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CALIF ENERGY COMMISSION

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State of California
Energy Resources Conservation
And Development Commission

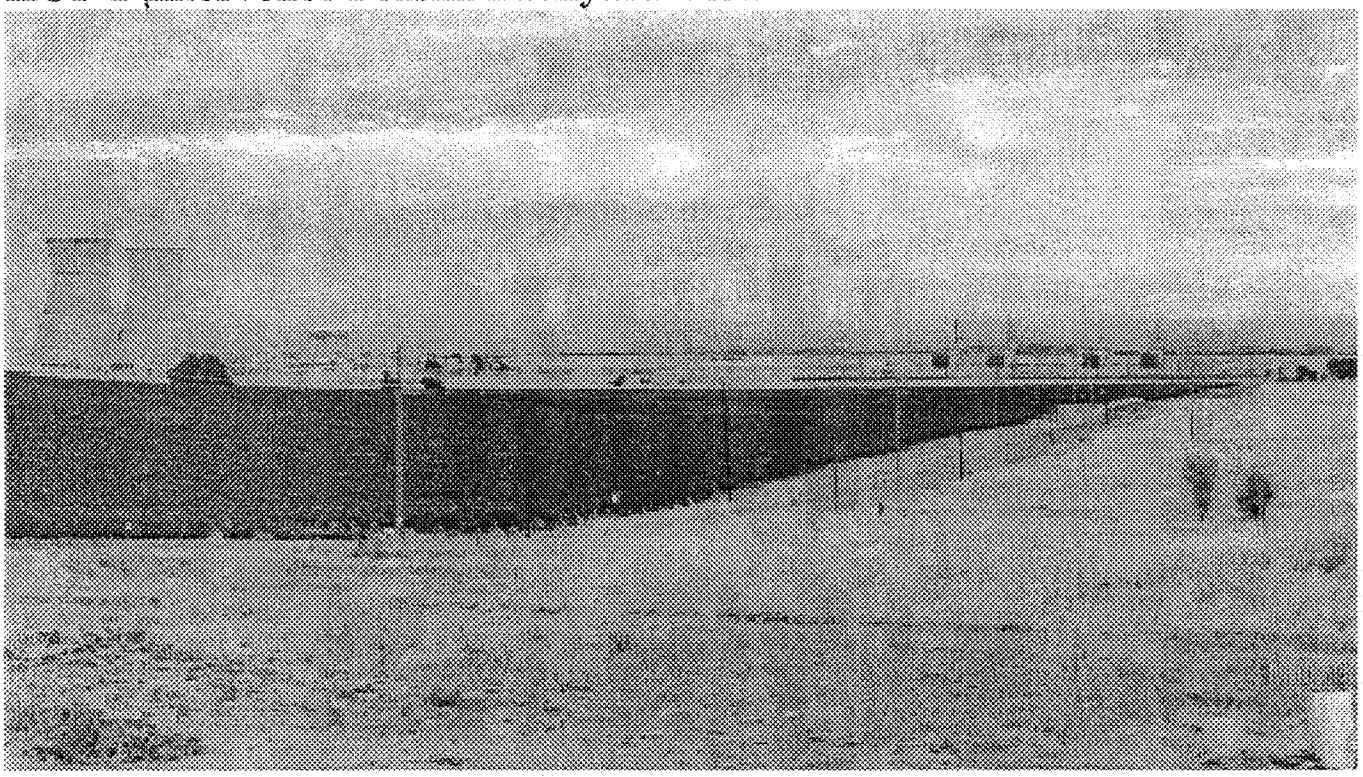
In the matter of	)	Docket No. 01-AFC-19
	)	
Application for Certification	)	
MUD Consumes Power	)	Reply Brief
Project	)	

6-27-03

Date

Kathryn Peasha

KOP-2 Intervenor Peasha Backyard View



VISUAL RESOURCES

" The proposed project structures would cause adverse but less than significant project-specific visual impacts. However, the visual effects of the proposed structures would be cumulatively considerable in combination with the ongoing adverse visual effects of the existing Rancho Seco Power Plant structures". (FSA 4.12-1)

Staff has testified that the projects structures would be cumulatively considerable in connection with the adverse visual effects of the existing Rancho Seco Power Plant. All the adverse impacts in the project area are the responsibility of the applicant. The applicant has testified that there are no plans or funding to tear down the existing Rancho Seco Power Plant.

Clearly in analyzing past energy projects in the area combined with the CPP the cumulative impacts are significant and adverse, and minor screening in selective places will not diminish the overall cumulative impacts of the two energy facilities. The staffs testimony above admits to incremental visual effects. CEQA guidelines state "cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. " (CEQA Guidelines Section 15355).

The visual impacts from this project and the Rancho Seco Plant are cumulatively significant and adverse and a violation of CEQA.

The condition of certification Vis-3 leaves the landscaping mitigation plan development till after certification and the plan should be reviewed and approved by members of the public whose views will be impacted. The CPM will be in charge of review and approval but the decision should allow for review and approval by the affected nearby residents. The mitigation strategy should not be left till after certification.

Landscape Screening

VIS-3 The project owner shall provide landscaping that is effective in screening the proposed project from views from nearby residences.
The project owner shall submit a landscaping plan to the CPM for review and approval and to Sacramento County for review and comment. The plan shall include:
a) 11"x17" color simulations of the proposed landscaping at 5 years and at 20 years as viewed from KOPs 2 and 3.
b) A landscaping plan(s) and map(s) drawn to scale showing the proposed location and species of plants.

Visual Plumes

KOP-2 Clear morning view from Intevenor Peshea's yard

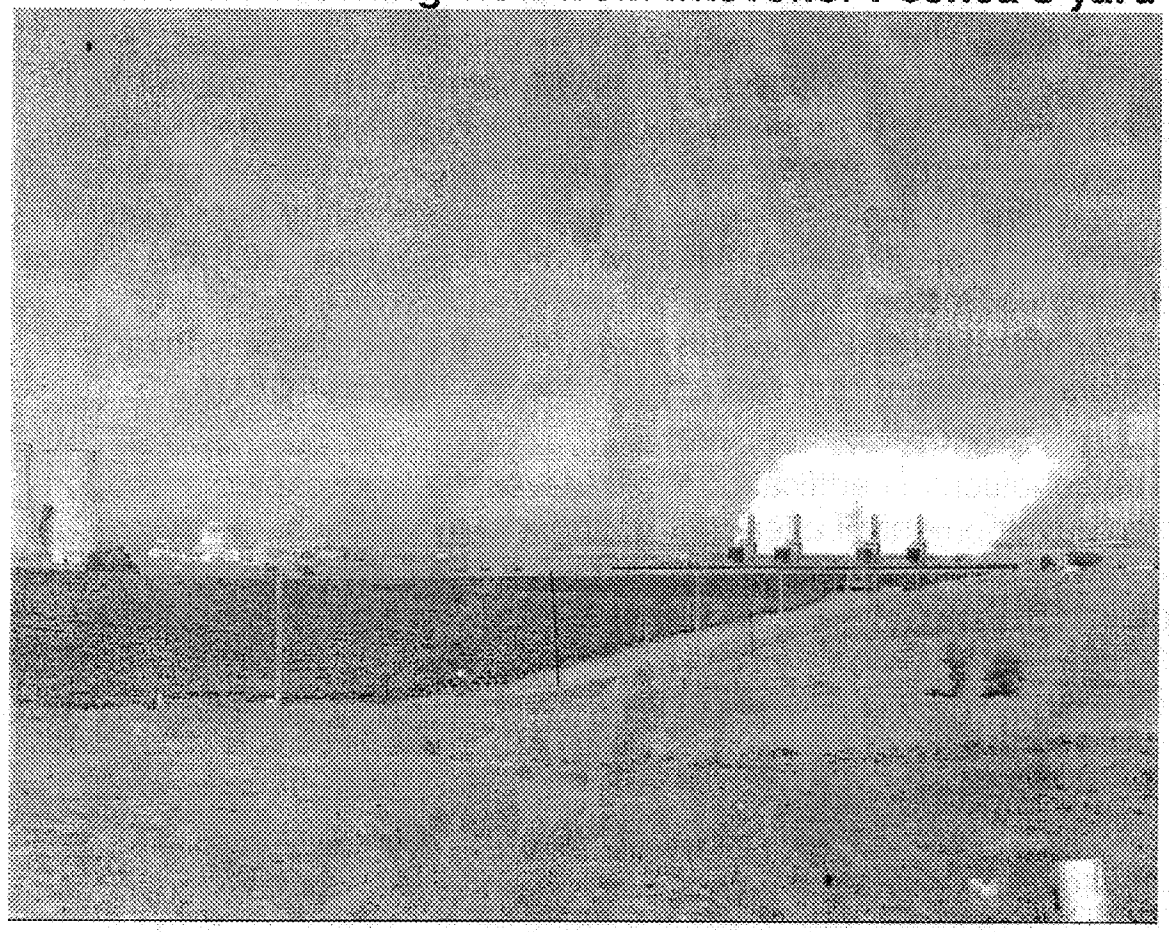


Table 2 – Staff Predicted Hours with Cooling Tower Steam Plumes
Sacramento 1990-1993 Meteorological Data

	Available (hr)	Plume (hr)	Percent
All Hours	34,980	19,595	56.0%
Daylight Hours	17,865	5,871	32.9%
Nighttime Hours	17,115	13,724	80.2%
Daylight No Rain/Fog Hours	16,028	4,070	25.4%
Seasonal Daylight No Rain/Fog Hours*	6,339	2,781	43.9%

*Seasonal conditions occur anytime from November through April.

Staffs testimony is that the existing Rancho Seco Plant degrades the environment so much that occasional plumes (25.4%) are not considered a significant impact.

Testimony of Dale Edwards
Staff has concluded that the project's cooling tower water vapor plumes would be somewhat frequent and vary in size from small to large, **but due to the existing Rancho Seco Power Plant** which is adjacent to the proposed project, the overall short duration that plumes are predicted to occur on clear days, and the generally moderate level of visual change plumes would cause to the view when present, their direct visual impact would be adverse but less than significant to close-in and more distant viewing locations. The project's cooling tower water vapor plume would also result in adverse but less than significant cumulative visual impacts, **considering the existing Rancho Seco Power Plant and most notably the parabolic cooling towers**. (FSA 4.11-1)

The applicant owns the Rancho Seco Plant and is the cause of the existing visual degradation and is now going to add visual plumes where there are currently none. Plume abatement technology is appropriate and feasible and should be required of the applicant due to his contribution to the existing degradation. Local residents have asked for plume abatement (RT 3-14-03p.92) and they are the ones as you can see above have to live with the visual degradation.

Air Quality

1) Staffs testimony in the FSA is that it has found that the CPP has the potential to create significant impacts to the PM 10 standards and contribute to violations of the recently promulgated Pm 2.5 standard and the 8 hour ozone standard.

"The CPP as proposed has the potential to create significant impacts to local and regional air quality unless additional mitigation is provided. Staff found that the project's emissions have the potential to cause significant impacts relative to the state 24-hour PM_{10} (particulate matter less than 10 microns in diameter) air quality standard. In addition, the project would also contribute to existing violations of the recently promulgated federal 8- hour ozone and 24-hour $PM_{2.5}$ standards. Therefore, in addition to the mitigation measures contained in the Final Determination of Compliance from the air district to mitigate the project's PM_{10} and $PM_{2.5}$ emissions, staff proposes that the SMUD implement a wood stove replacement program". (FSA 1.1-6)

The applicant failed to rebut this testimony.

2) As Staff testified they implemented the wood stove program to mitigate the CEQA impact of 41,000 pounds per year of unmitigated PM-10

5 MR. SARVEY: Right. So it's supposed to
6 be 41,000. Thank you for the correction, Mr.
7 Layton. My question was, is this considered an
8 unmitigated impact under CEQA, and that's why you
9 proposed the wood stove before you did your
10 recalculations, is that correct?
11 MR. NGO: Yes. (RT 5-12-03 p. 319)

3) So staff has testified that 41,000 pounds per year of unmitigated Pm-10 is a significant impact under CEQA and is recommending an ammonia slip level of 5 ppm to minimize the unanalyzed formation of secondary pm-10 from the ammonia emissions. As the hearing officer observed the unmitigated ammonia emissions that will form an unanalyzed amount of secondary PM 2.5 are also a significant impact under CEQA

7 HEARING OFFICER SHEAN: I think we're
8 going to allow a little bit of latitude, because I
9 believe -- if I'm getting this and hopefully I
10 do -- what they're trying to determine is, if you
11 had an unmitigated CEQA impact over here that
12 related to PM-10 emissions --
13 MR. SARVEY: 41,000 pounds.
14 HEARING OFFICER SHEAN: -- now you had
15 another proposal in your package for further
16 ammonia slip mitigation, if, for example, the
17 Commission did not buy that, would further
18 mitigation through this stove proposal address
19 your, you know, the effects of the ammonia slip? (RT 5-12-03 p.330)

4) Staff further testified that normally offsets would be provided for the ammonia slip but if the applicant would live with an ammonia slip level of 5ppm that there would be no significant impact and staff would recommend no additional mitigation. (RT 5-12-03 p.332 FSA 4.1-16)

1 And so, to answer your question, there
2 will be some particulate converting from the
3 ammonia, but if SMUD will be able to live with
4 that condition on the five ppm ammonia slip
5 recommended by staff, I think it will be okay. (RT 5-13-03 p, 332)

Because the area is non-attainment for the state 24-hr PM10 standard and the federal 24-hour PM-10 and PM2.5 standard, the ammonium nitrate and sulfate (from NOx, SOx and ammonia) contribution should be mitigated by minimizing the ammonia emissions by restricting the ammonia slip level to 5 ppm.

It should be noted that staff would normally recommends mitigation, in the form of emission reduction credits, be provided to mitigate the PM2.5 impacts from ammonia; However, because of the uncertainty in the actual conversion of ammonia, staff only go as far as recommending to minimize ammonia emissions. (FSA 4.1-16)

5) So if the project is not limited to 5ppm for ammonia slip additional mitigation should be provided in the form of a contemporary local emission reduction program that benefits the local community.

NOx offsets

1) The projects NOX credits are over 50 % VOC credits substituted for NOx. VOC credits will be substituted for NOX ERC's at a ratio of 3.9 to1. Staffs own analysis found that the VOC to NOX ratio should be 6 to 1.

Staff's own analysis of measured VOC, ozone, and NOx levels from the Elk Grove monitoring station indicated a VOC to NOx ratio as high as 6:1, and a default, or theoretical, ratio of approximately 6:1. (FSA 4.1-20)

2) So by staffs own analysis the project may lack enough VOC Credits to offset the NOX emissions. Additionally substituting VOC Credits for NOX credits may be an effective strategy for controlling Ozone but the projects VOC offsets do not effectively mitigate the secondary formation of pm-2.5 that occurs in the winter months. Therefore the projects offset package is inadequate to mitigate the secondary PM 2.5 concentrations that occur predominately in the winter months of November through February. Staff has testified that the high concentrations of pm 2.5 in the winter are primarily due to the combination of ammonia and sulfates in reaction to the NOX concentrations in the atmosphere. (FSA 4.1-8) Staff has also testified that the VOC emissions lack the elemental carbon molecules to form the secondary pm 2.5.

The project's VOC emissions would be in the form of unburned natural gas, which is mostly methane and ethane, which contain only one to two carbon atoms. Thus, the turbine exhaust is not expected to emit any significant amounts of VOC that can participate in the formation of secondary PM2.5. (FSA 4.1-15)

During quarters one and four 80,000 Pounds OF VOC's will be used as NOx offsets which leaves 80,000 pounds of NOx which will form secondary PM-2.5 that remain to be offset. Assuming that the applicant is correct that the area is ammonia rich most of these unmitigated NOX emissions will combine with the ammonia concentrations to form secondary PM 2.5. This will require additional mitigation that the proposed wood stove program or some other contemporary emission reduction program could provide. Without additional mitigation the project will worsen existing violations of the State and Federal PM-10 standard and possibly create new violations of the Federal 8 Hour Ozone standard and the new State PM 2.5 Standards in violation of CEQA Guidelines.

Pm-2.5 Offsets

The staff has revised the projects pm 2.5 Emissions and speciated the projects pm-10 offsets in the errata in Table 9. The staff appropriately has discounted the projects PM 2.5 emissions by 5 %. Subsequently they have discounted 48 percent of the offsets by AP-42 emission factors but fail to discount the rest of the projects pm-10 ERC's and have credited 52% of the projects ERC's as 100% pm 2.5. Staff has also testified that they have relied on the SMAQMD who told them that almost 100% of the ERC's that were not discounted were PM 2.5 (RT 5-13-03 p. 348) The SMAQMD testified that they did not analyze pm 2.5 in their analysis. In the absence of verifiable PM 2.5 content of the ERC's AP-42 emission factors must be consulted. Since the majority of these unclassified emissions are from detergent manufacturing an analysis of the particulate size would reveal the majority of the particle sizing for the unspeciated sources. The most recent report on detergent manufacturing shows no conclusive data as to particle size so it is unclear how a claim can be made that 100% of the pm-10 emissions could be pm 2.5 particularly when a portion of the detergent offsets are fugitive dust from detergent handling processes. The Campbell Soup PM-10 ERC's of 3,424 pounds per year are ERC's which were created in the late 1980's before the Clean Air Act was enacted and are not an air quality benefit (Intervenor Exhibit 17) as the district must adjust their SIP plan for there use. The other pm-10 credits that were not speciated are from natural gas combustion and biomass fired cogeneration boiler which could be at best 95% PM-2.5.