

DOCKETED

Docket Number:	01-AFC-19C
Project Title:	SMUD Cosumnes Power Plant - Compliance
TN #:	225831
Document Title:	SFA Response to Public Comments
Description:	N/A
Filer:	Jerry Salamy
Organization:	Jacobs
Submitter Role:	Applicant Consultant
Submission Date:	11/6/2018 4:22:16 PM
Docketed Date:	11/6/2018



SACRAMENTO MUNICIPAL UTILITY DISTRICT FINANCING AUTHORITY
P.O. Box 15830, Sacramento, CA 95852-1830

Cosumnes Power Plant

SFA-18-011

November 6, 2018

Mary Dyas
Compliance Project Manager
California Energy Commission
Siting, Transmission, & Environmental Protection Division
1516 9th Street, MS-2000
Sacramento, CA 95814

Subject: Sacramento Municipal Utility District Finance Authority's Cosumnes Power Plant (01-AFC-19C)

Dear Ms. Dyas:

The California Energy Commission received a comment letter on the Sacramento Municipal Utility District (SMUD) Finance Authority (SFA) Cosumnes Power Plant (CPP) Petition to Amend (PTA) from the Herald Fire Protection District (HFPD - TN 225075). SFA provides the following responses to the HFPD's comments in the order in which they occur in the letter.

1. The Evidentiary Hearing before the California Energy Resources Conservation and Development Commission (Docket No. 01-AFC-19) (May 12, 2003) page 127 notes, we (SMUD) would in fact get a permit from the Fire Chief before we actually operated the plant itself.

Response: The comment by the SMUD representative during the evidentiary hearing ignores the Commission's exclusive authority under the Warren-Alquist Act to permit jurisdictional power plants (with a net generation of 50 megawatts capacity or greater) in the state. As such, a fire permit from a local agency is not required. However, SMUD submitted the following CPP's documents to the HFPD for review and comment.

- Construction Fire Prevention Program on September 2, 2003
- Mechanical Design Package on June 18, 2003
- Operational Fire Prevention Program on February 6, 2006

These documents demonstrate SMUD's commitment to work with local agencies to ensure the construction and operation of the CPP conforms to applicable laws, ordinances, regulations, and standards (LORS). Attachment 1 presents a copy of the CPP's Compliance Matrix (as required by Condition COM-4) showing the submittal of the fire prevention programs to local agencies for review and comment.

2. The changes in the electrical, mechanical, natural gas, and ventilation systems necessary to achieve the electrical output, fuel consumption, and resulting heat production outlined in the Petition does require a review and redesign of the fire protection systems affected by the changes to ensure they are still compliant with current applicable laws, ordinances, regulations, and standards. The results must then be submitted to the Herald Fire Protection District for comment and approval.

Response: As noted above, the Commission retains exclusive authority to permit jurisdictional power plants in the state. If the proposed modification of CPP being requested by SFA required the modification of the Operational Fire Protection Program required by Condition Worker Safety-2, then SFA would have an obligation to submit the revised Operational Fire Protection Program to the HFPD for review and comment. However, the proposed modification of CPP does not require revising the Worker Safety-2 Operational Fire Protection Program as these changes are primarily installing in-kind replacement components (in the case of the Advanced Gas Path/Dry-Low NOx 2.6+ combustor) and the installation of an oxidation catalyst into an existing space within the heat recovery steam generators. As a note, the oxidation catalyst does not require any reagents and functions in a similar manner to the catalyst employed on all gasoline automobiles sold for use on public roadways.

In addition, Condition GEN-1 requires SFA to design, construct, and inspect each phase of the project in accordance with the current edition of the applicable California building codes. To ensure this occurs, the CEC requires design and construction at CPP to be overseen by a Designated Chief Building Official approved by the CEC. Furthermore, GEN-1 requires the submittal of a Certificate of Occupancy signed by the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's Decision have been met. Attachment 2 presents a signed copy of the Certificate of Occupancy.

3. The proposed CPP modifications will not create a significant impact from hazardous materials handling that will require additional mitigation measures.

The original computer model used for the uncontrolled release of aqueous ammonia found in the Final Staff Assessment (Part 1) on the Cosumnes Power Plant Project (February 2003) is now 15 years old. The model never considered the infrastructure damage resulting from the deflagration of aqueous ammonia, page 4.4-11 notes, data response 181 (SMUD) 20021) provided the results of modeling for a worst-case accidental release of aqueous ammonia. The analysis assumed winds of 1.0 meter per second and atmospheric stability category F would exist at the time of the accidental release. An air temperature of 115 degrees was assumed. The ALOHA (Areal Locations of Hazardous Atmospheres) air dispersion model was used to estimate airborne concentrations of ammonia.

These analyses were designed to predict the maximum possible impacts based on distance from the storage tank without regard to specific direction of transport.

The worst-case release is associated with a failure of the ammonia storage tank releasing all of its content into the secondary containment area, and the alternative scenario is a failure of a supply truck loading hose spilling aqueous ammonia onto the truck unloading pad with flow to the capture sump.

The results indicated that concentrations exceeding 75-ppm in the worst-case scenario would be present in the atmosphere 801 feet, which is mostly limited to the project site. The off-site areas impacted by the 75-ppm concentration would be to the north and east of the fence line and approximately 75 feet to the west (just past the transmission towers). In the alternative scenario, the concentration of 75-ppm would be present 318 feet away from the truck unloading pad which would impact off-site areas only to the north and east. Page 4.15-4 notes, Major structural fires may develop from uncontrolled fires or be caused by large explosions of natural gas or other flammable gasses or liquids. Compliance with all LORS would be adequate to assure protection from all fire hazards. The Herald Fire District has stated that it is adequately equipped and staffed to respond to an on-site fire within 10 minutes or less (Hendrickson 2002), and the Sacramento County Environmental Management Department (SCEMD) stated that they are prepared to deal with any hazardous materials spill (Rothchild 2002).

A new computer model using updated equipment must be completed. The new computer model must include the average local wind speed, temperature, and direction. Also, a study on the deflagration damage resulting from the aerosolized aqueous ammonia (as it crosses the transmission towers) must be completed as well. An updated computer model on the uncontrolled release of aqueous ammonia and deflagration damage study, may identify additional construction requirements and impacted areas/persons not known at the time. Of significant importance, is the potential for the entire on-site emergency water supply system including the gravity fed water tank to be either contaminated or in the deflagration zone.

Response: Condition HAZ-2 requires SFA to comply with the requirements of the California Accidental Release Prevention Program (CalARP), which requires the preparation of a Risk Management Plan (RMP). The CalARP regulations, implemented by the administering agency - the Sacramento County Environmental Management Department and overseen by the California Energy Commission Compliance Project Manager, requires SFA to submit updates to the RMP plan every five (5) years or when a major change¹ to the facility is implemented. Updating the RMP update involves a review of the process hazards, any changes in the hazardous materials used/stored at the facility, a

¹ Major change means introduction of a new process, process equipment, or regulated substance, an alteration of process chemistry that results in any change to safe operating limits, or other alteration that introduces a new hazard.

review of the facility's accident history, and an assessment of the worst case and alternative case offsite consequence analysis.

The modifications proposed by SFA do not increase the amount of ammonia present onsite, nor do they alter the process chemistry or introduce new hazards. Additionally, SFA completed an RMP update in April 2015².

Furthermore, the physical layout of the CPP site has not changed and potential hazards remain the same as when the Commission approved the plant configuration.

Finally, the ambient parameters used in the CalARP program for determining the offsite consequences (wind speed and temperature) are required by the administering agency and were selected to maximize the offsite impacts by increasing the evaporation rates of released substances (highest local ambient temperature within the last 3 years) and minimizing the dispersion of the plume (using a low 1.5 meter per second wind speed). Using average temperature data would tend to reduce the rate at which ammonia evaporates and using an actual predominant wind direction could result in the plume impacting an area with no residential or sensitive receptors. The current model assumes the winds blow equally in all directions to enhance the conservative nature of the offsite consequence assessment methodology developed by the State.

4. The Cosumnes Power Plant Upgrade Project notes the increase in natural gas usage. The natural gas pipeline supplying the Cosumnes Power Plant was originally designed for Class 3 service and met, at that time, all known regulatory requirements. The Class 3 designation was based on the population density and land use. Since the original pipeline was constructed, the population density has considerably changed. The number of both permitted and non-permitted occupied dwellings has increased and Rancho Seco Park was remodeled, accommodating more visitors.

On 05/12/2018, a flash type fire occurred during maintenance in the above ground portion of the pipeline located at 12495 Clay East Road. The Herald Fire Protection District received a private phone call to Fire Station 87 directly and not through the Sacramento Regional Fire/EMS Emergency Communications Center (SRFECC). A review of the pipeline Class 3 designation as well as the frequency and type of maintenance procedures performed must be reviewed and identified changes implemented. Also, the established protocols in the Integrated Contingency Plan were not followed. The Integrated Contingency Plan must itself be updated to include plans for a large fire or natural gas release at both of the above natural gas pipeline locations in the Herald Fire Protection Districts response area.

Response: The proposed modification of the CPP will not increase the capacity or demand of the natural gas pipeline, nor are any physical changes required to the pipeline. SMUD/SFA operate and maintain the pipeline consistent with

²<http://www.emd.saccounty.net/Public%20Notices/Risk%20Management%20Plans%20April%202010.pdf>

applicable Federal regulations (Title 49, Code of Federal Regulations, Part 192). In fact, SMUD just completed its annual density survey of the natural gas pipelines, as required by CFR 192, which indicated no change in the mechanical integrity of the pipeline.

Regarding the call the HFPD received from a private party, this call is not associated with the proposed modification to CPP being assessed at this time.

5. The Herald Fire Protection District will be the first responding fire agency during any hazardous material spill/release or fire but does not have the required equipment needed to perform the mandated procedures required during a large incident. In the event of an on-site water distribution system failure, the Herald Fire Protection District does not have the additional apparatus and remote drafting infrastructure necessary to provide the mandated fire flow requirements at the Cosumnes Power Plant or any of the other SMUD asset locations in the Herald Fire Protection District's response area.

Response: During the CPP evidentiary hearings, the Committee heard testimony from a panel of local fire and hazardous materials officials, including the Hazardous Materials Coordinator for Sacramento County, the Chief of the Herald Fire Department, the Galt Fire District, the Battalion Chief of the Elk Grove Fire Department, and the Fire Captain and Hazardous Material Coordinator of the Sacramento City Fire Department. The panel described an "integrated and seamless communication and response capability of the Sacramento area firefighting and hazmat incident resources, which have the ability, beginning with the enhanced 911 dispatch, to mobilize area resources from initial responders to a massive multi-jurisdictional response."³

In addition to the 24/7 presence of onsite staff that undergoes routine fire protection and hazardous materials response training, CPP includes numerous onsite fire protection and leak detection systems that are routinely tested to ensure operational readiness. Onsite chemical storage areas are protected by secondary containment sumps and monitoring systems, with an allowance for the accumulation of precipitation to ensure protection of public health and the environment.

Finally, SMUD has entered into agreements with the Sacramento Metropolitan Fire District and the Sacramento County Sheriff's Department to provide for the installation of radio communication equipment at CPP and at Rancho Seco. These communication systems enhance communications and emergency response in south Sacramento County. SMUD also committed to providing training materials and patching equipment as recommended by the agencies involved in the evidentiary hearing panel discussed above. Attachment 3 presents a letter to the CPP Committee members discussing these and other measures. SMUD holds twice-yearly documented training for the region's fire protection and law enforcement communities for gas pipeline related emergencies and runs through table top and field exercise scenarios design to

³California Energy Commission, Final Decision (01-AFC-19), September 10, 2003, page 270.

enhance unified command coordination in Sacramento and Yolo Counties related to SMUD facilities. SMUD also performs annual CPP training drills directly with Herald, Cosumnes, and Lone Fire Departments, and Sacramento County Hazmat to simulate high angle rescues, hazardous materials releases, and causality recovery exercises. These joint exercises have been performed on an annual basis for the past 10 years and include formal after-action reviews following the exercise to identify opportunities for improvement to be better prepared for a real response. Attachment 4 is the agenda from the 2017 joint training emergency response exercise.

6. 3.6.1 Environmental Baseline Information

No existing recreational, scenic, natural resource protection, natural resource extraction, educational, or religious land uses exist in the vicinity (i.e., within one mile) of the project site. Cosumnes Power Plant (CPP) is approximately two miles west of Rancho Seco Park, which is owned and operated by SMUD. Recreational facilities include fishing, boating, swimming, and camping. No other recreational facilities exist in the vicinity of the project site.

The Final Staff Assessment (Part 1) on the Cosumnes Power Plant Project (February 2003) page 4.4-11 notes, there are no sensitive receptors (schools, hospitals, day care centers, etc.) within a three-mile radius. The Cosumnes Power Plant is 1.4 miles west of Rancho Seco Park (measured by vehicle odometer entrance to entrance) across the emergency use roadway located between Clay Station Road and the park entrance. No reason for the two-mile reduction in distance for sensitive receptor sites was identified in the new Petition. The park was recently remodeled. However, the single lane entrance and exit were not redesigned and repaired. Also, the issue of emergency notification during a release through the dam overflow spillway was not addressed.

Rancho Seco Park now accommodates more visitors of all ages/abilities and several large events are held there every year.

Response: The use of a 1-mile area around the CPP is based on the CEC Siting Regulation Appendix B(g)(3)(A) which requires "A discussion of existing land uses and current zoning at the site, land uses and land use patterns within one mile of the proposed site and within one-quarter mile of any project-related linear facilities." Regardless of the distance to the Rancho Seco Park, the proposed CPP modification will not result in a conflict with applicable land use laws, ordinances, regulations and standards. Furthermore, SMUD/SFA analyzed the air quality and public health impacts from the proposed increase in CPP fuel consumption and determined that the point of maximum impact did not result in a significant air quality or public health impact (see Transaction Number 224625, Attachment 3.1, Appendix E).

7. Sacramento County's General Plan has defined an Urban Service Boundary (USB), which defines a permanent boundary beyond which the County does not

provide urban levels of public infrastructure. The CPP site is outside of the USB, and urban growth is not planned for the project vicinity.

Because the proposed project upgrade is not in the USB, no public infrastructure, such as water mains and fire hydrants, exist in the area. The Herald Fire Protection District will continue to shoulder all of the financial responsibility and regulatory requirements necessary to protect all SMUD assets located in the Fire District boundaries.

Currently, there are seven registered address locations in the District. The miles of electrical distribution lines are not included. An audit involving SMUD assets over the last 10.5 years showed a steady increase in the number and severity of emergency calls. The totals are;

- 53 working fires.
- 93 EMS incidents.
- 140 incidents classified as "other".

Among the emergency calls for service were: 1 Remote Area Rescue involving a helicopter; 1 technical rescue; 2 water rescues (involving a total of 4 patients); 1 pipeline fire, 2 deaths; and 1 major flooding incident involving the dam overflow spillway.

Response: Based on a review of the information provided in the comment, these calls appear to be unrelated to the operation or maintenance of CPP and appear instead to be related to other energy infrastructure activities in the HFPD's jurisdiction. The proposed CPP modifications will not affect the potential for HFPD-related service calls at the site or within the project area. A review of CPP's medical/fire/hazardous waste-related incidents indicates the facility has experienced 2 emergency responses in the last 43,800 operating hours. One response was regarding an injury to an employee and the other was in response to a visitor experiencing a minor medical issue.

8. The proposed CPP modifications will not create a significant impact to land use that requires additional mitigation measures.

This discrepancy in distance between Rancho Seco Park and the Cosumnes Power Plant must be corrected and more accurately reflected in the new petition. The proposed modifications will create a significant impact to the roadways and widespread panic due to a hazardous material spill/release or large fire at the Cosumnes Power Plant. Currently, the only option for the visitors at the park is for them to shelter in place. This is unacceptable because the majority of overnight visitors are in tents. A second exit from the park must be constructed. This will further aid in the orderly evacuation of the park visitors during an emergency incident.

Response: The comment assumes that a hazardous materials release from CPP has the potential to necessitate the evacuation of the nearby Rancho Seco

Park. A review of the Final Staff Assessment Part 1⁴ shows the Commission assessed two cases (catastrophic failure of the CPP ammonia storage tank and an alternative release during unloading of ammonia into the storage tank) of CPP's release of ammonia using the Areal Locations of Hazardous Atmospheres (ALOHA) model. The Final Decision concludes that the maximum distance the ammonia concentrations would exceed the Commission staff's threshold of 75-ppm was 801 feet, which does not extend to the nearest publicly accessible area of Clay Station Road. At distances of 1 mile or more, the ammonia concentration will likely be less than the odor threshold and unnoticeable for most individuals.

Furthermore, SMUD has just completed its 2018 Local Hazard Mitigation Plan⁵ (LHMP) which represents the utility's commitment to reduce or eliminate where possible the potential natural and human-caused risks and impacts from its operations. The LHMP assesses the hazards associated with SMUD's generation facilities (fossil, renewable, and hydro), as well as hazards associated with its electrical and natural gas transmission/distribution system. The LHMP addresses hazardous materials releases from CPP as well as geologic and terrorism risks for the dam at Rancho Seco Park.

9. The Final Staff Assessment (Part 1) on the Cosumnes Power Plant Project (February 2003) found "an unacceptable risk" in the transportation of hazardous material to the Cosumnes Power Plant, page 4.4-14 notes, Staff has some concerns about the route used to gain access to the project site. Twin Cities Road is narrow and has no shoulder. Because there are farming and livestock operations in the area, it is reasonable to expect that slow-moving or wide loads (tractors, hay trucks, etc.) would use this road and thus be encountered when transporting hazardous materials to the power plant. It is staff's opinion that due to the narrowness of this road, it would be impossible for a tanker truck to pass a hay truck going in the opposite direction without at least one vehicle (or perhaps both) going slightly off the road. This would present an unacceptable risk of upset of the tanker truck. Additionally, the route passes a school in Herald and heavy fog exists during morning hours during certain times of the year (late winter and early spring). In order to mitigate this risk, staff recommends adoption of Condition of Certification (HAZ-8); that all hazardous materials tankers carrying more than 1000 gallons be escorted from SR-99 or 15 to the facility by a lead vehicle equipped with fog lights and a two-way radio or other method of communicating with the transportation vehicle.

Page 4.9-6 notes, At SR-104/Twin Cities Road, Caltrans has long term plans (i.e., in 2015) to widen the Twin Cities Road overpass from two lanes to four lanes at SR-99 and to add a bicycle lane that would fit into an existing wide section of SR-104/Twin Cities Road.

⁴ https://www.energy.ca.gov/sitingcases/smud/documents/2003-02-11_COSUMNES_FSA.PDF, page 4.4-11.

⁵ <https://www.smud.org/-/media/Documents/Corporate/About-Us/Reports-and-Documents/2018/Local-Hazard-Mitigation-Plan-public-comment-draft.ashx?la=en&hash=4A93C3EF014B605992C95AC40F6C1267D79EID8E>

The construction on the Cosumnes Power Plant was completed but the aforementioned "unacceptable risk" remains. Additionally, the overpass at Twin Cities Road now has a roundabout instead of four lanes. A new traffic study must be completed that includes provisions to repair Twin Cities Road along the entire route from SR-99 to the power plant.

Should a vehicle accident involving a tanker carrying hazardous materials occur on Twin Cities Road, the Herald Fire Protection District does not carry the mandated emergency containment equipment needed for a hazardous material spill/release on the roadway in the fire apparatus. Additionally, the Herald Fire Protection District would also require additional apparatus and remote drafting infrastructure necessary to combat a fire involving a hazardous material spill/release on the roadway.

Response: The transport of materials, including ammonia, to the project site was considered during the licensing of CPP. The proposed modifications to CPP do not require an increase in the volume of ammonia stored at the site or require additional ammonia deliveries. As such, the proposed modifications do not alter the underlying basis, or the conclusions reached by the Commission in licensing the CPP.

If you require any clarifications or additional information, please let me know.

Sincerely,

A handwritten signature in blue ink, appearing to read "E. Poff".

Eric Poff
Manager, Thermal Generation, Power Generation

cc: D. Blevins/EthosEnergy
René Toledo/SMUD
Jeff Adkins/Trinity

Attachment 1
SMUD's COM-4 Compliance Matrix

COMPLIANCE MATRIX FOR STARTUP AND OPERATIONS

Technical Area	Condition Number	Description of Action/Submittal	Plant or Pipeline	Agency Submittal or Approval	Days Submitted or Notified Prior	Time Condition	Pre-Construction Flag	Date of Time Condition	Expected Submittal Date	Date of Submittal or Last Revision	Date Approved by Agency	Notes	Status [not started/ in progress/ completed]	SMUD Prerequisite Tasks	Assigned To	Date Due
Worker Safety & Fire Protection	WORKER SAFETY-1	Submit a copy of the project construction safety and health program containing referenced elements, and letter of review from Herald Fire District stating it has reviewed and commented on the fire protection elements	Both	CEC - CPM	30	Prior to mobilization	Prior to construction	09/17/03	08/18/03	7/28/03 (CPP03-424) to J. Scott for Pipeline 7/28/03 (CPP03-426) to G. Hendrickson for Pipeline 8/15/03 (CPP03-466) to J. Scott for Pipeline 9/2/03 (CPP03-539) to G. Hendrickson for Project Site 8/29/03 (CPP03-537) to J. Scott for Project Site 10/8/03 (CPP03-673) to J. Scott	8/14/03 approval from Herald FPD for pipeline 9/2/2003	Approved	C	Collect and prepare plan for submittal	SMUD	08/11/03
Worker Safety & Fire Protection	WORKER SAFETY-2	Submit a copy of the project operations and maintenance safety and health program containing referenced elements, obtaining review and comment from Cal/OSHA, and review and comment from Herald Fire District for fire protection elements	Both	CEC - CPM	30	Prior to start of commercial operation		03/08/06	02/06/06	5/6/03 (CPP03-201) Galt F.D. 01/08/06 WGPO hand delivered IIPP to J. Scott		Submitted Preliminary information to Galt FD	C	Develop project O&M safety and health program and submit to Cal/OSHA, and obtain review and comment from Herald Fire District	WGPO	01/30/06
Worker Safety & Fire Protection	WORKER SAFETY-3	Submit the noise control program to the CPM. Make the project available to Cal-OSHA upon request	Both	CEC-CPM	30	Prior to the start of ground disturbance	Prior to construction	09/17/03	08/18/03	8/7/03 (CPP03-447) to J. Scott 10/17/03 (CPP03-718) to J. Scott 1/7/04 (CPP04-010) to J. Scott for pipeline		Submitted as NOISE-3 under FSA conditions	C	Develop hearing conservation program	SMUD	08/11/03
Worker Safety & Fire Protection	WORKER SAFETY-4	Submit the noise survey report to the CPM. Make the report available to Cal-OSHA upon request.	Both	CEC-CPM	30(after)	After completing survey and 80% sustained output		03/08/06	04/07/06			or 80% sustained output		Conduct Noise Survey	WGPO	03/23/06
Facility Design	GEN-1	Submit a statement of verification, signed by the design engineer, attesting designs, construction, installation, and inspection requirements of LORS have been met (1998 CBC), and submit certificate of occupancy from CBO	Both	CEC - CPM CBO	30 (after)	30 days after receipt of certificate of occupancy from CBO		03/08/06	04/07/06					Prepare statement of verification letter	SMUD	03/31/06
Facility Design	GEN-2	Submit the schedule of facility design submittals, master drawing list and master specification list for major structures. Reference Facility Design Table 1	Both	CEC - CPM CBO	60	Prior to site rough grading (or project owner and CBO approved alternative timeframe)	Prior to construction	10/09/03	08/10/03	1/8/03 (CPP02-313) to J. Scott	01/09/03	Approved	C	Develop schedule of facility design submittals, master drawing list and master specifications list	SMUD	08/03/03
Facility Design	GEN-2	Provide updates to the CBO review schedule in the monthly compliance report	Both	CEC - CPM CBO	monthly	Provide updates in monthly construction compliance report		monthly construction compliance report	monthly construction compliance report					Provide monthly updates	SMUD	monthly
Facility Design	GEN-3	Submit a copy of the CBO's receipt of payment in each monthly compliance report indicating CBO design review, plan check, and construction inspection activities are progressing	Both	CEC - CPM CBO	monthly	Provide in monthly compliance report during construction		monthly construction compliance report	monthly construction compliance report				C	Submit statement of reimbursement that CBO is SMUD employee	SMUD	monthly
Facility Design	GEN-4	Submit for review and approval, the resume and registration number for the proposed resident engineer (in charge of the project) and any other delegated engineers assigned to the project	Both	CEC - CPM CBO	30	Prior to site rough grading (or project owner and CBO approved alternative timeframe)	Prior to construction	10/09/03	09/09/03	7/17/03 (CPP03-405) to CBO 7/18/03 (CPP03-407) to J. Scott			C	Select resident engineer and resident engineering staff	SMUD	09/02/03
Facility Design	GEN-5	Assign and submit resumes and registration numbers of the responsible civil engineer, soils (geotechnical) engineer, and engineering geologist	Both	CBO	30	Prior to site rough grading (or project owner and CBO approved alternative timeframe)	Prior to construction	10/09/03	09/09/03	7/17/03 (CPP03-405) to CBO			C	Select responsible design engineers	SMUD	09/02/03
Facility Design	GEN-5	Notify CPM of the CBO's approvals of the responsible "below grade and foundation" design engineers	Both	CEC - CPM	5 (after)	Within 5 days of CBO approval of responsible engineers		10/09/03	10/14/03	7/17/03 (CPP03-407) to J. Scott			C	Develop notification letter	SMUD	10/07/03
Facility Design	GEN-5	Assign and submit resumes and registration numbers of the responsible design engineer, mechanical engineer, and electrical engineer	Both	CBO	30	Prior to site construction (above ground installation) (or project owner and CBO approved alternative timeframe)		11/01/03	10/02/03	7/17/03 (CPP03-405) to CBO			C	Select responsible design engineers	SMUD	09/25/03
Facility Design	GEN-5	Notify CPM of the CBO's approvals of the responsible "above ground" engineers	Both	CEC - CPM	5 (after)	Within 5 days of CBO approval of responsible engineers		11/01/03	11/06/03	7/18/03 (CPP03-407) to J. Scott			C	Develop notification letter	SMUD	10/30/03

Attachment 2
CPP Certificate of Occupancy



SMUD

Sacramento Municipal Utility District
Sacramento's First Choice for Energy

6201 S Street, P.O. Box 15830, Sacramento, CA 95852-1830. (916) 452-3211
AN ELECTRIC SYSTEM SERVING THE HEART OF CALIFORNIA

CERTIFICATE OF OCCUPANCY

March 29, 2007
DPG 07-036

Mr. Bob Nelson
Sacramento Financing Authority
Cosumnes Power Plant
14295 Clay East Road
Herald, CA 95638

**CERTIFICATE OF OCCUPANCY – CEC PERMIT
NUMBER 01-AFC-19C COSUMNES POWER PLANT**

Dear Mr. Nelson,

On behalf of the California Energy Commission (CEC), I am granting this Certificate of Occupancy for the occupied buildings and appurtenances of the Cosumnes Power Plant, CEC Permit Number 01-AFC-19C.

The occupied buildings and appurtenances are complete and accepted as compliant with the California Building Standards Code (CBSC) and all other applicable LORS, relative to safe occupancy.

Sincerely,

Paul J. Bender, PE
Chief Building Official

September 27, 2002
CPP02-167

Supervisor Don Nottoli
Sacramento County Board of Supervisors
700 H Street, Suite 2450
Sacramento, CA 95814

Re: Cosumnes Power Plant Pipeline Route Maps

Dear Supervisor Nottoli,

Thank you for meeting with SMUD on September 23rd to discuss the Cosumnes Power Plant project. As you requested, I have enclosed a set of gas pipeline route maps for your use. The California Energy Commission requires us to provide route information on topographical maps, which are not updated as frequently as street maps. Therefore, you will notice several recently constructed roadways do not appear in the context of these maps. I hope you will still find this format suitable and useful.

On Tuesday of this week, I spoke with Herald Fire Chief Glenn Hendrickson to coordinate a joint meeting in the month of October with the Herald and Galt Fire Protection Districts to review CPP's fire protection design drawings. I also followed up with Jeff Clark, SACDOT Senior Civil Engineer, and re-affirmed SMUD's commitment to coordinate pipeline activities with the County near the intersection of Clay East Road and Twin Cities Road.

Please feel free to call me at (916) 732-7101 with any questions.

Sincerely,

Kevin Hudson
CPP Licensing Project Manager

Attachments

cc: Jeff Clark (Sacramento County DOT)
Steve Cohn
Jim Shetler
Lois Wright

April 11, 2003
CPP03-168

Capt. Chuck Atwood
Sacramento Fire Department
3230 J Street
Sacramento, CA 95816-4405

Re: Sample Spill Prevention, Control, and Countermeasures Plan; and Risk Management Plan; Cosumnes Power Plant (01-AFC-19)

Dear Capt. Atwood,

As requested in our March 26, 2003 meeting with you, Chief Templeton of the Galt Fire District, and Chief Hendrickson of the Herald Fire District, we are enclosing copies of representative samples of the Spill Prevention, Control, and Countermeasures Plan, and the Risk Management Plan for SMUD's Cogeneration Facility at Campbell Soup. These samples are similar to material that will be developed for the Cosumnes Power Plant.

We understand that you are working with Chief Templeton and Chief Hendrickson to evaluate SMUD's Application for Certification and hazardous materials to ensure the fire departments are properly equipped to respond to an incident that could be reasonably anticipated, such as a fire, hazardous material spill, or aqueous ammonia shipping incident.

We also discussed having a panel made up of representatives from the fire departments to answer questions at the California Energy Commission hearings. The next hearing dates are expected to be May 12th and 13th, 2003. It would be helpful to have you participate on that panel.

SMUD looks forward to continuing to work with the Sacramento Fire Department, Galt Fire District, and Herald Fire District to ensure the safety of the plant, community, and responders. If you have any questions, you may reach me directly at (916) 732-7101.

Sincerely,

Kevin M. Hudson
Licensing Project Manager
Cosumnes Power Plant

cc: Chief Hendrickson, Herald Fire District
Chief Templeton, Galt Fire District
Scott Flake, SMUD
Walter Hernandez, SMUD Consultant

May 6, 2003
CPP03-201

Chief Glen "Skip" Hendrickson
Herald Fire District
12746 Ivie Road
Herald, CA 95638

Re: Cosumnes Power Plant Fire and Hazardous Materials Incident Response

Dear Chief Hendrickson:

On behalf of the Sacramento Municipal Utility District (SMUD), this is to confirm our commitment to work with you and the other fire districts/departments that may be called upon to respond to fire, ambulance and/or hazardous material emergencies at the proposed Cosumnes Power Plant at Rancho Seco, to prepare an acceptable Construction Fire Protection and Prevention Program prior to construction of the CPP project and an acceptable Operations Fire Protection and Prevention Program and Emergency Action Plan prior to operation of the CPP project.

Yours truly,

Colin Taylor
Project Director
Cosumnes Power Plant

cc: Galt Fire Chief James Templeton
Chief David Green, County of Sacramento Environmental Management Department
Captain Atwood, City of Sacramento Hazmat Team

Firewater Electric Pumps

The Presiding Members Proposed Decision requested additional information for the firewater pumps from SMUD. The following provides information that is intended to satisfy this request.

Two firewater pumps serve the Cosumnes Power Plant. Each is electrically driven. The primary pump is powered by on-site sources, including the Rancho Seco switchyard that feeds back to the CPP. The motor control center serving the primary pump has four redundant sources. The backup fire pump is powered by an independent, off-site 12 kV source connected to SMUD's looping electrical grid. That grid is powered by multiple power generation sources. SMUD qualified to be its own control area in 2002; therefore, SMUD is independent of the California ISO and has the ability to operate even when there is a system-wide outage throughout the western United States or California. In other words, SMUD can isolate itself when upsets to the regional grid occur, yet can draw from outlying areas to supplement its own generation. Attached are electrical system drawings 100E1101, sheet 1, revision 1 and 100E1104 sheet 1, revision 1 that depict this information.

The fire system has been designed and sealed by a registered professional engineer, attesting that the firewater pump system meets the requirements of NFPA 20, *Installation of Stationary Pumps for Fire Protection, Chapter 6, Electric Drive for Pumps*. The on-site source with its redundancies, and off-site source with its redundancies, constitute two or more independent sources required by NFPA 20.

Galt Fire Protection District Letter Received June 12, 2003

1. Better communications, both alerting (154 MHz) and responding (800 MHz). Requests locations on existing cooling tower for repeaters for the local responding agencies, both VHF and UHF.

SMUD will provide the County with space atop the existing 425-foot cooling tower, and space for a communications rack in the communications room.

2. Concerned that in the event of a power failure, there is no backup generator for primary or backup electric fire pump. Both fire extinguishing systems and fire hydrants depend upon constant power supply.

Due to air quality limitations by the local air district and the CEC for new facilities, installing diesel generators and pumps were not possible. Generators and pumps require periodic testing which would have exceeded the air quality emission reduction credits available for the facility. There is a primary and a backup fire pump. The engineer designed the system to meet NFPA 20 guidelines. Electrical diagrams show multiple circuit and generator redundancies for the primary fire pump motor control center. The backup fire pump is connected to an off-site 12 KV source fed from a transformer connected to a 69 KV loop. This loop is supplied by multiple generating sources. The CPP water tank is supplied by three Folsom-South Canal pumps. In addition, the tank can also be gravity-fed by a 36" pipe connected to the Rancho Seco reservoir having a 2,850 acre-feet capacity.

3. The facility will have several chemicals. Regular training should be made available for responding agencies. Training could take the form of computer, multi-media and on-site training.

SMUD will provide initial training and periodic refresher training for the responders. This training will be held jointly to better coordinate responses. The training will cover the fire systems, hazardous materials and response, and a joint exercise will be developed. In addition, SMUD will provide videos specific to some of the hazardous materials that may be encountered on site.

4. Service contracts between SMUD and the agencies should be reviewed for adequacy.

SMUD will review the existing contracts with the fire districts and agencies.

June 18, 2003
CPP03-295

Chief Glen "Skip" Hendrickson
Herald Fire Protection District
12746 Ivie Road
Herald, CA 95638

**Re: Cosumnes Power Plant (01-AFC-19)
Condition of Certification: Worker Safety-2; Mech-1
Chief Building Official Fire Protection Systems Mechanical Review Package**

Dear Chief Hendrickson:

The Sacramento Municipal Utility District (SMUD) design engineer of record for the Cosumnes Power Plant (CPP) is Utility Engineering (UE). UE has developed a mechanical package for Chief Building Official (CBO) review and approval. The attached letter from UE lists the items contained in the review package.

The California Energy Commission (CEC) applies a series of "Conditions of Certification" required for the plant license. These conditions often require SMUD to submit information to local agencies for their review and comment. Condition of certification Worker Safety-2, reads, "The Operation Fire Protection Program and the Emergency Action Plan shall be submitted to the fire protection agency serving the project for review and comment." SMUD considers this Fire Protection Systems Mechanical Package to be an integral part of fire safety at CPP, and requests your review and comment. A complete package is also being provided to the Galt Fire District, since they are the backup responder for the Herald Fire Protection District. I look forward to receiving any comments you and Chief Templeton may have by July 18, 2003, which I will forward to Mr. Paul Bender, P.E., Chief Building Official.

Sincerely,

Kevin M. Hudson, P.E.
Licensing/Compliance Manager
Cosumnes Power Plant

Attachments

cc: Chief James Templeton, Galt Fire District, w/ attachments
Captain Chuck Atwood, City of Sacramento Hazmat Team w/o attachments
Jeri Scott, CPM, California Energy Commission w/o attachments
Paul Bender, P.E., Chief Building Official (w/ attachments in separate correspondence)

Attachment 3
Letter to the CEC Committee Discussing
Emergency Response Measures

July 1, 2003
CPP03-330

The Honorable Robert Pernel
The Honorable Arthur Rosenfeld
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Cosumnes Power Plant (01-AFC-19) – SMUD Fire/Hazmat Safety Plan in Response to Committee Order re: Fire Safety, dated May 19, 2003

Dear Commissioners:

The Sacramento Municipal Utility District (SMUD) submits the attached Fire/Hazmat Safety Plan in response to the California Energy Commission (CEC) Presiding Committee's Order re: Fire Safety, dated May 19, 2003. The purpose of the Plan is to outline the additional personnel, training, and equipment needs of local fire and public safety agencies as a result of the construction and operation of SMUD's Cosumnes Power Plant (CPP).

As detailed in the attached Plan, at least 30 days prior to the start of construction, SMUD will submit to the CEC a copy of the Project Construction Safety and Health Program, the Personal Protective Equipment Program and the Construction Fire Protection and Prevention Plan, in accordance with AFC Condition WORKER SAFETY-1, which was jointly proposed by CEC Staff and SMUD and entered uncontested into the record of the evidentiary hearings. Prior to the start of operation, SMUD will submit to the CEC a copy of the Emergency Action Plan, Operation Fire Protection Program and Personal Protective Equipment Program, in accordance with jointly proposed AFC Condition WORKER SAFETY-2.

As explained in SMUD's Opening and Reply Briefs, the evidentiary record is uncontested that the proposed Hazardous Materials Management ("Hazmat") and Worker Safety/Fire Protection Conditions of Certification jointly proposed by CEC Staff and SMUD, together with the requirement for SMUD to submit and implement both Project Construction and Project Operation Safety and Health Programs, will ensure that CPP is designed, constructed and operated to comply with all applicable local, regional, state, and federal laws, ordinances, regulations and standards ("LORS"), to protect the public from significant risk of exposure to an

The Honorable Robert Pernell
The Honorable Arthur Rosenfeld
July 1, 2003
Page 2

accidental release of any hazardous material, to protect workers during construction and operation, to protect against fire, and to provide adequate emergency response procedures. The attached Plan elaborates further on the cooperative efforts of SMUD and local fire agencies to protect public health and safety, and gives a preview of what will be included in the plans required to be submitted in response to the two WORKER SAFETY Conditions. In our view, the plans called for in these two conditions will adequately protect public health and safety.

Thank you for the opportunity to present this Plan for the record.

Sincerely,

Colin Taylor
Project Director

cc: Service List for CEC Docket No. 01-AFC-19

**Fire Protection, Worker Safety, and
Hazardous Materials (Fire/Hazmat) Safety Plan
for Construction and Operation of the
SMUD Cosumnes Power Plant Project
CEC Docket No. 01-AFC-19**

1. Introduction

The Sacramento Municipal Utility District (SMUD) submits this Fire/Hazmat Safety Plan in response to the California Energy Commission (CEC) Presiding Committee's Order re: Fire Safety, dated May 19, 2003. The purpose is to outline the additional personnel, training, and equipment needs of local fire and public safety agencies as a result of the construction and operation of SMUD's Cosumnes Power Plant (CPP). At least 30 days prior to the start of construction, SMUD will submit to the CEC a copy of the Project Construction Safety and Health Program, the Personal Protective Equipment Program and the Construction Fire Protection and Prevention Plan, in accordance with AFC Condition WORKER SAFETY-1, which was jointly proposed by CEC Staff and SMUD. Prior to the start of operation, SMUD will submit to the CEC a copy of the Emergency Action Plan, Operation Fire Protection Program and Personal Protective Equipment Program, in accordance with jointly proposed AFC Condition WORKER SAFETY-2.

SMUD has held multiple meetings with the all of the local fire agencies with primary responsibility in this area: Herald Fire Protection District, Galt Fire District, City of Sacramento Fire Department (Hazmat), and Elk Grove Community Services District Fire Department. In addition, SMUD has met with the County of Sacramento Environmental Management Department (EMD), and has spoken with representatives from the Sacramento Regional Fire Communications Center, which is a joint powers authority that coordinates all fire, Hazmat, and emergency medical response communications for most of Sacramento County.

The Herald, Galt, Elk Grove and City of Sacramento fire agencies and Sacramento County EMD have received or reviewed the Application for Certification (01-AFC-19) containing the list of hazardous materials, fire safety, and worker safety information for CPP.

In addition, SMUD's Fire Protection & Loss Prevention Specialist Mr. Gary Bertsch has been deeply involved in the planning and approvals of all fire protection/detection systems for CPP.

SMUD and the fire agencies have agreed to partner in several ways to ensure that the incremental effects on local fire/hazmat response from CPP are fully mitigated. The following sections outline the measures that will be taken to work jointly with the fire agencies during the construction and operation phases of CPP. In particular, this document provides local fire

agency contacts, an overview of the construction phase, an overview and description of safety and hazmat containment features during plant operation, a description of the CPP proposed training program, and a description of additional fire prevention, response and rescue and communications equipment proposed for the CPP Project.

2. SMUD Capabilities

SMUD is the sixth largest municipal utility in the United States, serving more than 1.2 million people in Sacramento County and a portion of Placer County. SMUD works hand-in-hand with fire/medical and law enforcement agencies to serve and protect the public. During storms, accidents, and natural disasters, the public relies upon SMUD to respond to life-threatening emergencies alongside police and fire crews. When a vehicle accident or storm fells power lines, SMUD is called by emergency communicators to “safe” electrical lines, reroute power to customers, and later rebuild systems and restore power. SMUD also partners in several consortiums with federal, state, and local agencies to plan responses for acts of nature and to protect community assets from terrorist threats. SMUD’s full-time Emergency Preparedness Supervisor, Mr. Selby Mohr, leads this coordination. SMUD regularly responds to search and rescue efforts near its hydroelectric Upper American River Project in the Sierra-Nevada Mountains, and also works with the Drowning Accident Recovery Team (DART) to assure boating and recreational safety at SMUD’s hydroelectric reservoirs.

SMUD is the community’s power generation and electrical expert, working with schools and organizations to educate the community on the dangers of electricity and the need to treat it with respect. Its educational programs teach people what to do in the event of electrical fires, electric shock and electrical burns. SMUD educates people on the dangers of carbon monoxide poisoning from using improper heating appliances. Other programs also teach people about the dangers of improperly connected electrical generators that could back feed and endanger SMUD line workers. Furthermore, SMUD is active in teaching people to “call before you dig” to avoid the dangers of buried utilities, including electricity and gas. All of this is communicated in multiple languages, creating a link with the community to minimize the dangers that would require an emergency response.

SMUD’s Fire Protection and Loss Prevention Specialists assure all SMUD assets are protected to minimize danger to the asset, employees, public or responding agencies. The CPP is no different than any other asset in SMUD’s portfolio, where safety is paramount.

SMUD, working together with fire/medical and law enforcement agencies is experienced at coordinating training and resources to protect the public from danger, and to respond when an incident occurs.

3. Local Fire Agencies

The following is a list of the primary agencies involved with a fire/medical response to CPP:

Herald Fire Protection District (first off-site responder fire/EMS)

Point of Contact: Chief Glen "Skip" Hendrickson

Phone: (209) 748-2322

Galt Fire District (normally, second responder fire/EMS; primary responder for ambulance/ALS)

Point of contact: Chief James Templeton

Phone: (209) 745-1001

Elk Grove Community Services District Fire Department (backup second responder fire/EMS)

Point of contact: Battalion Chief Richard Holmes

Phone: (916) 685-1270

Sacramento City Fire Department (hazardous materials response – Sacramento County)

Point of contact: Captain Chuck Atwood

Phone: (916) 264-1958

County of Sacramento Environmental Management Department (hazardous materials response)

Point of contact: Chief Dennis Green

Phone: (916) 875-8550

Alternate: Elise Rothschild

Phone: (916) 875-8473

Sacramento Regional Fire/EMS Communications Center (SRFECC, Joint Powers Authority)

Point of contact: Penny Adams, Operations Manager

Phone: (916) 228-3064

4. CPP Construction Phase

CPP construction will follow all laws, ordinances, regulations, and standards. A comprehensive list of LORS is found in SMUD's AFC Section 8.7 (Worker Health and Safety) and Section 8.12 (Hazardous Materials Handling). Specifically, AFC Section 8.7.4.3.1 addresses the elements of the construction health and safety program. Several elements of the program focus on fire protection and prevention, and an emergency action program/plan. These plans will be developed by the construction contractor in concert with SMUD, and coordination with the local fire departments. SMUD and the local fire agencies will coordinate training, construction fire safety and hazardous materials safety. Condition of Certification WORKER SAFETY-1, which was jointly proposed by CEC Staff and SMUD and which was uncontested during the evidentiary hearings, fully incorporates this requirement.

5. CPP Operations

A. Overview

CPP operation will follow all applicable laws, ordinances, regulations, and standards (LORS). A comprehensive list of LORS and CPP compliance plan is found in SMUD's Application for Certification in Section 8.7 Worker Health and Safety, and Section 8.12 Hazardous Materials Handling. Highlights of these sections include mention of a Risk Management Plan, Hazardous Materials Business Plan, and Spill Prevention and Countermeasures Control Plan. Fire, medical and hazardous material response is briefly reviewed in the AFC, and the plans will be developed to fully address contingencies. FSA proposed conditions of certification Worker Safety 2 and the Hazardous Materials conditions address these topics, and SMUD fully embraces the proposed requirements.

B. CPP Fire Safety Features

CPP is designed with state of the art fire/leak detection, fire suppression systems and fire pumps in compliance with National Fire Protection Association (NFPA) guidelines. The following lists the main equipment/areas that are equipped with automatic sprinkler and/or deluge systems: Admin/control room, maintenance building, warehouse, water treatment building, heat recovery steam generator (HRSG) boiler feed pump areas, steam turbine generator (STG) bearings, lube oil skid, lube oil piping pedestal area, STG auxiliary transformer, STG step-up transformer, emergency feed transformer, electrical building auxiliary transformers, combustion turbine generator (CTG) isolation transformers, CTG auxiliary transformers and cooling tower.

The primary fire pump uses on-site power, and the motor control center has four methods of redundancy. The backup fire pump is served by an offsite 12 kilovolt (kV) source. Fire agencies initially expressed concern that there was not a diesel backup fire pump. Those concerns were alleviated when the agencies were shown construction diagrams indicating that both the primary and backup fire pumps comply with the requirements of NFPA 20. In fact, SMUD previewed all of the primary fire system diagrams with the agencies on June 18, 2003, to explain the fire control and safety measures. An uninterruptible power supply (UPS) battery bank provides the power necessary to safely shut down plant systems, and other battery systems provide life safety lighting in the event of power loss.

The firewater source is the 350,000-gallon portion of the plant raw water tank reserved for fire protection in accordance with NFPA 22. Special pipe risers and level monitors in the tank ensure suitable tank capacity is reserved only for fire fighting. The tank has a 4-1/2" wye-type fire truck connection. In addition, a separate, six 2-1/2" fire hose connection header is provided. Each primary area protected by a sprinkler deluge system also has a dedicated fire department wye-connection. The raw water tank is continuously served by water lines from the Folsom-

South Canal, and backed up by the 2,850 acre-foot Rancho Seco Reservoir, which uses the same fail-safe principles used to provide fire protection water for the closed Rancho Seco Plant.

The first 500 MW phase will be served by 13 fire hydrants (spaced less than 300 feet apart), with fixed hose and standpipe stations located strategically in the plant. The local fire departments were consulted to specify compatible fire hydrant hookups, threads and barrels. In addition, hand held fire extinguishers are located throughout the plant as required by Building Code and NFPA 10.

Fire detection systems automatically signal the control room and alert the onsite operators to any unusual conditions. All of the CPP fire protection and detection systems are reviewed and approved by the Chief Building Official fire systems delegate, whose qualifications are approved by the CEC Compliance Project Manager in addition to SMUD's full-time Fire Protection & Loss Prevention Specialist.

Local fire agencies have requested a fire department key box (commonly referred to as a "Knox Box"), which SMUD has agreed to provide at the CPP front gate. SMUD recognizes that the safety of responders is paramount. Hence, prior to any firefighting action, the senior plant operator will advise the responding agency commander of the nature of the event, and provide direction as to the safety of a particular area for any emergency response activity.

C. CPP Hazardous Materials Containment Features

Early in the licensing process, SMUD contacted the Sacramento County Environmental Management Department (Hazardous Materials Division) and the City of Sacramento Fire Department (Hazardous Materials Response Team) to determine review protocols.

SMUD is required, and has committed to develop several documents, including a Risk Management Plan, Hazardous Materials Business Plan, and Spill Prevention and Countermeasures Control Plan. A Consolidated Hazardous Materials Permit is also required. All these documents are submitted to the County of Sacramento, and copies are distributed to the various fire agencies for review, comment, and coordination.

CPP has been designed and certified by professional engineers who specialize in power plants and who are experts in assessing risks associated with the materials needed to operate a power plant. They fully understand the requirements for separating incompatible materials, and have taken measures through plant design to separate and provide containment for materials that may be hazardous.

Equipment and tanks that are open to the atmosphere, and that also contain oily fluids or hazardous materials are surrounded by a secondary containment system, usually a vault or dike. In the case of the aqueous ammonia tank, secondary containment plus an underground containment vault is used to minimize dispersion to the atmosphere. The containment systems are designed to hold the contents of each tank or equipment, plus enough freeboard to handle

rainwater associated with a 25-year storm event. Equipment and tanks that are enclosed in buildings also have containment dikes and systems to limit spill dispersion.

CPP will be staffed 24 hours a day by a rotating shift of plant operators. CPP plant operators will undergo 40 hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. Additionally, at least one operator on each shift will undergo Incident Commander training to enable CPP staff to inform fire agency responders on the hazards of an incident, and coordinate an appropriate response.

CPP plant operators will be trained to assess, contain, and, if appropriate, clean up small spills. Outside agencies will be called for assistance for moderate and larger spills.

In coordination with the agencies, specifically the Sacramento City Fire Department Hazmat team, a list of on-site equipment has been developed. An assortment of materials and equipment will be kept on site to contain and clean up spills. These materials will be stored in an area away from potential hazards and available to responding agencies. Materials will include a large assortment of absorbents, absorbent booms, neutralizing agents, containment barrels, sensing equipment, leak-sealing patch kit, barriers and warning signs, and personal protective equipment such as SCBAs, spare air tanks, Type B splash suits, gloves, and face shields. A backboard or SKED, and decontamination equipment will also be available.

6. Additional Training Proposed to Offset Incremental Effects of CPP.

In addition to the safety features that SMUD has designed and planned into the CPP, on-site equipment and materials, and SMUD personnel training, SMUD has committed to work with the local fire departments and agencies to develop a program to ensure plant, employee, responder, and public safety. SMUD has met with the local fire agencies to discuss the adequacy of this program. In addition to the direct benefits of this program, CPP will provide significant indirect benefits to the local community. Local fire agencies will now have the opportunity to train together and use the equipment and other resources supplied to the departments by SMUD as CPP mitigation to provide a better equipped, trained and coordinated emergency response to non-CPP emergency events in the community.

A. Emergency Response Plan Review

The fire departments and agencies will have the opportunity to review and comment upon the written emergency response plan, risk management plan, hazardous materials business plan and spill prevention, control, and countermeasures plan that will be developed for CPP. SMUD will use its expertise formed during construction and operation of three local thermal cogeneration plants that are similar in design and operation to CPP in order to develop these plans, and coordinate resources of the local agencies.

B. Training Curriculum

The fire departments and agencies will be invited to comment on the joint-training curriculum developed for plant operation related to fire and hazardous materials safety.

C. Initial Training and Plant Orientation

The fire departments and agencies will be invited to initial training and plant orientation to work side by side with the plant operators to learn the safety features and systems of CPP. The departments and agencies will be shown the location and use of plant fire protection equipment and hazardous materials spill containment materials and equipment. SMUD expects fire department and agency personnel will be trained alongside CPP staff. Training will be held on a weekend day or evenings to accommodate the Herald Fire District volunteers. SMUD is also reviewing its existing mutual aid and service contracts with the agencies. SMUD has certified First Responder Operations (FRO) trainers on staff who will meet with approximately 24 Herald Fire District volunteers and provide FRO training in accordance with CSTI curriculum. This training plan addresses that which is recommended by the Sacramento Fire Department Hazardous Materials Coordinator.

D. Periodic Joint Refresher Training

The fire departments and agencies will be invited on an annual or semi-annual basis to re-familiarize themselves with the plant safety features, and to conduct joint exercises in the industrial setting. More frequent sessions may be conducted to ensure a suitable number of emergency response personnel are familiar with CPP, which will undoubtedly prove an excellent training site for new recruits and existing fire department staff. This cooperative practice will provide the opportunity for fire department first responders to see, first hand, many of the industrial systems that they will encounter on a day-to-day basis at CPP and elsewhere. CPP will provide examples of hazardous material storage, fixed automatic and manual fire suppression systems, high voltage switchgear, natural gas handling facilities, etc., as well as the proper, code-compliant design of fire detection and suppression systems, fire lanes, and site access roads.

7. Additional Equipment Proposed to Offset Incremental Effects of CPP.

A. Communications Enhancements

SMUD has entered into an agreement with the Sacramento Metropolitan Fire District and the Sacramento County Sheriff's Department to provide space on the Rancho Seco tower for an antenna, and space in the communications room for a communications rack to enhance communications and emergency response in the south Sacramento county, primarily in and around Rancho Seco and CPP. A copy of the agreement is attached. As recommended by the Galt, Herald, and Elk Grove Agencies, SMUD has also offered to the Sacramento Regional Fire,

space on top of the Rancho Seco cooling towers for antennas and space in the communications room for a communications rack to enhance 800 MHz and 154 MHz communications.

B. Hazardous Materials Equipment/Containment

As noted previously, the CPP site will have a large assortment of items recommended by the fire agencies to contain or neutralize spilled materials. The Sacramento City Fire Department Hazmat team does not recommend the Galt or Herald Fire agencies be fitted with specialized Hazmat equipment on their vehicles. However, to ensure the Herald and Galt fire agencies have information on the hazards of materials that may be transported from Highway 99 along State Route 104, Hazardous Materials Data Sheets for hazardous materials to be shipped or stored at CPP will be prepared. Sheets will be laminated, bound and kept in agency command vehicles. Unlike material safety data sheets (MSDS), these sheets will focus primarily on preferred firefighting and containment methods, hazards to the public and responders, and materials compatibility.

To offset the risk of materials (primarily aqueous ammonia) being transported from Highway 99 along State Route 104, SMUD will provide the following to address the Sacramento City Fire Department and Elk Grove Community Services District Fire Department recommendations:

- 27-foot nylon belt/polyurethane patch (Aqueous ammonia is delivered in stainless steel DOT tankers. This type of device is used for plugging leaks on stainless steel tankers, since magnetic devices will not work)
- Training Video: “Anhydrous Ammonia”, Emergency Film Group (Note: CPP uses aqueous ammonia which is a much less dangerous commodity; however, firefighting and vapor control methods are similar, and there are few known videos specific to aqueous ammonia)
- Training Video: “Real World” Hazmat: Acid Spills and Fires (program features two incidents involving sulfuric acid leak, one compounded by a natural gas leak)
- Training Video: “Real World” Hazmat: Natural Gas Incidents (program offers valuable do’s and don’ts for responding to natural gas incidents)
- Training Video: Hazmat Refresher Course: Modes of Transportation for Hazardous Materials (emergencies involving hazardous materials in transit)
- Training Video: Tanker Off-Loading (designed specifically for the HazMat specialist, demonstrates how to drill and offload product from a MC306/DOT406 non-pressurized aluminum cargo tank)

The patch device will be provided to the Sacramento City Fire Department Hazmat team. The multimedia training information will initially be provided to the Sacramento City Fire Department Hazmat team, but is also available for use by other agencies.

Attachment 4
Agenda for CPP 2017 Joint Emergency
Response Training Exercise

EthosEnergy	EEPPS - Health, Safety & Environmental Procedures	Revision: 11
	Emergency Response Plans & Emergency Action Plans	Issued: Jan-2017
		Review Due: Jan-2018
		Doc.# HS12

CPP Drill Scenario - UN-ANNOUNCED

Participants:

CPP Staff: Steve Angel (CRO), Dennis (BOP), Brett (ZLD), Jeremy (O&M)
Herald Fire Department (HFD) - TBD: 3 Responders - 1 Vehicle from station 87 on Ivie Road (Possibly Chief's vehicle *too*)

When Drill Begins:

Facility Manager - Anonymous - Control Room
HSE Manager - Anonymous - Floating, Set up smoke machine, *set* up signage on the lab that door is hot to the touch
Plant Engineer - If available, Anonymous - Recording Time Line
Engineer - If Available, Anonymous, Take pictures/record timeline
Additional OMT's - Under the direction of the CRO or O&M
Additional Ethos Staff - Evacuees

Scenario: Drill is subject to postponement (for operations. and/or PSO issues. or for Fire Department emergency request)

- Just Prior to 10:00 am
 - o Anonymous drill support will don safety vests
 - o HSE Manager to place smoke machine in lab (N. door - and place it ajar) and place signage on lab doors indicating they are too hot to touch
 - o O&M Manger to notify the Ranch and PSO that CPP will be conducting a Drill and that HFD (Ivie Road Station) will be participating.
- Initial Conditions
 - o Plant on-line at base load. No Touch day does not apply
 - o Outside Conditions are as is
 - o Personnel are performing normal jobs.
- At approximately 10:00 am the O&M Manager notices smoke from the Lab on the video feed in the control room and tells the CRO. The O&M will inform the CRO that a drill is underway. It is expected the CRO will send an OMT to investigate.
- When the OMT arrives at the Lab, the HSE Manager will notify the OMT:
 - o We are conducting a fire drill
 - o No personnel are injured or missing in the lab
 - o The OMT will follow the instruction of the CRO
 - o That no other information is known (about the extent of the fire)
- The OMT will do the following (it is expected):
 - o Notify the CRO that there is a fire in the lab causing the smoke seen on the monitor and indicate that the lab doors are too hot to open and that no one is down in the lab.
 - o Follow direction from the CRO

EthosEnergy	EEPPS - Health, Safety & Environmental Procedures	Revision: 11
	Emergency Response Plans & Emergency Action Plans	Issued: Jan-2017
		Review Due: Jan-2018
		Doc.# HS12

- The CRO *is* expected to do the *following* when *notified* that the fire drill *is* underway:
 - o Call HFD Chief James Hendricks mobile phone - (209) [REDACTED]
 - o Call PSO

The CRO and O&M Manger are expected to evaluate and or execute the *following*:

- o *Is* an evacuation warranted?
 - o *Notify* Management (literally make the phone call)
 - o Was the *sign in* book retrieved during the evacuation?
 - o *If* evacuating, are all *staff* members accounted for?
 - o *Is* the primary muster point satisfactory?
 - o Have contractors been evacuated and accounted for?
 - o NOTE: Only non-essential personnel/contractors/visitors will be evacuated.
 - o Has PSO been notified?
 - o *Did* Operators meet the responders at the gate?
 - o Work with Incident Commander
- HFD, *will* be met at the main gate by OMTs and led to either the control room or the *location* where the fire is. It is imperative that HFD does not travel under the 230kv lines and north of the plant and that their trucks are escorted.
 - HFD takes over the scene as Incident Commander
 - At end of drill: Debrief, compile drill evaluations, *time lines*, etc. *Discuss positives* and areas for improvements & lessons learned. Held in Conference Room.
 - Followed by Lunch for all (approximately 11:30am)