying additional pollutant offsets. Additionally, in the future there very well may be a carbon adder (carbon taxes) that would make such operation even more cost prohibitive, and there is the potential for future regulations regarding environmental dispatch.

Center for Biological Diversity, William B. Rostov

Issue 1: *Is an analysis of the potential use of re-gasified LNG and its impacts on GHG emissions necessary?*

Response: No, the argument regarding LNG use and increased GHG emissions is both speculative and goes beyond the scope of project evaluation. Staff argues that a secondary analysis, or life-cycle analysis, of GHG emissions involves layers of speculation on extremely loosely defined assumptions, and therefore cannot be reasonably or meaningfuly accomplished. Moreover, there is widespread disagreement about whether, and to what extent, LNG has higher GHG impacts than domestic supplies. The actual future supplies of natural gas from LNG are speculative and the amount of LNG that might be used in the SDG&E natural gas pipeline system or at the project site is also speculative. Regardless, if the project were not built other dispatchable power plants that may have to use the same amount or more re-gasified LNG would have to generate the power that would have been generated by the proposed project; with lower efficiencies/higher fuel use and increased use- related impacts from LNG.

Additionally, any project may have changes in fuel supply, whether it is the fuel a new residential development may use for heating and cooking, or the fuel the residents from that new development may use for transportation. Such speculative analyses are not required by CEQA and are not defendable.

Issue 2: *Has staff performed an adequate analysis of potential greenhouse gas emissions? Is there a need for an analysis of greenhouse gas mitigation or alternatives that have fewer greenhouse gas emissions?*

Response: Yes, staff has performed an analysis of the project's potential greenhouse gas emissions, it's net GHG performance, and its place in the electricity sector and has determined that the project will actually reduce overall GHG emissions and is consistent with state policies and goals for GHG emission reduction from the electricity sector. Therefore, there is no need for an analysis for potential greenhouse gas mitigations, nor any need to evaluate alternatives that would have reduced greenhouse gases. This type of rapid response dispatchable project, which is very efficient and has comparatively low GHG emissions, is essential for the integration of renewable resources and the reduction of state-wide and WECC-wide GHG emission reductions.

The argument used by the intervenor does not recognize the beneficial impact of the facility compared with existing conditions. A million new Prius' all driving 10,000 miles a year would emit quite a bit of GHG emissions, but they would also emit considerably less GHG emissions than a million Hummer's driving 10,000 miles, or less than essentially whatever vehicle they are replacing…the fact that they are not plug-in hybrid or full electric vehicles (current technologies that may not be widely available or meet the requirements of all drivers) and do not have the lowest possible GHG footprint, does reduce the fact that their use would create a GHG reduction and beneficial impact.

Issue 3: *Has staff failed to discuss how the project could result in a significant greenhouse gas impacts?*

Response: No, staff has identified that projects need to be consistent with state policies and goals for GHG emission reduction from the electricity sector. Power plant proposals that reduce electricity system emissions and help integrate renewable generation are consistent with such goals.

Issue 4: *Has staff provided substantial support to the claim that the project would result in a net reduction in greenhouse gas emissions?*

Response: Staff believes that it has provided substantial supporting documentation in Appendix AIR-1 that this project is consistent with state policies and goals for GHG emission reduction from the electricity sector and that it will help enable a reduction in overall system GHG emissions. This documentation includes the following two key points:

- The electricity generation from this dispatchable energy project will replace electricity generation from existing generation units that have significantly more GHG emission per MWh of generation, including the existing Encina Units.
- Dispatchable power is necessary to integrate more renewable energy, which cannot reliably provide power during peak demand.

Issue 5: *Has staff adequately analyzed GHG cumulative impacts*

Response: Please see the response to Issues 3 and 4, and the response to City of Carlsbad's Mr. Michael Hogan on the GHG cumulative impact assessment.

Issue 6: *Has staff adequately discussed the project's and the electricity sector's contribution to climate change?*

Yes, staff has provided information regarding the electricity sector's contribution to climate change, the regulatory requirements, and the goals/methods for reducing emissions per AB 32 requirements

Issue 7: *Does the project have an additive effect on Climate Change? Has staff improperly weighed the environmental benefits of the project again the additive effect of the project on climate change?*

Response: No, please see the response to Issue 9.

Issue 8: *Has staff provided an adequate analysis to show that the project is an appropriate addition to the electric system?*

Response: Yes, staff has provided a comprehensive review of the electricity needs and the system roles that the project would fill (**APPENDIX AIR-1**, specifically as summarized in **Greenhouse Gas Table 12**).

Issue 9: Does the GHG analysis need to include a project needs analysis?

Response: No, the GHG analysis includes an analysis of the project and its impacts within the electricity generating system. There are no regulatory requirements to replace many of the older less efficient peakers, but this project will function to do that and to efficiently allow the integration of a significant amount of renewable power.

Rory Cox Testimony

Please see staff's response to Center of Biological Diversity, William B. Rostov, Issue 1.

Power of Vision

Exhibit 702

Q: Why does the FSA not include CEC 2009 IEPR data and ISO 2011-2013 Local Capacity Technical Report when discussing capacity/generation need forecasts?

A: Staff did not refer to the *2009 IEPR* in the FSA in large part because it was not adopted until December 16, 2009, more than one month after the FSA was completed.

Staff did not refer to the ISO 2011 – 2013 Local Capacity Technical Report as it was not believed necessary to support arguments that the CECP is needed for local reliability in the San Diego area, will facilitate the replacement/retirement of aging facilities in the San Diego area that use once-through-cooling, and enable the integration of larger amounts of intermittent renewables.

Q: Does the ISO 2011 – 2013 Local Capacity Technical Report discuss capacity/generation needs in the San Diego area?

A: Yes. The study projects a need for 2,489 MW of capacity in the San Diego to meet California ISO-established local capacity requirements in 2013. It found existing capacity totals 2,982 MW, yielding a surplus of 493 MW. This total assumes the retirement of the South Bay facility and the completion of the Orange Grove, Bull Moose and Lake Hodges projects, as well as the completion of the Sunrise Power Link. If the retirement of the existing Encina facility, 960 MW, were include it would create a local deficit of 467 MW in 2013.

Q: Does the *2009 IEPR* contain numerical analysis or assessments that shed light on the need or value of the CECP?

A: Yes. The 2009 IEPR demand forecast contains an estimate of 1-in-10 year peak loads for the San Diego area in 2013 of 5,212 MW. This is 145 MW lower than the value used in the 2011 – 2013 Local Capacity Technical Report (5,357 MW) to project the local capacity requirements for the area.

Q: Does this mean that the projected need for capacity in the San Diego area, based on the change in the demand forecast, is 145 MW less?

A: This change in peak loads can be expected to lower the local capacity requirement by a roughly similar amount under most circumstances. However, other local transmission constraints may become binding despite the reduction in demand; new power flow studies that utilize the revised demand forecast need to be run to establish the impact of demand reduction on the local capacity requirement.

Q: Would a 145 MW reduction in the local capacity requirement for the San Diego area affect the need for and value of the CECP?

A: No. Such a reduction in the local capacity requirement would not be sufficient to allow the retirement of the existing Encina facility without additional capacity in the San Diego area; the capacity deficit in the area would be 322 MW. Furthermore, the change in the demand does not markedly affect (a) the system-wide need for fast-ramping dispatchable capacity to integrate large quantities of intermittent resources, and (b) system-wide need for dependable capacity and inertia to replace a share of that expected to be lost as a result of complying with the State Water Resource Control Board's policy regarding the use once-through cooling technologies.

<u>Exhibit 703:</u> *What is the justification for changing the transient average from one hour to three hours?*

Response: This project by its nature and design is a rapid response facility that may need to operate with ramp rates higher than other GE Frame 7F gas turbine projects, and which may cause very short and minor NOx emissions excursions. The three hour limit is designed to allow these minor excursions without impacting total emissions and permit limits. The project analyses includes this effect.

Is staff concerned that the project will not be able to meet emission limits due to high ramping rates?

Response: No, the applicant is required to meet its permit limits and while the ISO can request high ramping it cannot request the project to violate its permit limits.

Is staff certain that the project's SCR can meet 2 ppm NOx?

Response: Yes, there are a number of operating GE Frame 7F gas turbine projects with 9 ppm, 15 ppm and 25 ppm guaranteed turbine NOx levels that have overall exhaust limits of 2 ppm. The 9 ppm is a relatively low gas turbine exhaust guarantee and a commercial SCR system can easily reduce outlet concentration to 2 ppm NOx at much higher SCR system inlet concentrations than 9 ppm NOx.

Exhibit 704: *Shouldn't the more stringent U.S.EPA PSD netting calculation apply to this facility?*

Response: The netting calculations were determined in compliance with their federally approved NSR rule. The interpretation of the baseline years covered by the U.S.EPA emission netting rule under PSD regulations are not clear, as the timeline may actually be related to the initial permit applicant date, which in this case would allow earlier years with higher emissions to be used, which would create a netting average that is higher than determined by the District under its NSR rules. If a more stringent calculation applies then the facility may be required by U.S.EPA to obtain a PSD permit or the facility will have to take a lower annual emission cap. However, the PSD permitting process would not impact the District's New Source Review (NSR) rule emission limits, control requirements, offsetting, etc.; it would only impact project schedule.

Exhibit 741: *Should a higher offset ratio be used for this facility?*

Response: See the response to Terramar Exhibit 309 regarding staff's recommended emission offset mitigation that is above and beyond the District's requirements. The District's required offset ratio for NOx is a federally approved value consistent with the District's Air Quality Management Plan to attain the federal ozone standard.

City of Carlsbad

Michael Hogan

GHG Cumulative Analysis – pp. 5-7,8

CEC staff does not agree with the argument presented by Mr. Hogan regarding methodology for assessing cumulative GHG impacts for a power plant project. First, a GHG impact analysis by its very nature is a global cumulative impact analysis, and no single project will have a measurable impact on global or local climate change. Other known and projected local projects would also have negligible impacts on global or local climate change, so analyzing the CECP project along with other local projects is a meaningless analysis for this global issue. Staff evaluated the project with respect to whether the project would or would not be consistent with the State of California policies and goals for GHG emission reduction goals from the electricity sector. It was staff's finding that based on numerous factors that this very energy efficient mid-merit dispatchable power plant project would be consistent with these policies and goals and would help enable statewide GHG emission reduction goals.

Air Quality Cumulative Analysis – p. 8, Attachment 1

Please see the response to Terramar Exhibit 307. Also, Mr. Hogan mischaracterizes staff's CO findings on Page 4.1-49 (page 4.1-47 on the reformatted section). Staff is only noting here that the project conforms with the CO maintenance plan, which is not the only cumulative impact analysis finding made for the project.

CITY OF CARLSBAD

Q: Public Resources Code Section 30413(d) requires the California Coastal Commission to provide a report whenever the Energy Commission conducts a "Notice of Intention" (or "NOI") proceeding. The Coastal Commission declined to provide such a report for the CECP AFC proceeding. In your analysis did you examine the criteria set forth in Section 30413(d)?

A: Yes, Staff considered the criteria set forth in Section 30413(d) in its analysis. FSA pages 4.5-10 through 4.5-15 provide a detailed discussion of California Coastal Act requirements, including the Consistency Determination, Coastal-Dependent Industrial Facilities, Environmentally Sensitive Habitat Areas (with references to other appropriate FSA sections such as **Biological Resources** and **Visual Resources**), and the Coastal Act Public Access Policies. On page 5 (Q10) of Ralph Faust's testimony provided by the City of Carlsbad, Mr. Faust lists the seven criteria for which the Coastal Commission can make findings regarding consistency with the Coastal Act. Staff has long been aware of these criteria as they relate to this project and past power plant siting cases, and as such provided an analysis that considers these criteria, and consistent with past Coastal Act Consistency Determinations conducted for projects at coastal power plants (see footnote on FSA page 4.5-13). Other areas of staff's technical analysis are relevant to Staff's conclusion that the CECP site is suitable in terms of the criteria in Section 30413(d), as detailed in the following FSA sections: **Biological Resources, Visual Resources, Water Resources, Land Use, Hazardous Materials,** and **Alternatives**.

Q: Did Staff's FSA consider the CECP's consistency with the City of Carlsbad South Carlsbad Coastal Redevelopment Plan (SCCRP)?

A: Yes. The discussion of the project's consistency with the SCCRP is included in the FSA in LAND USE Table 2b (Project Compliance with Adopted City of Carlsbad Land Use LORS). Note that staff also included the City of Carlsbad's analysis of the project's consistency with this plan in Table 2b. In that analysis, the City pointed out the reasons why they felt the proposed CECP would not meet the plan's requirement for a finding of "extraordinary public purpose" for an electric power generating facility. Based on the City's analysis (in FSA Table 2b,

pp. 4.5-30 through 4.5-31), the extraordinary public purpose finding appears to be intended for the residents of the City of Carlsbad and not for the general public at large (i.e., San Diego County). It should be noted that the CECP will be providing reliability service to the "load pocket" that includes the City of Carlsbad, as well as reducing once-through cooling marine impacts and serving as backup generation for intermittent renewable power generation. As such, it provides both local and regional public purpose benefits. Moreover, it will make the overall electricity generation system more efficient, thereby reducing by some degree GHG emissions from the electric generation system.

Q: Would Land Use staff like to provide any information regarding the City's testimony on Condition of Certification **LAND-1** regarding the Coastal Rail Trail?

A: Yes. On page 17 of Mr. Scott Donnell's testimony (Q31), the City states that Condition of Certification (CoC) **LAND-1** did not appear in the PSA, and that staff did not sufficiently coordinate the contents of the condition with the City. These statements are incorrect. CoC **LAND-1** can be found on PSA page 4.5-38. In addition, staff coordinated the content of **LAND-1** with City staff. In particular, as referenced in the PSA and FSA, information was provided in an e-mail from Scott Donnell sent to staff on April 3, 2008, which provided information regarding the history of the CRT in the City, and the types of requirements the City would want placed on the CECP to facilitate the development of the CRT within the EPS boundaries. The information provided by the City is included in both the PSA and FSA and can be found on FSA pages 4.5-14 through 4.5-15. In addition, the City of Carlsbad also provided PSA comments specifically regarding CoC **LAND-1** (see City of Carlsbad comments on the PSA of CECP dated January 30, 2009).

CITY OF CARLSBAD

Q: Did the Carlsbad Energy Center Project Final Staff Assessment (FSA) contain a complete analysis in regard to cumulative impacts?

A: Yes, the FSA provided complete cumulative impacts analyses. All past, present and reasonably foreseeable future projects were cumulatively considered. The city argues that ALL past, present and reasonably foreseeable projects be cumulatively considered -- via a strictly-defined and uniform geographic measurement that they themselves fail to suggest – for ALL sections of the FSA. The city asserts that CEQA requires this uniform approach, regardless of the individual technical area or subject matter under review. Under this regime, the expansion of a rail road track must not only be cumulatively considered for **Traffic & Transportation** and **Land Use** (which it was in the FSA), but all remaining technical disciplines as well, regardless of the relationship. Staff disagrees with this generic approach. Staff utilized appropriate geographic standards based on the discipline (**Noise**, **Air Quality**, and **Waste Management** have different thresholds in terms of geographic considerations, not one). As Mr. Hogan correctly notes in his testimony, a proper and adequate cumulative impact analysis must be substantively meaningful, not technically perfect.

Staff provided adequate and consistent analyses, and drew appropriate conclusions in regard to cumulative impacts based on facts, data, evidence, reports, statements, studies (and input from all parties to the proceeding, including the City of Carlsbad). City Attorney Ron Ball directed Staff in a December 29, 2008 letter (Docket #49545) to consider the following cumulative impacts, "Known and foreseeable projects include the proposed Interstate 5 widening, the proposed coastal rail trail and the proposed plant lift station and required supporting facilities." Staff, however, went far above and beyond the city's demands in terms of the list of projects considered in the FSA for purposes of cumulative impacts, ultimately including (but not limited to):

- Caltrans I-5 North Coast Widening Project
- Carlsbad Seawater Desalination Project
- Carlsbad/Vista Sewer Upgrade Project
- LOSSAN Corridor Double-Tracking Project
- Coastal Rail Trail

CITY OF CARLSBAD

Q: In the City of Carlsbad Alternatives testimony, while answering Question 19 the witness states that the "Fleet Services Facility" alternative site (referenced within the PSA and FSA Alternatives Section as the "Carlsbad Safety Center" site) as being 8-acres in size. Based on this testimony, is this a feasible site?

A: As stated in the Alternatives FSA (p. 6-4), suitable alternative sites must fulfill the following minimal criteria:

> *" ….. Site suitability, including size (at least 23 acres are required for the power plant equipment, plus laydown and construction set-aside space);"*

Both the PSA and FSA Alternatives sections analyzed this site as the "Carlsbad Safety Center". Based on information provided by the City of Carlsbad, this site was assumed to be 25 acres in size and analyzed accordingly. Based on this updated testimony identifying the site as being only 8-acres, development of the proposed project at the Fleet Services Facility site is not a feasible alternative due to the lack of sufficient size for development of the CECP. Therefore, this alternative site should be removed from further consideration.

Q: In the City of Carlsbad Alternatives testimony, while answering Questions 45 and 46 the witness states that both the Oaks North and Fleet Services Facility alternative sites were reviewed by the FAA and found to have no significant aviation impacts. Based on this testimony, is this a true statement?

A: The FAA Feasibility report prepared on May 22, 2008 (referred to in City of Carlsbad testimony as Docket #49073) considered physical structure impacts to aviation activities at the Oaks North Site only. As stated in this document, the results of the May 22, 2008 FAA findings were based on a limited review and were not an official determination of findings but only a report based on the general or estimated information supplied for the structures at the Oaks North Site. This FAA review did not consider aviation impacts from upward thermal air plumes associated with the proposed project stack.

During the PSA workshop held in the City of Carlsbad on January 8, 2009, Mr. David Butterfield of the FAA presented a Flight Standards Assessment of the airspace surrounding McClellan-Palomar Airport, which included the Oaks North, Fleet Services Facility, and existing Encina Power Plant (proposed project) sites.

Based on figures and data presented during his presentation, Mr. Butterfield stated that the numbers of low flying aircraft overflights at both the Oaks North and Fleet Services sites made development of the proposed project at either location a much higher aviation impact risk based on upward thermal air plumes from the proposed stack when compared to the proposed project site.

City of Carlsbad

Q: What is your testimony with regard to the city's various assertions regarding the efficacy and analysis for Key Observation Points (KOPs) and proposed visual mitigation contained in the FSA?

A: Staff was largely satisfied that the selection of KOPs in the FSA, as they represented the full range of viewing conditions, including the scenically sensitive lagoon area surrounding the site. In fact, several key viewpoints were those identified by the City itself in its Coastal LUP. This belief was reinforced by the addition of a number of additional KOPs at the specific request of the City.

Most of the FSA visual analysis (KOPs 1 through 6) is of potential impacts to the lagoon viewshed. Yet staff, in evaluating the simulations of those KOPs, could not identify those impacts as significant under the methodology routinely used on all other Energy Commission power plant projects. An examination of the simulations of those 6 KOPs clearly indicates that the project, though visible from several areas around the lagoon, is visually very subordinate to the existing EPS, and is partially screened by existing trees. Staff considers the 6 KOPs to be a reasonable selection of views representing a full range of views found in the overall lagoon area, particularly because they were selected from City-identified key viewpoints identified in the City Coastal LUP. Yet in none of those viewpoints could staff conclude that a significant impact could be identified, based on the normal thresholds of visual change applied to all other projects.

Staff does not understand why landscaping, if effective, is not a superior method of visual mitigation than architectural treatment. The Encina Power Station (EPS), like many older once-through coastal plants, epitomizes the use of architectural treatment for visual mitigation, yet Mr Neu criticizes the EPS as visually unacceptable in his own statement above (A5.3). The existing landscape screening at the proposed CECP site has, in staff's opinion, become an important visual asset of the existing Agua Hedionda viewshed, contributing vividness and improving the quality of the visual environment. If removed, this tree canopy should be replaced. Staff also concluded that such replacement could serve as effective visual screening of the proposed project; Mr Neu offers no explanation of why staff's proposed condition would be ineffective.

While staff agrees that the project would be visible from points on Carlsbad Boulevard, as depicted in simulations of KOP 1 and 8, visibility is not equivalent to significant visual impact. This is particularly true with the addition of staff-

recommended COC VIS-2, which requires additional landscape screening. As KOP 1 illustrates, the project remains visually subordinate to existing tanks and EPS structure, even without required additional screening.

Mr Neu is correct in stating that berms and landscaping would not completely eliminate project visibility. However, staff concluded that it would substantially reduce visibility, to a level of visual change that is less than significant. Mr. Neu states that recommended screening would form a barrier and block views of the resources in the vicinity of the project. However, the same resources are blocked to a roughly equal degree now due to the presence of the dense mature landscape screening surrounding the CECP site. Staff has not recommended enclosure of the power plant in an architectural structure similar to EPS. Staff considers landscape screening a preferable solution, since it contributes to vividness and visual quality of the setting while providing screening.

Q: Do you believe you utilized the correct rationale for the ratings used in the analysis for each KOP? If so, please comment as appropriate.

A: Yes, I used the appropriate rationale in all the KOP's, including:

KOP 1. Mr Neu assumes that existing tree screening would be removed with removal of the existing tree berm. But this is not staff's understanding of the proposal. Staff's understanding is that the nearest trees to the CECP structures in this view would remain, and be augmented as required under COC VIS-2 so that in the long term, screening would be greater than that depicted in the simulation of KOP-1. Staff disagrees with the statement that removal of the EPS building would render the CECP more visible. As indicated in KOPs 1 and 8, the removal of the EPS building is not relevant to the potential visibility of the CECP structures from Carlsbad Boulevard. Rather, the presence of existing and proposed tree screening surrounding both sites appeared to be the determining factor of the project's visibility.

KOP 3. Mr. Neu asserts that insufficient room exists for tree screening of the east boundary of the CECP site. Staff's assumption that adequate room exists was based on in-the-field site surveying by CEC and Caltrans staff. Based on that survey, staff concluded that a berm and screening of similar height and magnitude to the existing would be possible, and that such screening would be sufficient to substantially screen the facility. Staff acknowledges that complete screening of the proposed stacks by this measure would not be possible from some viewpoints. However, in the context of staff's assessment method, invisibility of the project is not the determining threshold for impacts. Rather, staff's method requires that the facility be substantially screened, that is, to the point where the visible portions would be visually subordinate within the overall

view. Staff's cumulative conclusions are based on the belief that COC VIS-5 make this objective feasible.

KOPs 3 and 4. Mr Neu expresses concern over the fact that 'the size of replacement trees will take many years to reach a size that would provide partial screening of the proposed facility.' Staff agrees with this comment. It is for this reason that staff considers it important that COC VIS-5 be implemented at the earliest feasible date. If large-container, fast-growing trees are planted prior to plant operation and the I-5 Widening does not occur for up to 10 years, staff believes this is sufficient time for the tree screening to attain considerable stature, and provide reasonably effective screening by the time the existing berm and trees are removed. The new screening would become even more effective over time.

KOP 7. Mr. Neu's statement regarding northbound views of the CECP site under the cumulative scenario are incorrect. In fact, northbound views to the CECP site under the cumulative I-5 Widening scenario would be completely blocked by the elevated HOV-lane structure proposed for the center lanes of the widened I-5.

KOP 8. Mr. Neu's statement contradicts the conditions depicted in the simulation of KOP 8, and staff's observations while on the EPS site. These statements could be true if there were no landscape screening, but staff has no reason to assume that this would be the case. Further, this viewpoint is one that would benefit from enhanced tree screening required under COC VIS-2.

KOP 10. As noted above, Mr. Neu's statement appears to be inaccurate. The view from KOP 10 is analyzed in detail in the FSA. As stated in the FSA, there is no reason the CECP facility could not be substantially screened by a combination of existing and future landscape screening. Why Mr. Neu assumes that existing screening would be removed rather than enhanced under the future scenario is unclear to staff.

KOP 11. As noted previously, the assertion that no determination on impacts to CRT users is incorrect. The FSA (page 4.12-25) observes that visual change for trail users would 'progress from moderate to strong levels as one approached the power plant." However, staff concluded that recommended landscape screening would be increasingly effective in proximity to the plant, due to the increased angle of view. These impacts would occur in a context, in the rail ROW between the EPS and CECP sites, with very low existing visual quality.

Q: What is your comment on the city's assertions in regard to cumulative impacts?

A: Staff is not aware of any information indicating that the cumulative projects cited reduce the potential for screening the CECP. Staff examined potential impacts to

Coastal Rail Trail users, but concluded that visual quality in the project vicinity was already low, and would actually be improved by recommended mitigation measures, i.e., enhanced landscaping on this boundary of the project site.

Q: What is your comment on the city's various attempts to compare a 1989 SDG&E power plant proposal to the current CECP proposal?

A: The City cites a 1990 Coastal Commission's analysis of an SDG&E proposal contained in a Notice of Intent (NOI) proceeding, 89-NOI-1. However, there are significant, fundamental differences between 89-NOI-1 and 07-AFC-6 in regard to visual resources, most notably their specific physical location on the EPS site. 89-NOI-1 was to be located where EPS storage tanks 1-3 currently reside, West of the rail road track, at grade, and immediately adjacent Agua Hedionda Lagoon. As the city knows, the CECP is proposed to be located where EPS storage tanks 5-7 currently reside, East of the rail road tracks, separated from Agua Hedionda Lagoon by mature trees and landscape screening, and below grade. 89-NOI-1 proposed dual, 150-ft exhaust stacks, at grade. 07-AFC-6 proposed dual, 139-ft exhaust stacks, 30-ft below grade. All these factors were important considerations in staff's analysis. The tree screening in particular, which has since acquired considerable height, is an important factor in the Staff Assessment conclusions. So, while the Coastal Commission's 1990 findings may have been valid with respect to the previous proposal, they cannot be correlated to the CECP proposal.

Q: What comments do you have in regard to the city's assertions on methodology?

A: Mr Neu states that the FSA significantly understates the enormity and extensive presence of the existing power plant. However, staff notes that under CEQA, staff is compelled to analyze the impacts of the proposed project in relation to the existing setting baseline, of which the EPS plant is a part. Under staff's visual methodology, typical of other standard professional visual assessment methods, if the existing setting had been characterized as highly degraded by the existing EPS plant, this would only have lowered, not raised, the visual sensitivity or susceptibility of the setting to significant impact. In other words, the threshold for significant visual impact would simply have been higher because the existing landscape would have been regarded as of already impaired quality.

Q: What is your comment in regard to the I-5 Freeway?

A: Mr Neu describes impacts to motorists on I-5 that would clearly not occur under the project-only scenario analyzed in the main FSA analysis. Under that scenario, motorists would NOT be exposed to the entire length of the CECP and substation. Rather, these features would be substantially screened, by the existing tall earth berm, the extensive existing mature tree screening, and additional supplemental tree screening called for in Staff's COC VIS-2.

Mr. Neu also depicts scenarios that could only occur with complete removal of the existing berm and screening along I-5, leaving the proposed project completely exposed. This condition could only occur under one of the cumulative I-5 Widening scenarios. Staff has recommended COC VIS-5 to require creation of a replacement berm and landscaping surrounding the CECP site in the period between CECP construction and initiation of the proposed I-5 Widening, which is not anticipated for an undetermined number of years. In that time, the replacement tree screening, if implemented as soon as feasible, would have time to grow in height and density. With this measure, the conditions and experiences describes Mr. Neu would never take place.

Q: What is your response to various assertions made by city staff and consultants in regard to cumulative impacts?

A: Under the cumulative scenario, the landscaping in the northern portions of the site which are responsible for the screening of the proposed project would, as staff understands it, not be affected. The information staff has received from Caltrans does not indicate that those portions of the existing screening would be affected.

Like the majority of the city statements, general comments and criticisms are not substantiated by specific facts or suggestions. For instance, staff's conclusion that an adequate landscape buffer could be created under the cumulative scenario was based upon specific, on-site surveys by CEC and Caltrans staff (including a June, 2009 site visit). These surveys dictated that a landscape berm -- and screen buffer of similar size to the existing -- could be accommodated in the available space even with a widened I-5 Freeway (see Exhibits VIS-1 and VIS-2).

Q: What is your response to various comments and assertions made by the city in regard to the Coastal Rail Trail?

A: Staff analyzed potential impacts of the Coastal Rail trail, to the extent that staff could anticipate the actual alignment of the trail, which was not determined at the time of the analysis, and may still be undetermined. Staff assumed that the trail would follow the rail right-of-way, as indicated in available plans at the time. As stated in the FSA analysis, views of the plant would be partially screened by the surrounding earth berm and landscape screening. The view would be similar to that depicted in KOP 9, except that staff has recommended additional landscape screening on that boundary under COC VIS-2.

Q: Were the future non-industrial uses of the EPS site analyzed in the FSA, or not as the city asserts.

A: The impacts on potential future users of the Encina Plant site *were* analyzed in the FSA cumulative impacts discussion, under the title 'Future Non-Industrial Uses of Decommissioned EPS Site.' At the request of the City, staff requested and received a simulation of the CECP site as viewed from the EPS site, for the precise purpose of analyzing potential impacts to future non-industrial viewers within the EPS site.. This view appears as KOP 10 in the FSA. It appeared quite clear to Staff from both this simulation and from a site visit to the EPS site that the existing landscape screening on the EPS site was capable of substantially screening the CECP project from that viewpoint, and a conclusion was presented to that effect on page 4.12-25 of the FSA. Staff presumes that the existing screening could be made even more effective if actual use of the site were imminent and the existing landscape buffer were enhanced.

Q: Do you have any general, concluding comments in regard to Mr. Neu's assertions and statements, especially in regard to your Condition of Certification, Visual Resources – 5 (COC VIS-5)?.

A: Throughout the course of Mr. Neu's statement is a fundamental refusal to even consider the reasoned and collaborative approach to mitigation contained in COC VIS-5. This suggested course of mitigation includes opportunities for input from all parties, including the city, Caltrans and the applicant. The COC is not 100% prescriptive by design – staff felt strongly that it should contain parameters in terms of its placement and purpose (including timing of its construction) but not its final design.

Energy Commission Staff Rebuttal Testimony by Dr. Alvin Greenberg: PUBLIC HEALTH and WORKER SAFETY / FIRE PROTECTION

Q: What is the purpose of your testimony?

A: This testimony responds to issues raised by the intervenors, and particularly the City of Carlsbad (City), in its opening testimony regarding the Carlsbad Energy Center Project (CECP).

Q: What general observations do you have about the City's testimony?

A: The City's testimony can be summed up largely as follows: 1) It did not have enough information to properly review and assess the project; 2) the CECP site is restricted such that additional fire land width is needed beyond the code-required 20-foot width, and that the "rim road" could be maintained; 3) the on-site water storage tank is inadequate for firefighting; and 4) the EMS and Hazmat response is inadequate.

Q: Do you agree with the City's contentions?

A: I do not, as I will explain further.

Q: How do you respond to the City's claim that it was denied information it requested that was essential to analyzing the project.

A: The City Fire Department's (CFD) requests for information went above and beyond the usual and customary requests made by over 50 fire department jurisdictions state-wide. And although I attempted to assist the City and the Applicant in their dialog about the project, I did find that the City's request for a 3-dimensional "diorama" of the site complete with miniature to-scale vehicles was unusual and unnecessary and thus I could not support that request. As with 75 other power plant applications that I have reviewed in 16 years working with the CEC, I determined that I had sufficient information to conduct an analysis pursuant to CEQA. It was also my experience that the fire departments in these other 75 locations found that the level of information similar to that supplied here was sufficient to perform such an analysis.

Q: The City CFD states that emergency access is too limited, and that it is necessary to have 50 foot wide access road around the base of the power plant for emergency access. It also claims that access from the "rim" above the project site is necessary for fire suppression. Do you agree with these contentions from the City?

A: I do not. As Fire Marshall Weigand states in his testimony, the applicable LORs is California Fire Code Section Code §503.2.2. This section states "[t]he fire code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations." Chief Weigand gives as an example the CFD requirement for an increase in emergency access lane widths at the Carlsbad Seawater Desalination Plant. However, since both projects are within the CFD jurisdiction, the reasonableness of such a requirement requires comparison to the practices of other fire jurisdictions in California that have found it necessary to cite Section 503.2.2 and demand a wider access width at a power plant with similar site constraints.

First, let me clarify that many **urban power plants in our state** have been sited and are operating safely at several sites that are very limited in size. Five come immediately to mind; facilities that I have both visited and inspected: the Magnolia Power Plant in Burbank, the El Segundo Power Plant, the Von Raesfeld (formerly Pico) Power Plant in Santa Clara, the Malburg Power Plant in the City of Vernon, and the Palomar Power Plant in Escondido. Please see Exhibits WS/FP-3 through WS/FP-6. All five of these power plants were built on very small "footprints" and are severely restricted by other buildings, geography, roads, rail lines, highways, and even a beach/ocean front.

The power plant site most similar to the proposed CECP is the existing Palomar Power Plant in nearby Escondido (please see Exhibit WS/FP-2). I prepared the Worker Safety and Fire Protection, Hazardous Materials, and Public Health analyses for the Palomar project, conducted one HazMat, Worker Safety, Fire Protection, and Security audit at the site, and also conducted one additional site visit to investigate another matter. I have visited and walked around the site on several occasions and thus am very familiar with its dimensions and restricted access. Palomar is located in a "scooped-out" bowl, with steep (nearly vertical) rock/earth walls on the east and west sides and a lesser-sloped but still high wall on the north end. Only the south end is open at ground level and access at this end is severely restricted by the large cooling towers present. During the siting proceedings, I spoke with the City of Escondido Fire Department. Not once did they express concern about the limited site access and narrow width of the proposed and now existing fire access lane. A review of the plot-plan of the

Palomar Power Plant – along with those of the other four power plants I mentioned above - shows that all have fire lanes and restricted access points similar to or even more restrictive that that proposed for the CECP. In fact, the heights of the walls at the Palomar site are more than double the height of the walls at the CECP site. Furthermore, there is no "rim road" above the Palomar site. Moreover, regarding the CECP site, all but a small portion (<10%) of the "rim road" around the CECP site will remain intact and available for emergency response access.

I also conducted a statewide survey in 2003 (Greenberg, Alvin and S. Greenberg, Off-site Emergency Response to Power Plants in California, CEC 2003) to determine the frequency of Emergency Medical Services (EMS) response and the off-site fire-fighter response for natural gas-fired power plants in California. The purpose of the analysis was to determine what impact, if any power plants may have on local emergency services. As a result of my survey, I concluded that incidents at power plants that require fire or EMS response are infrequent and represent an insignificant impact on the local fire departments, except for rare instances where a rural fire department has mostly volunteer fire-fighting staff. As stated in the FSA (page 4.14-11), major structural fires in areas without automatic fire detection and suppression systems are unlikely to develop at power plants. Fires and explosions of natural gas or other flammable gasses or liquids are rare. Yes, a few fires and HazMat spills have occurred but the record is clear that these types of accidents have not resulted in any deaths or injuries and have been limited in size and impact.

To conclude, an objective review of site conditions at currently operating power plants shows that restricted sites are not rare, that other fire departments have not seen fit to request wider fire lanes beyond code for similar conditions, and that these power plants have had no fires, major HazMat spills, or access problems. The safety record at CEC-certified power plants is excellent.

Q: The City's testimony (Crawford) also states that the FSA incorrectly states that the City's emergency response time is six minutes, and that in fact it would be longer. What data is the FSA's six minute response time based on?

A: The FSA's reported response time is based on information provided to staff by the City's Fire Marshal. (See FSA WS/FP reference CFD 2008 and attached ROC 5/28/08 conversation with Fire Marshall James Weigand.)

Q: The City's testimony criticizes the adequacy of "CECP's proposed fire protection water supply" because it purportedly relies on an on-site storage tank. What is your response to this assertion?

A: The AFC and FSA clearly state that fire suppression water will be provided "from an existing city water line (AFC §2.2.7.1; FSA page 4.14-12) and from "the existing hydrant system in the tank farm area (AFC §2.2.12; FSA page 4.14-12). The hydrant system will be pressurized by on-site pumps. The presence of a minimum 250,000 gal water tank dedicated to fire suppression is required by NFPA 850 and serves to provide on-site fire fighting capability in the event a seismic or other event reduces or interrupts the flow from the city water lines.

Q: The City Fire Marshall's testimony states that the site location in a depressed location "constitutes the intent of a confined space" and thus poses an unreasonable risk to emergency responders. Do you agree with this assessment?

A: Definitely not. The term "confined space" is a term of art that is misused here. As the person who wrote and enforces the revisions to the Cal-OSHA Confined Space standard (8CCR 5156, 5157, and 5158), I do not agree with the Fire Marshall's characterization that this site constitutes "the intent of a confined space". Cal-OSHA regulations define a "confined space" and this site or any other "site" does not even remotely meet that definition. I also disagree that this site poses a threat or an "unreasonable risk to emergency responders and facility employees". There are two access points to the general area, and the two access points to the depressed, below-grade area of the project are located at opposite ends (NW and SE) of one another.

Major conflagrations at CEC-certified power plants have simply not occurred. The likelihood of that occurring is far below a level of significance.

Q: Intervenor Terramar poses a question in its testimony concerning whether staff analyzed the likelihood and consequences of a failure of the double walled ammonia tank at the CECP? What is your response?

A: I am fully aware of the public's concern about the accidental release of a hazardous material, and have kept up with the most recent technical information about storage tanks and the impacts of earthquakes. The Nisqually quake demonstrated that newer tanks did not rupture, as did the Kobe quake. Furthermore, the accidental release modeling I conducted assumed the loss of

the entire tank contents (when the tank would be completely full) into the secondary containment area and I found that no significant risk would be posed to any off-site person. I did not model the concurrent loss of both the tank and the secondary containment. To assume such an event would move my assessment into the realm of theoretically possible, but highly unlikely. My analysis focuses on the potential for a significant risk, not any possible risk. All the information I have from seismic events demonstrates that loss of primary containment or secondary containment is not a significant risk. The loss of both would have an even lower chance.

Q: The project uses ammonia for the Selective Catalytic Reduction (air pollution control) stored in a concentration of 20 percent. Terramar asks if 20 percent is the "appropriate" concentration and whether ammonia can interact with natural gas leaks to create a greater risk? What is your response?

A: There is no "appropriate" percentage of the ammonia solution stored. It is not used in bomb making (that would be ammonium nitrate fertilizer). Natural gas (which is >94 percent methane) does not react with ammonia gas in the atmosphere. It would take a sufficiently high concentration of both, concentration, a very high temperature (>1000 C), and a pure noble metal catalyst.

Q: Terramar's comments are concerned about the risk of having a power plant located between what it calls "two sensitive receptors," meaning the freeway and the train line. What is your response?

A: A freeway and a rail line are not included in the definition of "sensitive receptors", although there may be sensitive individuals on a freeway or rail line. There are power plants located very near (within 350 feet of residences), commercial/industrial buildings that are occupied, rail lines (at the fenceline), and crowded beaches. Five come immediately to mind that I have visited and inspected: the Magnolia Power Plant in Burbank, the El Segundo Power Plant, the Von Raesfeld (formerly Pico) Power Plant in Santa Clara, the Malburg Power Plant in the City of Vernon, and the Palomar Power Plant in Escondido. Also, many hospitals have their own gas-fired power plants on site. Two that immediately come to mind include UCSF hospitals, clinics, and campus in San Francisco and Stanford University Hospital and campus in Palo Alto. Some hospitals even have medical waste incinerators on their sites.

Q: Intervenors also ask why there is no cumulative risk assessment for diesel particulate matter and toxics? Is this correct?

A: No. The existing emissions from trains and vehicles in roads and highways are included in the background risk due to all sources. Cal-EPA health risk assessment guidance requires that the incremental risk of toxic air contaminants emitted from the proposed project be assessed and that a cumulative assessment be conducted for those other new and proposed projects where the plumes could merge and result in an additive risk.

Importantly, the cumulative risk was assessed for the combination of the proposed CECP and the existing EPS at public request.

Q: Intervenors question whether the health risk would be significant if a different point had been chosen in terms of a residential receptor? Would that make a difference to the health risk assessment?

A: I used the impacts at the PMI (Point of Maximum Impact) to gauge the risk and hazard due to TACs emitted from the proposed power plant. The impacts at a residential receptor would be less than at the PMI, no matter where that residence was located. Therefore, any discrepancy about the nearest residence would not result in a significant difference in the health risk assessment or its results.

Q: Intervenors request that the cumulative health risk assessment include I-5 pollution. What is your response?

A: I have found after 31 years experience that plumes from point sources do not merge to create new cumulative significant risks where their individual risks are insignificant unless the sources are very close to each other with a block or two. This has been demonstrated by the BAAQMD in the past. Furthermore, the existing emissions from trains and vehicles in roads and highways are included in the background risk due to all sources. Cal-EPA health risk assessment guidance requires that the incremental risk of toxic air contaminants emitted from the proposed project be assessed and that a cumulative assessment be conducted for those other new and proposed projects where the plumes could merge and result in an additive risk. The cumulative risk was assessed for the proposed CECP and the existing EPS at the request of the public. Also, given there is no specific, prepared environmental information regarding source emission impacts from the proposed widening of I-5, it will be the responsibility of

Caltrans' I-5 EIR to assess those impacts. That analysis will have to forecast what air pollution impacts will come from the widening of the freeway.

Exhibit WS/FP-1:

Table of Representative "Restricted Access" Power Plants Licensed by the CEC

Power Plant	Location	Size (in acres)	MW
El Segundo	El Segundo	34	630
Magnolia	Burbank	23	328
Malburg	City of Vernon	5.9	134
Palomar	Escondido	20	500
Von Raesfeld	Santa Clara	2.86 (+ 0.26)	147
Proposed CECP	Carlsbad	23	558

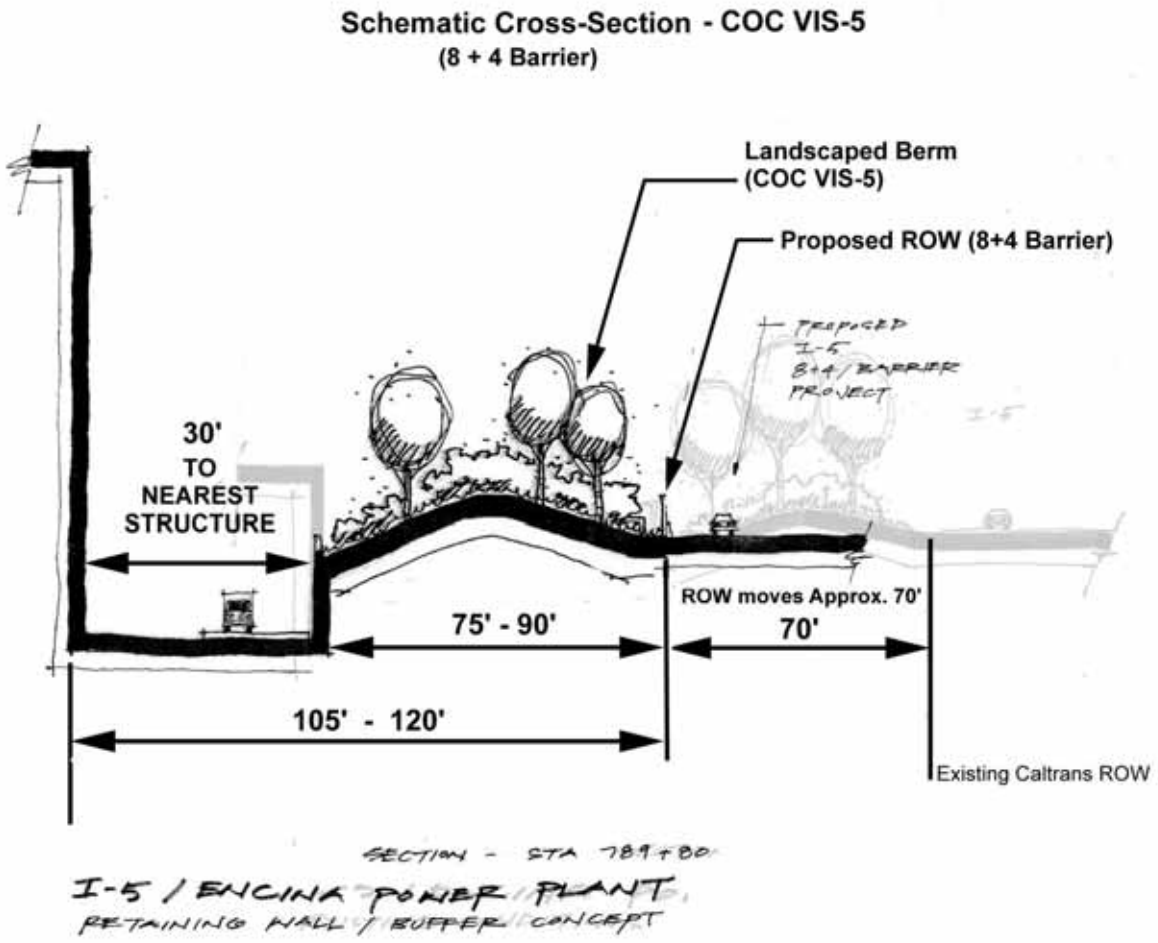


EXHIBIT VIS-1

Schematic Cross-Section - COC, VIS-5

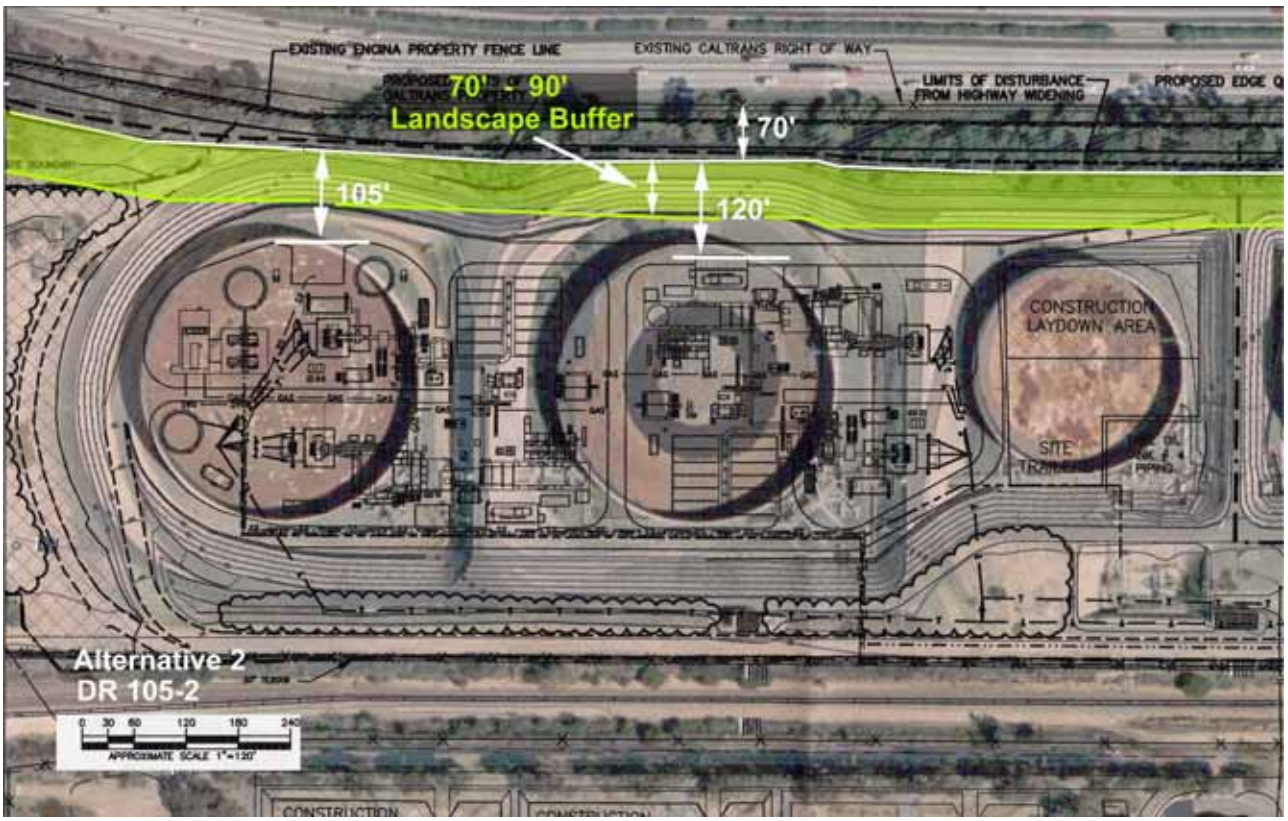
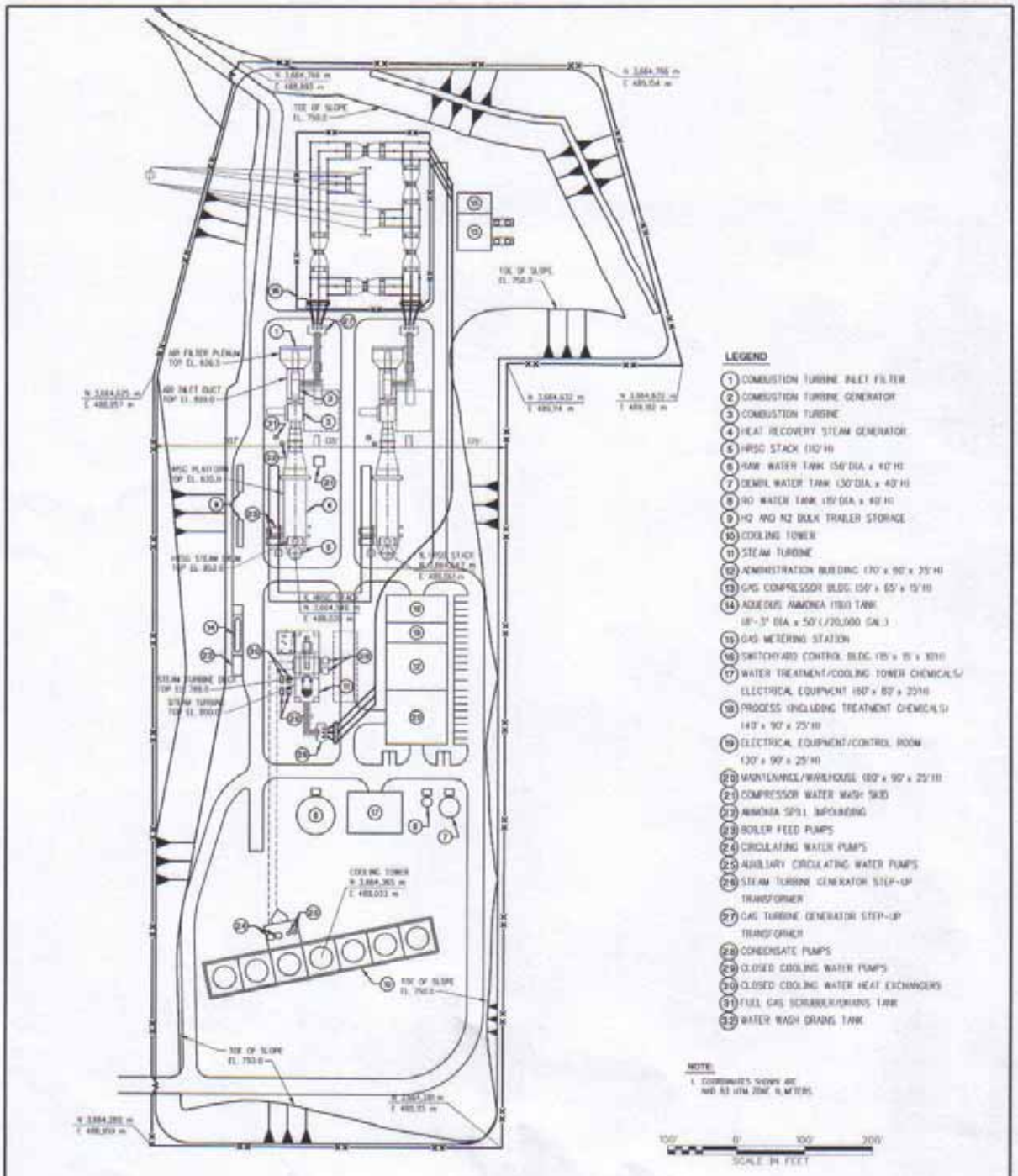


EXHIBIT VIS-2

Schematics Elevations - COC, VIS-5

2.



Burns & McDonnell
SINCE 1898

date JUNE 26, 2001
designed S. ROTTINGHAUS

FIGURE 2.4-1
Site Arrangement

Palomar Energy Project

project 27085
contract
SK - YGA1

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EXHIBIT WS/FP-2

Palomar Energy Project Site Arrangement

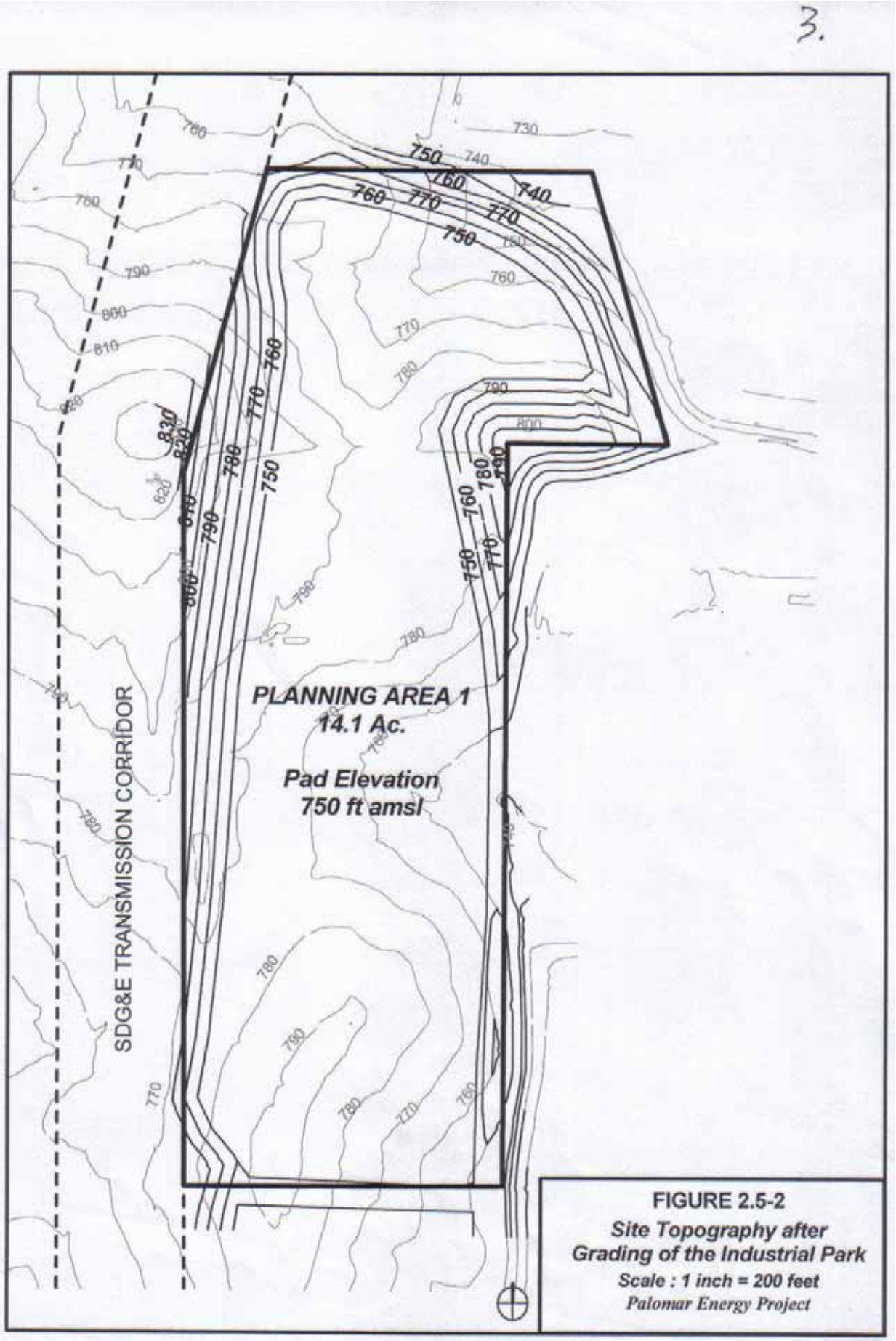


EXHIBIT WS/FP-3

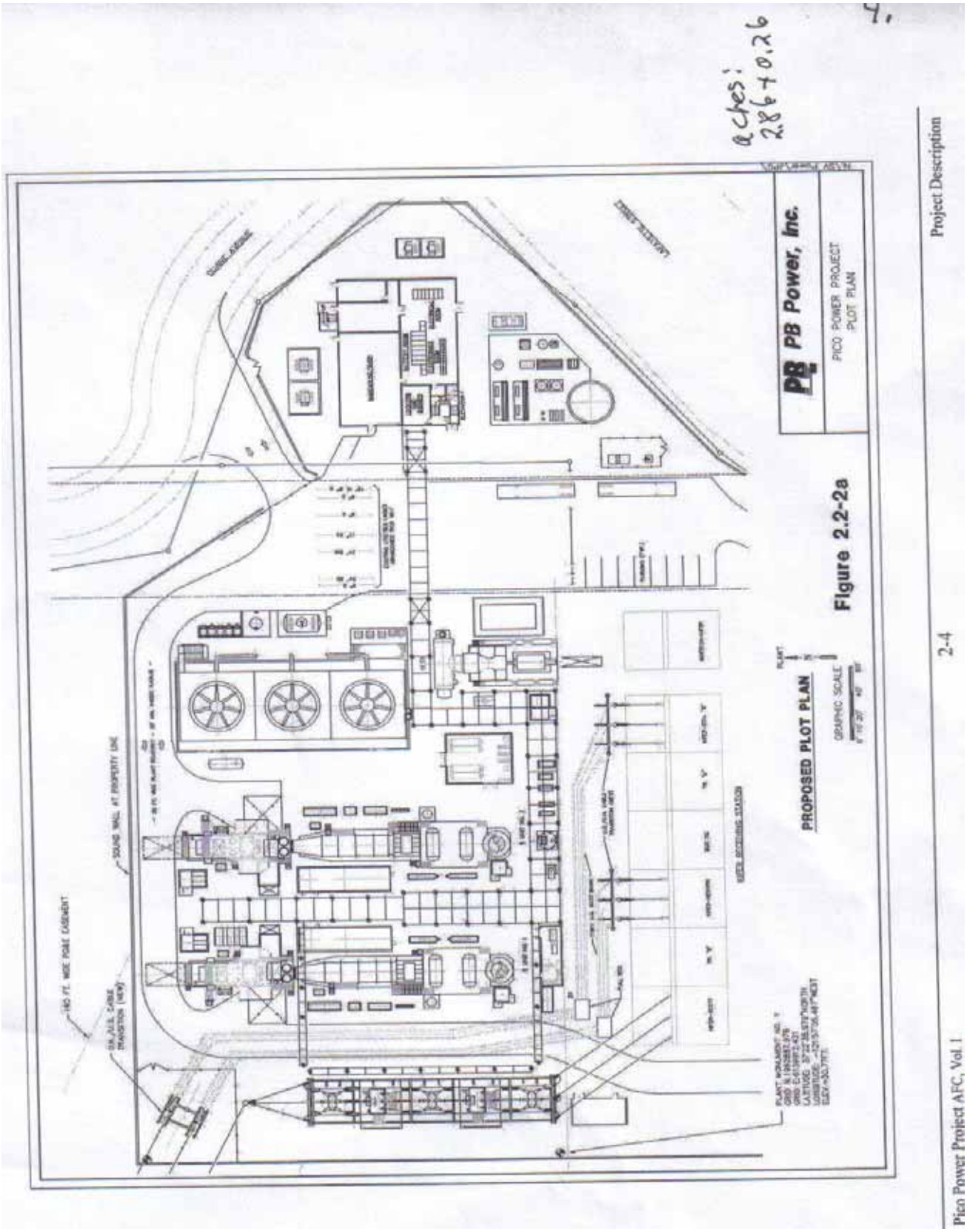


EXHIBIT WS/FP-4

Pico Power Project Plot Plan

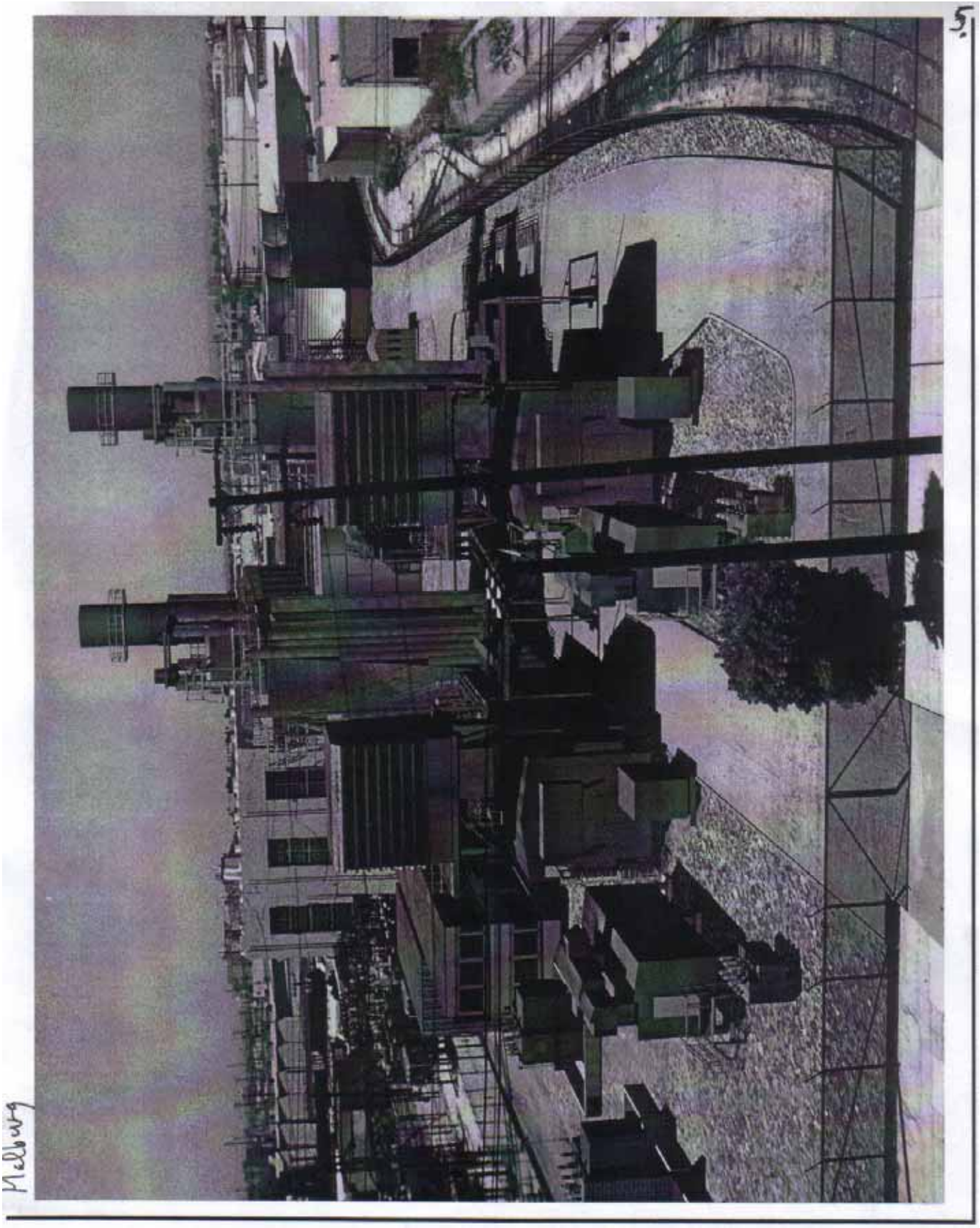
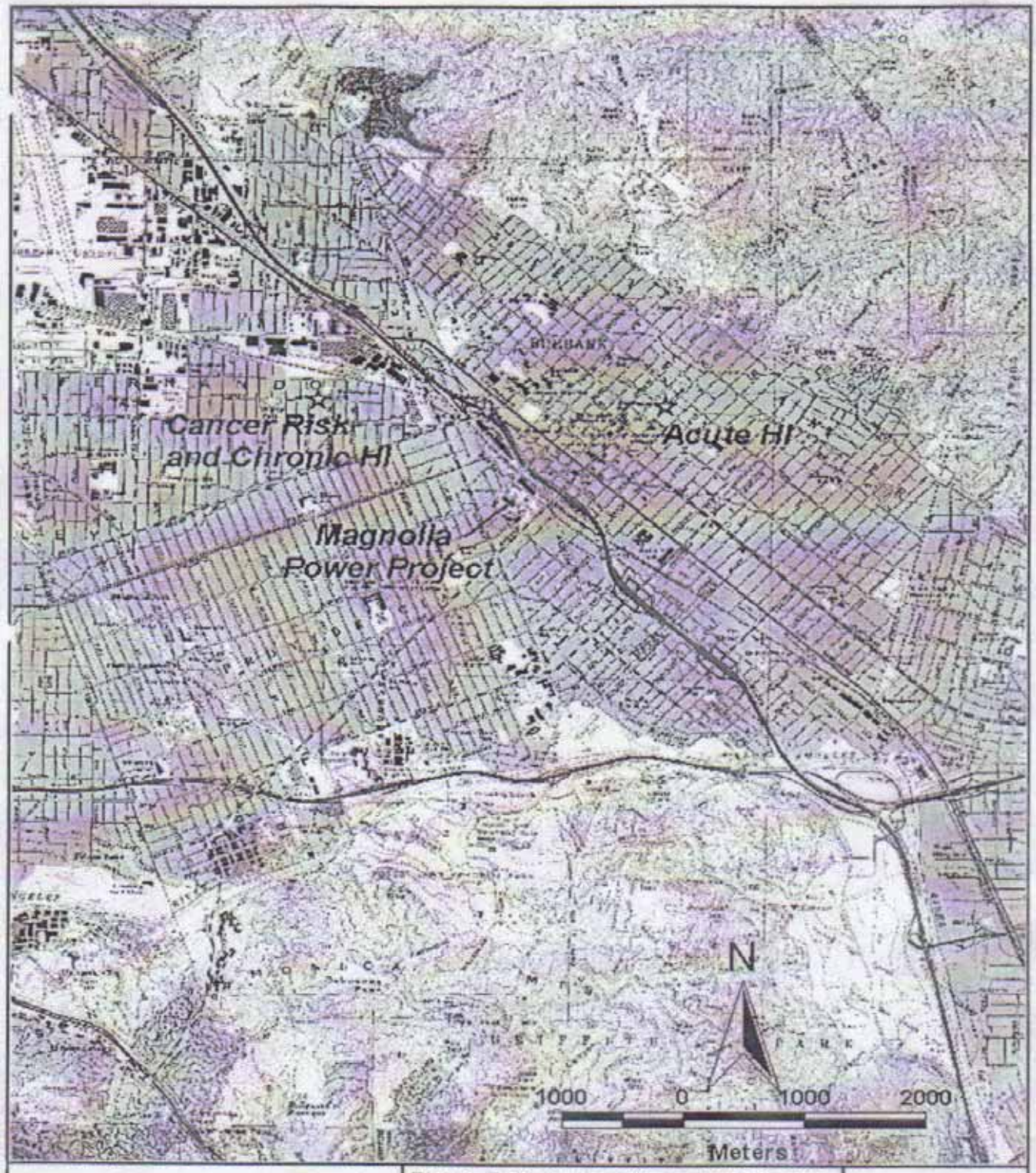


EXHIBIT WS/FP-5

Malburg Power Plant

6.



Magnolia Power Project	Figure 5.16-1: Locations of Maximum Health Effects (Cooling Tower assumed to use 50% ground water and 50% reclaimed water)	June 2002

EXHIBIT WS/FP-6

Magnolia Power Project

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
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APPLICATION FOR CERTIFICATION FOR THE *CARLSBAD ENERGY CENTER PROJECT*

Docket No. 07-AFC-6
PROOF OF SERVICE
(Revised 12/30/2009)

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DECLARATION OF SERVICE

I, J. Mike Monasmith, declare that on January 14, 2010, I served and filed copies of the attached, PHC Statement and Staff Rebuttal Testimony, dated January 14, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/carlsbad/index.html].** The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(C*heck all that Apply*)

For service to all other parties:

_X_ sent electronically to all email addresses on the Proof of Service list;

___ by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

_X_ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

_____depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

_____

*indicates change