

STATE OF CALIFORNIA
STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:)	Docket No. 01-AFC-19
)	
Application for Certification)	
of the Sacramento Municipal)	
Utility District's Cosumnes)	
Power Plant Project)	
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SACRAMENTO MUNICIPAL UTILITY DISTRICT'S
OPENING BRIEF FOR GROUP 2 HEARINGS
AND REPLY BRIEF FOR GROUP 1 HEARINGS

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APPENDIX

Transcript Corrections

I. INTRODUCTION

The Sacramento Municipal Utility District (“SMUD”) hereby submits this Opening Brief on the second set of evidentiary hearings (“Group 2 Hearings”) and Reply Brief on the first set of evidentiary hearings (“Group 1 Hearings”) on the Cosumnes Power Plant Project (“CPP” or “Project”) Application for Certification (“AFC”).

II. DISCUSSION

A. Biology.

The impacts to plant and animal species from the construction and operation of the CPP have been thoroughly quantified and analyzed. Extensive field surveys have been done at the site over the last thirty years, from when the site was surveyed in the late 1960s for the development of the Rancho Seco Nuclear Generating Station (“Rancho Seco Plant”), to several surveys for the development of mitigation banks for fairy shrimp, and as part of the Master Plan for the development of the Rancho Seco Park in 1994. (AFC, 8.2-6.) Although a number of special-status plants and animals were considered to potentially occur in the Project vicinity and along the gas pipeline corridor, very few were actually found on the site or along the pipeline route. (AFC, Table 8.2-3.) As the testimony demonstrates, because many of the potential impacts to sensitive species have been sufficiently resolved, they were not an issue during the hearing and, therefore, are not discussed in detail here. This includes potential impacts to rare or endangered plant species, impacts to the Cosumnes River and nearby creeks or their fisheries, and impacts to agricultural land.

SMUD has consulted with Staff, the California Department of Fish and Game (“CDFG”), the United States Fish and Wildlife Service (“USFWS”), the National Marine Fisheries Service (“NMFS”), and the Army Corps of Engineers (“ACOE”). These agencies provided guidance on

surveys, techniques, and analyses necessary to fully understand the potential impacts of CPP and its linear facilities. From the detailed surveys and reports, mitigation concepts have been developed, evaluated, and accepted by all regulatory agencies. (5/12 RT 229.) For all but one minor change, SMUD agrees with all of the Conditions of Certification that the Staff has included in its Final Staff Assessment.¹ Although, as with all projects, the exact acres of impact may be modified during construction and as a result of preconstruction surveys, impacts have been identified and the mitigation agreed upon, allowing a clear determination that CPP's impacts will be reduced to levels of insignificance. (5/12 RT 215.)

¹ The following change to BIO-12 Number 8 reflects the grading plan for the laydown area submitted to Staff and is consistent with the application to the ACOE for the 404 permit.

Preventative Design Mitigation Features

BIO-12

The project owner shall modify the project design to incorporate all feasible measures that avoid or minimize impacts to the local biological resources. These include:

1. Design of transmission line poles, access roads, pulling sites, and storage and parking areas to avoid identified sensitive resources;
2. Avoiding and minimizing wetland loss;
3. Prohibiting refueling or storage of hazardous materials within 200 feet of flagged sensitive resources, or 100 feet from "waters of the U.S.";
4. Design and construction of transmission lines and all electrical components in accordance with APLIC 1996 guidelines to reduce the likelihood of electrocutions and collisions of large birds;
5. Discharges from the storm water detention basin are of sufficient water quality to not effect fish and northwestern pond turtle habitat downstream;
6. Dry season trenching and grading within potential California salamander habitat;
7. The stormwater detention basin shall be operated to reduce contaminates consistent with stormwater requirements, and with a flow dissipater structure to reduce velocity and potential scouring at the outfall;
8. That the setback from the seasonal stream and swale that cross the laydown area is at least ~~100~~25 feet;
9. Design and operate a ZLD system that shall process all wastewater produced by the plant; and
10. Constructing the gas pipeline using an alternative route that does not cross the Laguna Stone Lake Preserve.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP.

1. SMUD's Design Avoids Numerous Wetlands and Provides Ample Mitigation for Those that Cannot be Avoided.

a. ACOE Reviewed and Accepted the Wetlands Delineation.

Under the Clean Water Act § 404, 33 U.S.C.A. § 1344, the ACOE has jurisdiction over impacts to waters of the United States. In that role, ACOE makes the final determination on the delineation of ACOE jurisdictional wetlands. In a letter dated February 19, 2003, the ACOE concurred with SMUD's wetland delineation, which estimates 47.08 acres of waters of the United States, including wetlands, within the survey area for CPP, its linear facilities and laydown area. (Filed with the Docket Office on February 20, 2003.) Although Intervenor Peasha's witness, Ms. Moore, disputes the accuracy of this assessment claiming that it does not "allow for required analysis of Project impacts to sensitive vernal pool species that occupy wetland habitats," the delineation has been certified by the jurisdictional entity, ACOE. (Moore Testimony, at p. 3.)

Mr. Koford explained during his testimony at the May 12, 2003, hearing that part of Ms. Moore's confusion over the adequacy of the wetland delineation may lie in the fact that there are wetlands features and vernal pools within the area that do not meet the ACOE's definition of a wetlands and, therefore, are not shown on the wetland delineation. (5/12 RT 40 - 41.) As explained below, however, impacts to vernal pool species in habitats that are not ACOE jurisdictional wetlands have nonetheless been considered in SMUD's biological assessment submitted to the USFWS.

During her cross-examination of SMUD's witnesses at the hearing, Ms. Moore was also confused about whether potentially impacted wetlands had properly been identified. She noted that some vernal pools within the ACOE 404 application that appear to be within 250 feet of

construction are not included within SMUD's wetland delineation for the ACOE permit. (5/12 RT 171-173.) Under the programmatic opinion for fairy shrimp issued by the USFWS pursuant to the federal Endangered Species Act, the USFWS evaluates impacts to suitable habitat within 250 feet of construction as a potential indirect impact on the hydrology of the pool. (DR Set 3R, CPP Biological Assessment, at p. 29; FSA, Part III, p. 4.2-18.) As Mr. Koford explained during the hearing, wetlands or vernal pools within 250 feet of Project features that were hydraulically isolated from the Project feature were not included in the assessment of potentially impacted wetlands. (5/12 RT 172-73; DR Set 3R, CPP Biological Assessment, Appendix B, p.4.) Staff's witness, Ms. Dorin confirmed that the 250-foot buffer does not apply to the degree that there is a hydraulic barrier, such as a railroad track or road, that is present between the vernal pool and the construction area. (5/12 RT 247.)

b. Impacts to Wetlands Are Fully Mitigated.

Although there will be impacts to wetlands from the construction of the CPP and its facilities, such as the gas pipeline, the ACOE requires as part of its permit process that SMUD avoid and minimize those impacts. This has required SMUD to move its pipeline and bore underneath areas to avoid wetland areas wherever possible.² (5/12 RT 36.) In fact, the Project will be preventing 91 percent of potential impacts to wetlands through avoidance measures, and will result in only four (4.224) acres of total wetland impacts, counting both temporary and permanent impacts. (5/12 RT 38.)

² In response to questions about whether there is a possibility that boring under a vernal pool may actually injure the vernal pool, Dr. Huffman noted that the BRMIMP contains contingency plans that include precautions for protecting areas in case there is a frac-out, damaging the pool. (5/12 RT 234.) Additionally, if damage were to occur, the conditions of the ACOE's 404 permit would require restoration or mitigation to offset that impact if restoration was not possible. (5/12 RT 235.)

In his testimony, Dr. Huffman explained that there would be both permanent and temporary impacts to wetlands from the construction of the CPP, which includes the site laydown and parking areas, and the construction of the gas pipeline. He explained that all temporary impacts are being mitigated by restoring these areas onsite after Project work activities conclude. (5/12 RT 36.)

Although no permanent impacts to wetlands or vernal pools will occur from construction and operation of the gas pipeline, construction of the CPP laydown and parking areas will result in permanent losses of 1.307 acres of vernal pools and wetlands. (Exhibit 6, Summary of Impacts to Wetlands/Waters of the U.S.) Permanent impacts to ACOE jurisdictional vernal pools will be mitigated at a one-to-one ratio through creation at Wildlands, Inc.'s ("Wildlands") Sheridan site. (Id.) (SMUD will provide higher mitigation ratios and overall levels of mitigation for impacts to special status species as described in the Biological Assessment, filed with the Docket Office on April 4, 2003, as Data Response Set 3R.) As Mr. Hudson testified at the May 12, 2003, hearing, the CPP site is within the approved mitigation area for each of the proposed mitigation banks and, therefore, should be acceptable to ACOE. (5/12 RT 27 (sponsored 05/05 IDR Set 16 containing management plans for conservation resources), 183.) Furthermore, the ACOE defers to the USFWS for acceptance of mitigation for impacts to special status species, and Mr. Fuller of the USFWS has confirmed that the Wildlands Sheridan bank is generally acceptable to the USFWS for creation of vernal pools.³ (5/12 RT 214.)

³ During the May 12, 2003, hearing, Mike Boyd of Californians for Renewable Energy, Inc. ("CARE") expressed concern during the public comment period that there were insufficient protections in place to ensure the success of vernal pool creation. (5/12 RT 236 - 243.) Those protections, however, come from using a mitigation bank approved by USFWS.

Mitigation for impacts to seasonal wetlands, freshwater marsh, river and streams, seasonal swales and drainage ditches will include the permanent preservation of 20 acres⁴ at the Wildlands Sacramento County site proposed for development. (Exhibit 6.) Dr. Huffman notes that this is a 16.4 to 1 mitigation ratio. (5/12 RT 38; Exhibit 6.) Although he could not speak for the ACOE, Dr. Huffman testified that based on his many years of experience, including his experience as the ACOE's Chief Wetlands Scientist, he believes that the ranges of mitigation proposed by SMUD to mitigate for impacts to wetlands will satisfy the ACOE. (5/12 RT 40.)

c. SMUD Selected a Laydown Area with Lower Habitat Values.

Finally, discussion as to Dr. Huffman's evaluation of the two potential laydown sites demonstrated that by using the site to the south, the site to the west with the greater habitat values would be preserved.⁵ (5/12 RT 44.) In making its decision, SMUD chose the area that met the best overall choice by considering impacts to biology, soils, visual impact to surrounding community, and proximity to neighboring properties, in addition to issues of cost and safety related to moving equipment. (SMUD Group 2 Testimony, Alternatives, Mr. Hudson, docketed May 5, 2003, p. 2-3.) Although both sites contain vernal pools and other types of wetland features, the south site is heavily grazed, and, therefore, its habitat values are substantially less in terms of native species and the development of vernal pools. (5/12 RT 44.) The south site also had the advantage of draining toward the plant and into the retention basin, which precludes the need to dig another retention basin. (SMUD Group 2 Testimony, Alternatives, Mr. Hudson, p.2.)

⁴ SMUD will be purchasing 41.5 acres of combined aquatics and upland giant garter snake habitat as mitigation for impacts to that species. (5/12 RT 28.) Approximately half of the mitigation site (20 acres) will be wetted acres, which can also be used to compensate for impacts to open water wetland impacts.

SMUD will revegetate the laydown area after construction is complete. (SMUD Group 2 Testimony, Biology, Dr. Huffman, p. 25.)

2. Impacts to Giant Garter Snake Habitat Will Be Mitigated To Less Than Significant Levels.

The giant garter snake is covered by both federal and state protections for endangered species. SMUD has performed habitat assessments in consultation with USFWS for giant garter snake habitat. The proposed gas pipeline crosses potential giant garter snake habitat, which includes drainage ditches, sloughs, and ponding areas. (5/12 RT 32.) Habitat suitability surveys were conducted along the length of the pipeline corridor and for the Project site itself. (5/12 RT 159.) As Ms. Crowe explained during the hearing, not only was the wetted acreage of the actual drainage itself evaluated and included in the impact acreage, but also 200 feet on either side, which is potential upland habitat for the giant garter snake. (5/12 RT 32.)

Although the construction of the pipeline for the CPP will result in temporary impacts to giant garter snake habitat, no habitat will be permanently lost. Nonetheless, SMUD has entered into a purchase option for 41.5 acres of giant garter snake habitat for combined aquatic and uplands at the Wildlands bank in south Sacramento County to mitigate any potentially significant impacts. (5/12 RT 28.) This is a one-to-one mitigation ratio. (Exhibit 5; 5/12 RT 32.) As testified to by Mr. Hudson, Wildlands has successfully instituted mitigation banks for giant garter snake habitat in the past. (5/12 RT 184.) Because of this, Mr. Fuller of the U.S. Fish and Wildlife Service foresaw that approval of the management plan would be “pretty smooth and easy sailing.” (5/12 RT 218.) Mr. Gifford of the Department of Fish and Game also concurred with the appropriateness of the mitigation. (5/12 RT 206.)

⁵ Although a third site on the northeast part of the SMUD property was considered, it was found to be very costly, adding approximately \$6.9 to \$13.1 million to CPP’s costs. (SMUD Group 2 Testimony, Biology, Dr. Huffman,

3. Impacts to Vernal Pool Species Will Be Mitigated to Less Than Significant Levels.

Wetlands that are not under the ACOE's jurisdiction, and therefore not listed in the wetlands delineation, are nonetheless protected under the Endangered Species Act because of their potential habitat for special-status species, including fairy shrimp, tadpole shrimp, and tiger salamander.⁶ Impacts to these habitats include less than three (2.967) acres of permanent direct impacts and less than seven (6.877) acres of indirect impacts that are temporary in nature. (Ex. 5, Summary of Special-Status Species Habitat Compensation.) Mitigation for direct impacts will be at a three-to-one ratio and at a two-to-one ratio for indirect impacts. (Id.) This will result in 19.7 acres of vernal pool fairy shrimp, tadpole shrimp, and California tiger salamander habitat being permanently preserved at the Laguna Creek Mitigation Bank and three acres of habitat being created at the Wildlands Sheridan site. (Id.)

Ms. Moore questioned the adequacy of the surveys completed for the California tiger salamander by Dr. Mark Jennings. She claims that "highly irregular winter rain patterns" during 2003 make the results of the surveys suspect. (Moore testimony at p. 3.) She also questioned whether the surveys were complete. Although she suggested that Dr. Jennings was unable to do a thorough survey because of restrictions on access by private landowners in the area, Dr. Jennings' report indicates that his survey covered suitable habitat within one mile of the proposed Project area, and that he was able to "survey the entire pipeline corridor and note the

Alternatives Analysis, pp. 31-32.)

⁶ Although the California tiger salamander is not yet a listed species, SMUD has anticipated that there was a strong likelihood that the tiger salamander would be listed sometime during the Project. Because of this, it was dealt with as an important and sensitive species, and given all the deference that would be given to a fully listed species. (5/12 RT 160-61.)

potential for any negative impacts on special concern or listed species.”⁷ (5/12 RT 157-58.) Both Ms. Crowe and Mr. Fuller from USFWS, who noted during the hearing that Dr. Jennings is qualified to do such work, however, dismissed Ms. Moore’s attacks on the adequacy of Dr. Jennings’ coverage of his survey. (5/12 RT 159, 215.)

4. Impacts to Swainson’s Hawk Will Be Mitigated to Less Than Significant Levels.

a. Surveys of Hawks Were Adequate.

During cross-examination at the May 12, 2003, hearing, Ms. Moore attempted to raise concerns over the adequacy of the methods for conducting presence/absence surveys performed for Swainson’s hawk. (5/12 RT 150-152.) Ms. Crowe indicated, however, that the surveys for Swainson’s hawk were done according to guidelines set forth by CDFG. (5/12 RT 42-43; 61 (explaining that there is no official survey protocol, only guidelines).) Surveys were performed in April and May of 2002, and in April of 2003. During April of 2003, the survey was conducted for five full days, from 8:00 a.m. to 5:00 p.m., on the CPP site, including the full 26-mile pipeline alignment. (5/12 RT 152.) At that time, some Swainson’s hawk pairs were observed flying at all times of the day. (5/12 RT 151.) Although seven active nests within a half-mile of the pipeline were identified, Ms. Crowe noted that during their surveys, some Swainson’s hawk pairs were still picking the locations for their nests. (SMUD Group 2 Testimony, Biology, Ms. Crowe, pp. 5-6; 5/12 RT 151.) SMUD’s consultants will do additional preconstruction surveys before construction begins, to make sure that there were no new nest locations. (5/12 RT 151.)

⁷ Although Ms. Moore questions Dr. Jennings’ ability to have conducted thorough surveys without having had access to private property along the pipeline route, she admitted during cross-examination that she has neither walked down the proposed site, the laydown areas or the pipeline route. (5/12 RT 270.)

She noted that earlier or later surveys would not have changed the type of mitigation measures adopted to protect the nesting birds, or the monitoring requirements. (Id.)

b. After Mitigation for Impacts to Swainson's Hawk, No Significant Impacts Remain.

Staff's expert, Ms. Dorin, testified that with the implementation of the mitigation measures proposed by Staff, there would not be a significant impact to Swainson's hawk. (5/12 RT 260.) Specifically, the Staff is requiring that a designated biologist monitor active nests within one-half mile of construction activities to ensure that there is not abandonment of any nests or young due to construction noise. (Id.) Condition of Certification BIO-18 requires that pre-construction surveys be conducted out to a half-mile from all construction areas. (FSA, Part III, p. 4.2-56.) All nests within the half-mile are to be mapped. (Id.) If active nests are found, they are to be monitored according to CDFG guidelines. (Id.)

Because Swainson's hawks are sensitive to disturbance during nesting, CDFG recommends a half-mile buffer between construction and active nests, and consultation on a case-by-case basis to allow construction activities within the half-mile buffer. (DR Set 1Q, CPP Draft "BRMIMP", at pp. 3-11 to 3-12.) If nest-abandonment is a concern, no construction activities are allowed during the nesting season until the young have fledged or the adults are no longer nesting, except with written consent of CDFG. (Id.) To ensure compliance, Condition of Certification BIO-3 requires SMUD's construction/operation manager to "act on the advice of the Designated Biologist to ensure conformance with the biological resources Conditions of Certification." (FSA, Part III, pp. 4.2-47 to 4.2-48.) This advice includes requiring a halt to all activities in any area when it is determined that there would be an adverse impact to biological resources if the activities continued. (DR Set 1Q, CPP Draft "BRMIMP", at p. 3-12.)

In addition to this protection, SMUD will provide for a conservation easement of 53.9 acres at a Fish and Game approved mitigation bank to mitigate for any loss to Swainson's hawk foraging habitat.⁸ (DR Set 1Q, CPP Draft "BRMIMP", at p. 3-12.) CDFG will also issue a 2081 permit for impacts to the Swainson's hawk once it finds that the mitigation included in the Commission's CEQA-equivalent document fully mitigates all significant impacts. (5/12 RT 202-203.) Any additional requirements included by CDFG in the 2081 permit will be included as part of Condition of Certification BIO-5. (FSA, Part III, pp. 4.2-49 to 4.2-51.)

5. Impacts to Burrowing Owls Will Be Mitigated to Less Than Significant Levels.

a. Surveys of Owls Were Properly Done.

Some questions were raised by Ms. Moore regarding the sufficiency of the surveys conducted for burrowing owls in April of 2003. She states that the surveys were undertaken too early in the nesting season to confirm the species' presence and did not follow appropriate protocols, including during appropriate weather conditions and time of day. (Moore Testimony, at p. 3.) Ms. Crowe indicated, however, that the methods for conducting surveys for burrowing owls were done according to guidelines set forth by CDFG and that the time of surveys in the guidelines were only preferred, not required. (5/12 RT 61 (explaining that there is no official survey protocol, only guidelines).) Although Staff's expert, Ms. Dorin, agreed that the surveys should be done "two hours after sunrise, and two hours before sunset, one hour after sunset," as per the "preferred" times, she said that she was satisfied that the 8:00 a.m. to 5:00 p.m. time period for the surveys were "protocol level" and were sufficient for her to base her opinion. (5/12 RT 257, 261.) In addition, a burrowing owl was observed during the survey time period at

⁸ The Staff is currently waiting for confirmation from CDFG that the Laguna Creek mitigation bank in Sacramento

a known nesting location within the Sacramento Wastewater Treatment Plant bufferlands, indicating weather conditions and timing of the surveys were appropriate for observing owls. (SMUD Group 2 Testimony, Biology, Ms. Crowe, p. 17 (Attachment 1, Photos).)

In response to a question by Ms. Moore, Ms. Dorin acknowledged that any concerns over the protocol level of the surveys are adequately addressed by the fact that there will be surveys immediately prior to construction, which will satisfactorily address the potential presence of any owls. (5/12 RT 262.) In fact, prior to any construction activities, additional surveys will be conducted for all sensitive species. (FSA, Part III, p. 4.2-56, BIO-18.)

b. Mitigation For Impacts to Burrowing Owls Results in No Significant Impacts.

Condition of Certification BIO-15 requires that SMUD purchase a minimum of 6.5 acres of foraging habitat at an approved mitigation bank in Sacramento County for every pair or unpaired resident bird occupying a burrow within 250 feet of permanent Project facilities. (FSA, Part III, p. 4.2-55.) However, because surveys performed in April and May 2002, and April 2003, did not indicate any burrowing owls would be affected by Project construction, no compensatory habitat replacement is proposed or warranted. (DR Set 1Q, CPP Draft “BRMIMP”, at p. 3-12.)

6. Mitigation Measures Provide Additional Protection for Bird Species.

In addition to concerns for Swainson’s hawk and burrowing owl species, mitigation measures have been incorporated for protection to greater sandhill cranes and nesting and foraging birds, such as raptors, herons, egrets, waterfowl, belted kingfisher, and others protected under Fish and Game Code sections 3503, 3503.5 and the Migratory Bird Treaty Act. These

County is acceptable.

provisions include surveys to monitor for active nest sites, and prohibiting construction within distances that could cause negative impacts. (DR Set 1Q, CPP Draft “BRMIMP”, at p. 3-14.)

Other protections for birds generally include taking precautions to avoid bird electrocutions and collisions with the new electric transmission lines and towers of the CPP. Collisions are expected to be rare because of the relatively low height of the poles and short length of lines. The lines and towers will be constructed according to “raptor-proof” guidelines set forth in the “Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996.” (AFC, 8.2-13.) This will reduce potential impacts to levels that are less than significant. (Id.)

7. All Other Impacts to Biological Resources have been Assessed and Addressed.

Some concern was also raised at the hearing regarding whether impacts to biological resources from air emissions, particularly nitrogen, PM-10 and sulfur, had been properly considered. (5/12 RT 221.) Although limited discussion was given to the issue because there was no evidence of, or concern expressed by any agencies about, any significant impact from emissions on biological resources, the issue was addressed in a number of areas in addition to the AFC. (AFC, 8.2-12 to 8.12-13.) For example, Staff’s analysis of potential impacts of the CPP’s construction and operation included an assessment of air quality impacts related to biology, and specifically of potential impacts from nitrogen deposition. (FSA, Part III, pp. 4.2-25 to 4.2-26; 5/12 RT 249.) Similarly, the Final Determination of Compliance prepared for the Project by the Sacramento Metropolitan Air Quality Management District (“SMAQMD”) noted that “[s]mall increases from the combustion emissions associated with the gas turbines and the cooling tower drift are believed to be insignificant when compared with the quantity of fertilizer, manure,

herbicides and insecticides that are used and are present in production agriculture.” (FDOC, October 9, 2002, p. 21.)

8. SMUD Conducted a Complete Analysis of CPP’s Impacts and Will Provide Ample Mitigation for those Impacts.

Contrary to assertions made by Ms. Moore, the analysis of the species at issue has been thorough. In fact, Mr. Fuller of the U.S. Fish and Wildlife Service noted that “the assessment and determination of effects to federally trusted species are well done, in terms of the species at issue.” (5/12 RT 216.) Impacts to all of the species of special concern, including those that are not currently listed, such as the California tiger salamander, have been assessed. This assessment was not done in a vacuum, but included consultation with state and federal agencies, The Nature Conservancy, the Staff, and the public. (5/12 RT 222.) Where additional issues of concern were raised, additional information was gathered and analyzed according to appropriate protocols issued by the jurisdictional agencies.

Several of SMUD’s biology witnesses were asked by Ms. Moore if they felt comfortable stating that “any potential impacts will be mitigated to a level of insignificance” given the fact that ACOE had not issued its 404 permit nor had USFWS issued its Biological Opinion, and each of the witnesses answered “yes.” (5/12 RT 60, 85, 97.) The fact that not all permits and approvals from state and federal agencies have been approved yet does not, and should not, affect that assessment. Conversations with the state and federal agencies have been ongoing, beginning more than two years ago. (5/12 RT 85, 97.) All of the agencies have the information that they need from SMUD. None of the witnesses noted any conversations with the permitting agencies that gave them doubts that the permits would either not be forthcoming or would require substantial changes to the Project.

In her testimony, Ms. Moore stated that she felt it is premature for the Commission to approve the Project without first having all of the permits from the biological resources agencies with jurisdiction over the Project. If these agencies impose any additional requirements on SMUD, those requirements would be made conditions of the permits and included in the assessment. (FSA, Part III, pp. 4.2-49 to 4.2-52, Conditions of Certification BIO-5, 7, 8, 9, 10, 11.) Although it is possible that there could be minimal changes to permit conditions to avoid impacts to species of special concern, it is very unlikely that any future agency permits will change the location of either the Project or any of its features. (5/12 RT 227 (Dr. Huffman noting completion of the 404 process will not likely have any impact on the Project configuration).) There is, therefore, no justification for Ms. Moore's assertion that the Commission's decision should not be considered until after all of the permits are obtained.

B. Hazardous Materials Management/Worker Safety and Fire Protection.

1. SMUD's and Staff's Hazmat and Worker Safety and Fire Protection Conditions Were Uncontested.

As indicated in SMUD's Group 1 Opening Brief, SMUD and Staff are in agreement that their jointly proposed Hazardous Materials Management ("Hazmat") Conditions of Certification will ensure that the Project is designed, constructed and operated to comply with all applicable local, regional, state, and federal laws, ordinances, regulations and standards ("LORS") and to protect the public from significant risk of exposure to an accidental release of any hazardous material. (FSA, p. 4.4-20.) Similarly, SMUD and Staff are in agreement that the jointly proposed Worker Safety/Fire Protection conditions will ensure compliance with all applicable LORS and the requirement for SMUD to submit and implement both Project Construction and Project Operation Safety and Health Programs will adequately protect workers during

construction and operation, protect against fire, and provide adequate emergency response procedures. (FSA, p. 4.15-10 to 11.)⁹

2. Sacramento County’s “Integrated and Seamless” Fire Protection, Dispatch, Response and Rescue System Ensures Prompt Response to Fire and Hazmat Incidents Throughout the County, Including the CPP Site, Notwithstanding the Herald Fire Department’s Volunteer Status.

Although the Worker Safety/Fire Protection testimony and Conditions of Certification were uncontested and entered into the record without objection on March 14, 2003, Ms. Peasha and the Committee expressed concerns about how well plant personnel and local and regional fire departments, Hazmat teams, and other public safety agencies are equipped to respond to emergencies occasioned by a hazardous waste spill, e.g., aqueous ammonia, or to fires, both en route and at the Project site.

At the Committee’s direction, SMUD presented a panel of fire and Hazmat experts from several local fire agencies to explain how local fire agencies respond to fires, Hazmat incidents and other emergencies in Sacramento County and to assure the Committee and the public that SMUD will work with these local agencies to assure public health and safety, and to ensure adequate protection of workers at the site and the public in the event of an incident at the new power plant or pipeline or en route to these facilities. The public safety panel convincingly

⁹ The final set of Hazmat conditions incorporating the revisions jointly recommended by both SMUD and Staff are contained in Staff’s Supplemental Testimony and Revised Conditions of Certification, which were filed on March 12, 2003, and admitted into the record on March 14, 2003. (3/14 RT 258, 262.) The joint conditions are supported in the record by the unchallenged written testimony of Staff experts Alvin Greenberg, Ph.D. and Rick Tyler (FSA, pp. 4.4-1 to 4.4-25) and SMUD’s experts Karen Parker, Jerry Salmay, Colin Taylor, M.I. MechE., C.E., Kevin Hudson, P.E., and Bob Nelson. (SMUD Group 1 Testimony of Ms. Parker and Mr. Salmay [Hazardous Materials Management], Mr. Nelson [Facility Design and HAZ-8], Mr. Taylor and Mr. Hudson [General Project Development, including Project Description, Facility Design, Power Plant Reliability, Power Plant Efficiency, and General Conditions]; admitted 3/13 RT 222-224; see also 3/13 RT 200-209.) The Worker Safety/Fire Protection conditions are contained in the original FSA (p. 4.15-11, 12) and were admitted into the record, along with the uncontested declarations and testimony of Staff experts Alvin J. Greenberg, Ph.D. and Rick Tyler (FSA, pp. 4.15-1

responded to the Committee’s request for “a clear assessment, not only by SMUD but by the local agencies of what the potential for fires are out there, and then what is the level of preparedness and the adequacy of equipment to fight such fires at any of the graduated levels, if you will, of response that may become necessary. . . [and] to ensure that all of [the firefighters] are adequately trained and would not face any undue danger by coming to the plant to fight a fire or respond to some other incident there.” (See 5/12 RT 105.)

The public safety panel convened by SMUD included: Elise Rothschild, Hazmat Coordinator for the Sacramento County Environmental Management Department; Glenn Hendrickson, Chief of the Herald Fire Department; James Templeton, Chief of the Galt Fire District; Richard Holmes, Battalion Chief of the Elk Grove Community Services District (“CSD”) Fire Department; and Charlton (Chuck) Atwood, Fire Captain and Hazardous Materials Coordinator for the City of Sacramento Fire Department. (See 5/12 RT 106).¹⁰

Elk Grove Battalion Chief Holmes gave an overview of the integrated, no-boundaries fire and rescue system, which integrates all 11 fire agencies within Sacramento County. (5/12 RT 107.) “These agencies range from large urban agencies . . . to small, rural volunteer agencies. But the services we provide are **integrated and seamless** . . .” (108; emphasis added.)

Chief Holmes explained that the fire agencies provide fire protection service, ambulance service, swift water rescue, technical rescue, confined space rescue, and hazardous materials response. With the exception of the remote delta regions around Isleton, these services are all “provided under a common dispatch center” for all of Sacramento County, which is located in Rancho Cordova. (108-109.) “It is a fully enhanced 911 computerized dispatch center.” (Id.)

through 4.15-12, admitted 3/14 RT 256-262) and SMUD expert Patricia L. Danby (SMUD Group 1 Testimony on Worker Safety & Fire Protection, admitted 3/14 RT 252-253).

¹⁰ All of the page references in this Worker Safety/Fire Protection section are to the 5/12 transcript, unless otherwise indicated.

All of the fire agencies operate off of an 800 megahertz radio system, which breaks Sacramento County into hundreds or even thousands of “run zones.” For example, when someone picks up the telephone from their home and dials 911 to report an emergency, the dispatch center automatically knows their address and their callback information, and a run zone is identified. And the run zone, then is entered into a computer, and that computer pulls up the 50 closest fire stations to that address, to where that emergency is being reported. (109.) Most emergencies require only 1 or 2 stations response, but a large fire might require 4 or 5. (Id.)

Chief Holmes also testified that the reason that the run zones pull up 50 stations is that if any of the closest stations are not available, e.g., they are already out on a run, the computer moves on to the next closest station until adequate response is provided. “So the computerized program enables us to ensure that [citizens] get the closest resources possible, whether they need one fire engine or twenty . . . The system is built on a boundary-less system, and therefore does not recognize political boundaries. So if someone lives on the border of, let’s say, the City of Sacramento and Elk Grove, the computer doesn’t automatically send that call to the city’s fire station because they technically live in the city. If an Elk Grove fire station is closer, that will go to an Elk Grove station, or vice versa.” (110.)¹¹ Chief Holmes further testified that the fire agencies backfill in those areas if they lose resources to make sure that they have spread their resources geographically to provide the best service they can to the overall county. (112.) If service continues to degrade because of a large event, he testified that they can tap into the State

¹¹ The County is broken into four geographical areas designed to ensure minimum coverage. For example, during summer months, when there is the potential of large wild land fires that can strip an area of fire and emergency resources, Chief Holmes testified that the system is designed “to ensure that no area in the county gets drawn down less than fifty percent of its resources.” (111.)

of California's resources.¹² Chief Holmes concluded: "I'm proud to say the State of California has the best mutual aid system in the country." (Id.)

3. Hazmat Incidents Are Handled on a Countywide Basis through a Contract with the City of Sacramento's Fire Department.

Elise Rothschild, testifying on behalf of the County Environmental Management Department, oversees the storage, use and handling of hazardous materials and waste throughout Sacramento County. (122.) She testified that each site is required to develop a business plan, involving an inventory form, a site map and an emergency response plan. (123.) Ms. Rothschild explained how a hazardous materials incident gets dispatched. First there is the normal fire dispatch, and the first in fire department would respond. If the first responder determines that hazardous materials are or may be involved, they would get back with the centralized dispatch and ask that the incident be elevated to a "level two [H]azmat." When the incident is elevated to a level two Hazmat, Sacramento City Fire gets dispatched, along with the County Department of Environmental Management. (133.) Chief Hendrickson corroborated Ms. Rothschild's testimony, stating that the Herald Fire Department, which would normally be the first responder to the CPP site,¹³ is trained to go to "a class one, a haz one, and after that, the City and County take over." (139.)

Captain Atwood, the City of Sacramento's Hazmat coordinator and a Captain at Station 7 in South Sacramento, further explained that the City of Sacramento contracts with Sacramento County to provide emergency hazardous materials response, including accidents, releases, spills, illegal dumpings, etc., for the entire County. (114.) Whenever the first responder requests

¹² The Office of Emergency Services can coordinate the movement of fire and emergency resources throughout the state, moving in resources even from outside the county if needed, e.g., San Joaquin, Yolo or El Dorado County. (113.)

Hazmat aid, the City is available 24 hours a day, seven days a week (“24/7”). (115.) The City has three Hazmat teams, each team with four Hazmat specialists who work in conjunction with a fire truck (ladder) company. They have specialized equipment specifically for emergency responses. In addition, Captain Atwood testified that they run one decontamination team. The City has 108 Hazmat specialists total. In addition, every City firefighter is trained to first-responder operational level, and has even more detailed decontamination capabilities, where they can be pulled in and used as a Hazmat resource. (Id.)

According to Captain Atwood, it would normally take about 20-25 minutes for City Hazmat teams to respond to the CPP site. (133.) If the Hazmat spill were on the freeway or on Twin Cities Road en route to the site, it would take less time. The Hazmat team would do “the suit work,” meaning that “they have the chemical protective suits, and the knowledge and equipment to actually enter contaminated zones, or hot zones, to either mitigate the problem or repair the situation.” (134.) The County responds as well, coming from various parts of the county, so it could be anywhere from 20 minutes to an hour response time. The County team acts as a technical reference to the City Hazmat team, offering public health and environmental safety assistance. (134.)

As Captain Atwood noted, the first responder comes in and isolates the scene. They believe public safety is a number one priority - if they have to go into rescue operations, they focus on that first. If it is a hazardous material situation where the first responder does not have the resources to handle it, as would likely be the case if the Galt or Herald departments respond first, they will call in a City Hazmat team. (129.)

¹³ Ms. Rothschild testified that in the event of a Hazmat incident at the CPP site, Herald Fire would normally be the first responding agency to “stabilize the scene.” (127.)

4. The CPP Project Will Have Adequate Fire Suppression and Response System in Place to Minimize the Risk of Fire or Hazmat Incidents and to Respond Quickly and Safely If They Do Occur.

In response to Committee questioning about the type and amount of flammable substances on site, CPP Project Manager Kevin Hudson testified that at full build-out with the 1,000 MW plant, there would be 274,000 gallons of mineral insulating oil and 65,000 gallons of lubrication oil. (AFC, Table 8.12-3, p. 8.12-2.) There would be roughly half of these amounts of flammable substances for the Phase I 500 MW plant. In both cases, natural gas would be transported to the plant site by pipeline and would not be stored on site. (121.) CPP Project Director Colin Taylor testified that the CPP would have a fixed fire protection system on site, so the turbine lube oil system and transformers would be covered. (120.) A small fire could be put out without assistance, e.g., with a fire extinguisher. However, in the event of a substantial fire causing an alarm to sound, a 911 call would be made and firefighters would be dispatched per Chief Holmes' testimony described above. (119.)¹⁴ Mr. Hudson testified further that a minimum of two operators would be on site at all times, 24/7. Although not technically a brigade, all CPP plant personnel would undergo 40 hours of Hazmat training, and one operator on each shift would undergo 8-hour incident commander training to assess any type of fire situation, either from the control panel or from training. (118.)

As discussed in SMUD's Group 1 Opening Brief, Bob Nelson, SMUD's Superintendent of Thermal Generation Assets, who has overseen the operation of SMUD's four gas-fired power

¹⁴ In response to questions from Committee Adviser Av Garcia, Rancho Seco Plant Manager Steve Redeker testified that when the nuclear plant was operating, prior to shutdown, the nuclear and non-nuclear operations were integrated into a single organizational structure, with staff on call 24/7. (116.) These people were trained as a fire brigade made up of members of the Operations department and several other departments that were on site 24/7. As a fire brigade, firefighting was a secondary assignment, but all went through required training. Of course, at its

plants for the last four years and who has 17 years experience managing the operation of numerous power plants throughout the country, testified that SMUD's operating record is spotless, thanks largely to the excellent preventive procedures and training used by SMUD. (3/13 RT 250-251.) He testified that at least two plant personnel who are trained to handle hazardous materials spill and/or fires would be on the CPP site at all times. (3/13 RT 240-242.) He further testified that "there's very little of the plant proper that's actually combustible that is not already protected by automatic fire detection and suppression." (Id.)¹⁵

In response to a question from Commissioner Pernell about the response time from Herald and Galt stations to the CPP site, Galt Chief Templeton testified that "typically, when we have a larger incident, Galt Fire would be the second in under normal circumstances. We would be backing up Herald Fire. Typically, if it's a larger incident, one of our ALS ambulances would respond immediately, which means that they would be arriving maybe 2-3, maybe four minutes behind Herald Fire's units." (131.) He further testified that "if we were notified that it is a large incident, that there was something pretty major going on, it is very likely that the dispatch center would also respond with additional units automatically, perhaps even a[n] initial dispatch, which is why we have the unified dispatch." (Id.) "They would say, well, how many units are

height, the Rancho Seco Plant had upwards of 1,600 workers on site. Now, there are less than 200 workers on site. However, the Fire Brigade no longer exists. (116, 117.)

¹⁵ Mr. Nelson testified that all of SMUD's thermal power plants in the Sacramento area employ similar ammonia unloading procedures, which involve standby plant personnel in addition to the already highly trained driver. (3/13 RT 250-251.) Staff expert Mr. Tyler corroborated Mr. Nelson's testimony, stating that "the risk profiles from this facility, the types of materials being used, and the controls involved really make it very unlikely that we would have a significant hazmat event." (3/13 RT 247.) Mr. Tyler went on to testify as follows:

In the case of aqueous ammonia with catchment basins and the type of equipment that we have here, we've already put in place conditions where the hazardous materials would, if they were released . . . the material automatically drains from the catchment basin into a covered area which suppresses virtually all emissions from the facility. I would also point out that every hazmat delivery truck driver has to be trained extensively on how to respond to an incident involving his truck. If there were a tank failure, the tank would automatically drain into the catchment basin. (3/13 RT 248.)

available, and it would be picking units from the surrounding areas, which would be [Galt], Elk Grove, and working to the north.” (132.)

Commissioner Pernell correctly stated that “it's critical to have some special equipment onsite, to give the fire departments and hazmat teams some time to get there.” (135.) Captain Atwood agreed, testifying that the fire agencies “have been in discussion with SMUD concerning neutralizers, absorbents, etc. that will be placed onsite, readily available for the first responder. Because of the quantities that will be onsite, we can't realistically carry it on our rigs to the site, so it will be available on scene.” (135.)

Mr. Taylor testified that the combined fire agencies would be meeting with Project personnel to familiarize themselves with the hazards and to develop joint plans for emergency response. “In fact, as we get further along with the construction, we will meet with all the fire people and hazardous response teams and actually go through what we've got on the site, and how they could respond. For example de-energizing the plant before anybody put water on a particular area. And our operations staff would be trained to do that as well. But we would in fact get a permit from the fire chief before we actually operated the plant itself.” (127.)¹⁶

Galt Chief Templeton stated there was a need for some specialized equipment in terms of foam firefighting capabilities. SMUD and the local fire agencies are also discussing the need to install some additional communications equipment at the CPP site. (124-125.) Chief Templeton also testified that the Hazmat response plan will address electrical, pollution and fire hazards, including how to contain spills of flammable and combustible liquids, how to keep them separated, as well as their redundancy in power supplies and water supplies for their onsite fire suppression equipment. (126.) The bottom line is, as Captain Atwood testified, that all of the

fire agencies would get together and develop a list of additional equipment that they might need to respond to an industrial fire, as well as any training and/or personnel requirements:

“[W]e've got previous experience with SMUD operating their plants in the city of Sacramento, and prior to their operation we have reviewed everything and worked a lot with them, and during the process of construction and operation we do a continuing training based in familiarization of the operation of the plant. Now, with the people that will be on scene at the plant, you know, they're going to be experienced and knowledgeable about plant operations.” (128.)

5. SMUD Has Designed the Proposed Facilities to Minimize the Risk of Any Accidental Spills of Hazardous Materials; and Responding Local Agencies Are Prepared to Deal with Emergencies in the Unlikely Event that They Occur.

In conclusion, SMUD's and Staff's testimony on March 13, 2003 (discussed in detail in SMUD's Group 1 Opening Brief, pp. 23-27), and the public safety panel's testimony on May 12, 2003, demonstrated that: (1) SMUD has designed the proposed facilities to minimize the risk of any accidental spills of hazardous materials; and (2) responding local agencies are prepared to deal with emergencies in the unlikely event that they occur. To provide further assurances of the safety of the public, plant workers, and property from plant generation, SMUD is submitting by July 1, 2003 (in accordance with the May 19, 2003, Committee Order Re: Fire Safety), a more detailed plan listing the additional personnel, training, and equipment needs of local fire and public safety agencies as a result of the CPP Project.

C. Air Quality.

Staff argues that the ammonia slip level required by the SMAQMD must be reduced to 5 ppm (parts per million) to avoid increases in particulates. The following discussion addresses the speculative nature of the conversion of ammonia to particulates and therefore, the speculative

¹⁶ In response to a citizen's concern that Fire agency resources might be cut during tough budget times, Elk Grove, City, County, and Galt representatives all testified that their budgets were increasing, not decreasing, despite state

nature of the impact itself. The discussion then highlights the differences in recommendations by Staff across various siting cases, the need to evaluate the California Air Resources Board's ("CARB") guidance in its entirety -- with a NOx emission limit of 2.5 ppm, and the role of SMAQMD in addressing regional particulate issues.

1. Staff Admitted that the Amount of Conversion of Ammonia to Particulates is Speculative.

In order for ammonia slip to contribute to particulates it must convert in the air into a particulate, such as ammonium nitrate or ammonium sulfate. (See SMUD's Testimony, Air Quality, pp. 15-16.) Staff admits that the rate of conversion is speculative. "The ammonia to PM-10 or to PM-2.5 is a conversion, and that conversion is very variable and very speculative." (5/12 RT 345.) Since the conversion rate is speculative, it follows that the amount of contribution of ammonia to particulates is also speculative. Thus, the amount of impact on particulates from a 10 ppm ammonia slip is also speculative.

CEQA requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts. (Cal. Pub. Res. Code Sections 21002 & 21081.) A significant effect on the environment is defined in the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." (14 CCR Section 15382; Cal. Publ. Res. Code Section 21068.) It is well settled in CEQA that speculation cannot be the basis for a finding of significant impacts. (See Gentry v. City of Murrieta, 36 Cal. App. 4th 1359 (1995); Citizen Action to Serve All Students v. Thornley, 22 Cal. App. 3d, 748, 758 (1990).) Although all parties admit there is the potential for ammonia slip to cause secondary

budget issues, because they are funded from different sources. (140 - 141.)

particulates, the amount of contribution of ammonia slip to particulates cannot be accurately quantified. (3/13 RT 68, 70; 5/12 RT 345.) Since the conversion rate is speculative, the amount of contribution of particulates from an ammonia slip of 10 ppm is speculative. If the amount of the contribution to particulates is speculative, the impact of that speculative contribution cannot be accurately quantified. If the amount of impact is speculative, then CEQA does not allow the impact to be considered a significant impact. If the impact cannot be significant, the mitigation requested by Staff cannot be applied to CPP.

This conclusion is especially true in an environment that is “ammonia-rich,” in that the area has excess ammonia in relation to the precursors required for the ammonia to convert to particulates. (3/13 RT 68-69.) Adding more ammonia to the ambient air will result in the immediate formation of ammonium nitrate particulate only if the area has excess acidic nitrates and sulfates available for reaction. (SMUD’s Testimony, Air Quality, p. 16.) Based upon the CARB analysis and determination that the Sacramento area is ammonia-rich, Mr. Rubenstein concluded that the contribution of ammonia from an ammonia slip level of 10 ppm would be insignificant. (SMUD’s Testimony, Air Quality, p. 16; referencing the FDOC, p. 361.)

As explained by Mr. Rubenstein, selective catalytic reduction (“SCR”) catalysts degrade over time. (3/13 RT 67.) Mr. Rubenstein clarified that the ammonia slip when the catalyst is new is on the order of 1 ppm or less gradually rising over time¹⁷. (3/13 RT 116.) At the end of

¹⁷ If the Committee would like additional assurance of the catalyst design as described by Mr. Rubenstein, SMUD would accept the following as a condition of certification. This condition is provided as a revision to AQ-SC7.

AQ-SC7 The project owner shall ensure that the SCR systems are designed such that emissions of ammonia (ammonia slip) from each gas turbine exhaust stack following the SCR controls shall not exceed 5 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen, on a ~~one~~ three hour basis. This design requirement emission limitation shall apply during to steady-state operations. The applicable ammonia slip emission limit shall be 10 ppmvd corrected to 15 percent oxygen, as provided for in Condition AQ-23, except during transient hours. During transient hours, a limitation of 10.0 ppmvd corrected to 15 percent oxygen shall apply on a three hour average

the catalyst's life, the decay becomes more rapid. (3/13 RT 116-117.) Therefore, the actual ammonia slip emissions from a CEQA perspective will be very low initially, increasing over time until the catalyst is replaced when the ammonia slip emissions will return to very low levels.

Therefore, the ammonia slip emissions will be well below 10 ppm for the predominant life of the catalyst, the area is ammonia-rich reducing the conversion rate of ammonia to ammonium nitrate, and the rate of conversion is speculative. Thus, under CEQA, the potential impact from a 10 ppm ammonia slip level does not meet the requirements for a significant environmental impact.

2. Staff Advocates an Inconsistent Standard Across Siting Cases.

Given the Staff's recommendation of 10 ppm ammonia slip in the San Joaquin Valley Energy Center ("SJVEC") Final Staff Assessment, Staff is advocating an inconsistent standard

~~calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.~~

Verification: ~~Not more than 60 days after project approval by the Commission, The the project owner shall submit to the District and the CPM turbine written verification from the HRSG vendor that the SCR systems to be installed at the CPP facility are designed to meet an ammonia slip level of 5 parts per million, corrected to 15 percent oxygen, on a three hour basis in combination with a NOx emission limit of 2.0 ppm, corrected to 15 percent oxygen, on a one hour basis. The written verification shall include the following SCR design parameters:~~

~~Catalyst initial source test data and annual source test data demonstrating compliance with this condition as part of the Quarterly Operational Report (AQ-SC8). A "transient hour" is defined in any clock hour when the difference between the maximum MW produced by the generator train and the minimum MW produced by the generator train exceeds +25 MW (a "transient hour"); 3-hour average, calculated as the average of the transient hour, the clock hour immediately prior to and the clock hour immediately following the transient hour.~~ Manufacturer

Catalyst Description (material)

Catalyst Type (honeycomb/pellet)

Catalyst Volume (cubic feet)

Space Velocity (1/hr)

Area Velocity (ft/hr)

Maximum Design Ammonia Injection Rate (lbs/hr)

Maximum Design Ammonia Slip Rate (ppmvd corrected to 15% oxygen)

NOx Design Removal Efficiency (percent)

NOx Design Level at the SCR Inlet (ppmvd corrected to 15% oxygen)

NOx Design Level at the SCR Outlet (ppmvd corrected to 15% oxygen)

Design Temperature at the SCR Outlet (deg F)

SCR Reactor Operating Temperature Range (deg F)

for projects located in ammonia-rich areas¹⁸. In the SJVEC proceeding Staff recognized all of the following: 1) the location as ammonia-rich, 2) how that status limits the formation of particulates from ammonia emissions, and 3) the air district's recommendation of an ammonia slip level of 10 ppm in the final determination of compliance for that case and Staff accepted the 10 ppm level in the Addendum to the Staff Assessment. (SJVEC, 01-AFC-22, Addendum to Staff Assessment, p. 4.1-56 (Dec. 24, 2002).) The following is excerpted from the SJVEC discussion:

The ammonia emissions from the project would come from the SCR system, which controls the NOx emissions, as unreacted ammonia, or "ammonia slip," that remains in the exhaust after passing through the SCR catalyst system. The San Joaquin Valley, as a result of agricultural ammonia emissions, is ammonia rich, meaning that ammonia is not the limiting reactant for secondary PM10 formation. This means higher ammonia emissions will not necessarily result in additional secondary PM10 formation; however, reducing NOx emissions will almost certainly reduce secondary PM10 formation. While the ammonia emissions are recognized as a necessary by-product of the NOx control system, staff still encourages the Applicant to control their ammonia slip emissions to the lowest possible extent, while maintaining the guaranteed NOx emission limit. (SJVEC, 01-AFC-22, Addendum to Staff Assessment, p. 4.1-45 (Dec. 24, 2002).)

Thus, Staff's characterization of a trend to require 5 ppm ammonia slip on all projects is incorrect. (3/13 RT 148.) SMUD recommends an analytical determination of the need for a 5 ppm ammonia slip based upon the specific conditions of each siting case. That analytical determination includes the approach taken by the local air district in achieving the long-term air quality goals for that area and the regional conditions such as whether the area is ammonia-rich.

¹⁸ Please refer to SMUD's Opening Brief for Group 1 Hearings at pages 7-10 for a detailed discussion of this issue. We provide a summary of that discussion in this reply brief.

3. CARB Guidance and EPA Comments on Ammonia Slip Should be Read with the Corresponding NOx Limits.

Staff attempts to rely upon the CARB Guidance for Power Plant Siting and Best Available Control Technology, issued September 1999, (“CARB Guidance”) and the Environmental Protection Agency (“EPA”) comments on previous siting cases as support for a 5 ppm ammonia slip requirement. (FSA, p. 4.1-16.) In both the CARB Guidance and the EPA comment letters on other projects including Blythe and Pastoria, those projects included a NOx limit of 2.5 ppm. (CARB Guidance, p. 8; 3/13 RT 71.) Since the two measures are related in that ammonia is used to control NOx emissions, relying upon recommendations for one part of the equation without regard to the other side fails to recognize the interrelation of NOx and ammonia. For CPP, SMAQMD has determined that a NOx limit of 2.0 ppm is applicable. As such the recommendations from the CARB Guidance and EPA for an ammonia slip limit of 5 ppm when NOx is allowed to go to 2.5 ppm is a separate and distinct situation. Additionally, since both CARB and EPA were notified of this permit and provided the opportunity to comment, if either agency had concerns about the ammonia slip level required by SMAQMD, they could have expressed their concerns in their comments. (Although CARB did not take the opportunity to comment on SMAQMD’s Preliminary Determination of Compliance, EPA did take that opportunity and did not recommend a 5 ppm ammonia slip level. See FDOC, EPA Comment Letter found behind Appendix C.) Staff attempted to infer that if EPA had either recommended an ammonia slip of 5 ppm or was silent, then EPA recommended 5 ppm in all cases. (3/13 RT 71-72.) Mr. Rubenstein clarified that EPA had issued permits with ammonia slip levels of 10 ppm and that the issuance of a permit by EPA would not be considered an

indication of silence. (Id.) Therefore, neither CARB nor EPA has recommended an ammonia slip level of 5 ppm for CPP.

4. SMAQMD is in the Best Position to Determine the Appropriate Ammonia Slip Level.

As explained by Mr. Rubenstein, environmental controls and in this instance air quality controls are not adopted in a vacuum. (3/13 RT 112.) Whereas Staff is only focused on this Project, SMAQMD must address the compliance of the region as a whole and as well as how the emissions from CPP will impact regional compliance. As such SMAQMD looks at a particulate air quality problem, like PM 10 or PM 2.5, and determines which pollutants or which precursors are most relevant to contributing to that problem within a particular area. (Id.) Once the problem is identified, SMAQMD establishes a schedule and program for control, which includes reductions in PM10 emissions from existing sources, offset requirements for new sources including PM10 and their precursors SOx and NOx. (Id.; SMAQMD, Rules and Regulations, New Source Review, Rule 202 Sections 213, 302 & 303; Permit Renewal, Rule 201 Section 305.2, requires annual renewal “to determine that permit conditions are adequate to ensure compliance with District rules . . . Applicable District rules and regulations shall include those which were in effect at the time the permit was issued or modified, or which have subsequently been adopted and made retroactively applicable . . .” (emphasis added).)

Staff’s hard position that ammonia emissions should be avoided under all circumstances fails to place the ammonia emissions within the context of any organized or rational air quality planning program. SMAQMD has established rules that apply to specific projects to reach the air quality goals of the region. Staff implies, by stating that Staff is concerned about the Project’s impacts for the next 30 years, that SMAQMD cannot require additional reductions in

emissions of CPP in the future. (3/13 RT 155-156.) This is simply incorrect. As explained by Mr. Rubenstein, if in the future SMAQMD decided that additional controls on ammonia slip were necessary, SMAQMD could impose those requirements on CPP. (3/13 RT 119-121.) SMAQMD establishes plans and creates regulatory programs for both individual sources and regional compliance based upon fundamental science and analysis: SMUD believes such planning is the appropriate way to establish emissions controls.

5. 10 ppm Ammonia Slip is the Correct Limit for CPP.

As shown in the discussion above, the impact of a 10 ppm ammonia slip level on local and regional particulate levels is speculative. As such, no significant adverse air quality impacts can be found and no mitigation can be required. The Staff's attempts to justify the requirement by looking at other siting cases or actions taken by CARB or EPA in other situations contain numerous inconsistencies. In this case, neither CARB nor EPA recommended an ammonia slip level of 5 ppm for CPP. The complex interrelations between various direct emissions of particulates and precursors are best handled in a regional plan by a regional entity such as SMAQMD. The appropriate agency to evaluate and create standards to reach air quality goals is SMAQMD, which has required an ammonia slip level of 10 ppm. The evidence clearly shows that a 10 ppm level is the appropriate level for CPP.

D. Traffic and Transportation.

SMUD and Staff are in agreement that their jointly proposed Traffic and Transportation ("TRANS") Conditions of Certification will ensure that the Project is designed, constructed and operated to comply with all applicable LORS and will mitigate any Project impacts to a level of insignificance. (FSA, p. 4.9-21, 22.) At the conclusion of the March hearings, SMUD and Staff agreed to prepare two additional joint conditions, which were presented in Staff's May 9, 2003,

Revised Conditions, which were admitted into the record on May 12, 2003. (3/14 RT 206, 5/12 RT 378.) TRANS-9 requires SMUD to select a traffic safety specialist (“TSS”), such as a County Sheriff or California Highway Patrol (“CHP”) officer, to conduct a Worker Traffic Safety Program (“WTSP”) school bus/school children awareness training program, while TRANS-10 specifies the detailed contents of the awareness training program. There was some initial confusion in the record about whether SMUD disputed the TRANS-9 language. However, SMUD clarified at the May 12 hearing that it would agree to Staff’s proposed TRANS-9 language, provided it is understood that the CHP or County Sheriff led training could be conducted either in person or by video. (5/12 RT 375.)¹⁹

Staff and SMUD also agreed to add a provision to condition TRANS-5 that requires SMUD’s construction traffic control plan, which is to be worked out in consultation with Staff and local agencies, to include consideration of “whether road signs should be installed along Twin Cities Road to inform drivers of school bus zones.” During the March hearings and again at the May 12 hearing, Hearing Officer Shean asked about adding signage to give motorists notice that there are school bus stops and children present along the commuter and delivery route. (376.) SMUD reaffirms its commitment not just to consider, but to install such signs.

In conclusion, SMUD urges the Committee to adopt the proposed TRANS-1 through TRANS-10 conditions proposed by SMUD and Staff. These conditions will ensure that the Project will be designed, constructed and operated to comply with all applicable LORS and will mitigate any Project impacts to a level of insignificance.

¹⁹ Conditions TRANS-1 through TRANS-8 are supported in the record by the unchallenged written testimony of Staff experts James Fore and Eileen Allen (FSA, pp. 4.9-1 to 4.9-27, admitted 3/14 RT 262) and SMUD’s experts Jeanne Acutanza (SMUD Group 1 Testimony of Jeanne Acutanza, P.E. [Traffic and Transportation], admitted 3/14 RT 254). In addition, Staff’s May 9, 2003, filing included two new conditions, TRANS-9 and TRANS-10, to respond to concerns raised by Ms. Peasha and the Committee. These two additional conditions were supported by oral testimony at the March 14 hearing, as discussed in SMUD’s Opening Brief.

E. Alternatives.

In the FSA, Staff concluded that “none of the alternative sites appear to reduce the potentially significant adverse impacts of the Project.” Moreover, “all potentially significant impacts of the proposed CPP can be mitigated to less than significant levels.” (FSA Part 3, Alternatives Section 6.1, pp. 6.1-1 to 6.1-38.) Staff expert Nega Vahidi concluded that “[g]iven that there are no significant unavoidable impacts from the CPP and each of the alternative sites has the potential for significant impacts, none of the three alternative sites is preferred over the CPP.” (FSA, p. 6.1-33.) Vahidi’s testimony and the FSA Alternatives analysis were admitted into the record without objection. (5/12 RT 296.) The testimony of SMUD experts Susan Strachan, Kevin Hudson and Colin Taylor corroborate the staff conclusions. (Strachan’s testimony was admitted at 5/12 RT 288, and Hudson’s/Taylor’s testimony was admitted at 5/12 RT 289.)

A couple of Bay Area residents brought in by Ms. Peasha tried vainly to argue that the Project is not needed, that there are better alternatives, and that the Project should undergo review by the California Public Utilities Commission (“CPUC”). However, as explained further below, they were badly misinformed. Electricity demand has not fallen; baseload demand and voltage support needs continue to grow in the Sacramento region in particular and Northern California in general. CPP is extremely important to meet both baseload demand and voltage support needs. (See, e.g., 5/12 RT 300-304.) Moreover, municipal utilities such as SMUD are governed by their own elected boards rather than by the CPUC. (5/12 RT 293.)

Sacramento County is one of the fastest growing regions in the country, with its population increasing by nearly three percent each year. There is also a corresponding growth in baseload demand. The CPP Project will enable SMUD to produce more of its own power to

meet that demand and, therefore, have more control over maintaining reliability and stabilizing electric rates. Just as important for Northern California in general, there is a regional need for local voltage support within the SMUD service area. (DR Set 1E, p. 2.) Without another major baseload power plant to meet growing demand in the Sacramento region, system reliability would be compromised. (Id.) Fluctuations in voltage could damage customer equipment and cause service outages. (Id.) Therefore, the failure to site a baseload power plant in the region to meet increased customer demands would require clearing new corridors and building new transmission lines. (Id.)²⁰

In addition to the CPP Project, SMUD is recognized as one of the leading utilities in the world in developing innovative, renewable energy and energy efficiency programs. SMUD has about five MW of solar photovoltaic (“PV”) panels on about 70 acres of the Rancho Seco Plant site. (5/12 RT 294.) Currently, SMUD produces about half of its own electricity from hydroelectric, solar, photovoltaic, wind, and natural gas energy sources. The other half of SMUD's power is purchased on the wholesale market.

Some critics have questioned SMUD’s selection of the proposed CPP Project site, which would occupy 30 acres of land and some of the existing facilities associated with SMUD’s 900-MW Rancho Seco Plant. But the record shows that the “CPP location at Rancho Seco was the overwhelming best choice for a power plant site.” (SMUD group 2 Testimony on Alternatives, p. 2.)

SMUD and Staff evaluated a variety of sites with respect to infrastructure, ability to serve SMUD, and the potential for conflicts with other land uses. (AFC, p. 9-2.) This analysis showed

²⁰ In addition to the favorable site locale, the CPP’s operation will be highly efficient. As a modern “combined-cycle” plant, the CPP will use two power cycles to extract the highest efficiency possible from the natural gas fuel it uses. (DR, Set 1E, p. 1) The ZLD system proposed by SMUD also ensures that the Project will cycle the FSC water

that the best possible site for a major gas-fired plant would be right next to the former nuclear plant at Rancho Seco Plant site, which was closed by a vote of SMUD's ratepayers in 1989. SMUD's Rancho Seco Plant site includes not only the shut down nuclear plant, but also the surrounding 2,480 acres of land, the existing 1,800-MW transmission system, and access to the existing Folsom-South Canal ("FSC") water conveyance system and associated water rights.

12 to 15 times, ensuring efficient use of fresh water. The Project will use reliable and effective air emission controls to minimize air pollution, and will more than offset those emissions by reducing emissions at other sources nearby.

The evidentiary record details the compelling reasons for the proposed Project site.

1. SMUD already owns a large amount of land in and around the former nuclear plant site that is still suitable to develop for its original purpose, i.e., electrical generation. (AFC, p. 9-2.)
2. The site is close to the existing transmission substation at the Rancho Seco Plant, with access to PG&E and the ISO electrical markets. (Id.)
3. The proposed Project site will allow power delivery without constructing significant new transmission lines, thereby reducing potential impacts on the environment. (Id.)
4. SMUD has a contract for and has paid for, an ample water supply that is already delivered to the site by the Folsom-South Canal. Water quality is excellent, allowing a high level of cycling. (Id.)
5. Water is already delivered to the site by the existing FSC system, thereby eliminating the environmental impacts of constructing additional water supply infrastructure. (Id.)
6. The site is close to present and future gas supplies for future reliability. (Id.)
7. Development of the site would not significantly impact environmental resources. (Id., see also FSA, p. 6.1-33.)
8. The site is located in a rural area with comparatively few residents nearby and the Project uses would be consistent with neighboring utility uses, and is consistent with the originally intended (and zoned) use of the site, power generation. (Id.)

III. CONCLUSION

For the reasons stated above and based upon the evidentiary record of this proceeding, SMUD urges the Committee to issue the Presiding Member's Proposed Decision ("PMPD") as soon as possible, recommending approval of the proposed Project, gas pipeline and other related facilities and including the following:

- (a) Findings and conclusions that the Project will comply with all public health and safety standards, applicable air and water quality standards, and all other applicable LORS; and
- (b) SMUD's proposed conditions of certification for air quality and the conditions of certification jointly proposed by SMUD and Staff for all other technical areas, which contain all modifications, mitigation measures, conditions, or other specific provisions relating to the manner in which the proposed facilities are to be designed, sited, and operated in order to:
 - 1) protect environmental quality;
 - 2) assure safe and reliable operation of the facility; and
 - 3) comply with all applicable LORS.

Respectfully submitted,

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Dated:

6/13/03


STEVEN M. COHN, Assistant General Counsel

TRANSCRIPT CORRECTIONS

Thursday, March 13, 2003

- Page 281, Line 8 – delete “r,sum,” replace with “resume”

Friday, March 14, 2003

- Page 142, Line 4 – delete “the Colon” and replace with “Mr. Colin” as in Colin Taylor, Project Director
- Page 158, Lines 5 to 6 – delete “The patient was born and raised in , came to California in” and replace with “to”
- Page 170, Line 18 – delete “things” and replace with “thinks”
- Page 172, Lines 4, 8 to 10, 14 to 15, 18 – delete “DOGET” and replace with “LOGAN,” as in Don Logan, Transportation Engineer CH2MHill
- Page 182, Line 14 – delete “remove” and replace with “remote”
- Throughout transcript – delete “Harold” and replace with “Herald”
- Throughout transcript – delete “Arcoe” and replace with “Arcohe”

Monday, May 12, 2003

- Page 110, Line 19 – delete “recognized” and replace with “recognize”
- Page 118, Line 22 – delete “HazWopr” and replace with “Hazardous Waste Operations” or “HAZWOPER”
- Page 140, Line 19 – delete “MS. HOLMES” and replace with “MR. HOLMES” as in Mr. Richard Holmes, Elk Grove Community Services District Fire Department