

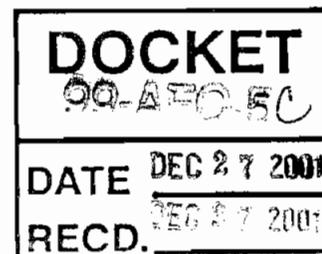
CALIFORNIA ENERGY COMMISSION

1316 NINTH STREET
SACRAMENTO, CA 95814-5512



December 27, 2001

Mr. Ed Merrihew
Compliance Manager
Calpine
701 B Street, Suite 248
San Diego, CA 92101



SUBJECT: Approval to Add a New Table 1 for Facility Design GEN 2 for the Otay Mesa Generating Project (99-AFC-5C)

Dear Mr. Merrihew:

California Energy Commission (Energy Commission) staff reviewed your submittal for the Condition for Certification for Facility Design GEN 2. After staff review, it has been determined that this condition be modified to combine Table 1 (Major Equipment List) and Table 2 (Major Structures and Equipment) for the new Table 1 (Major Structures and Equipment List).

As directed by Governor's Executive Order D-25-01, concerning post-certification amendments, we have expedited review of this proposed project modification because statutes and implementing regulations that normally apply to review and approval of this amendment have been suspended. Energy Commission staff has concluded that this modification has no potential for adverse environmental or public health and safety impacts. Therefore, you are authorized to proceed with the project modifications indicated below. A copy of this letter will be posted on the Energy Commission's website at www.energy.ca.gov, and we will file a California Environmental Quality Act Notice of Exemption with the State Clearinghouse.

Energy Commission staff concluded that modification of the April 18, 2001 Commission Decision for the Otay Mesa Generating Project (99-AFC-5C), Condition of Certification Facility Design GEN 2, as specified below has been approved as follows (eliminated text is shown in ~~strikeout~~ and new text is shown in underline):

GEN-2 Prior to submittal of the initial engineering designs for CBO review, ~~t~~The project owner shall furnish to the CPM and to the CBO a schedule of facility design submittals, a Master Drawing List, and a Master Specifications List. The schedule shall contain ~~a description and~~ a list of proposed submittal packages ~~of~~ for designs, calculations, and specifications for major structures and equipment ~~(see a list of major structures and equipment in Table 1: Major Equipment List below).~~ To facilitate audits by Energy Commission staff, the project owner shall provide specific packages to the CPM when requested.

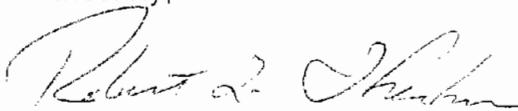
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Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, a the Master Drawing List, and a the Master Specifications List of documents to be submitted to the CBO and to the CPM for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in Table 1 below (Table 1 is supplemented by Table 2, Major Equipment List and Table 3, Major Structures and Equipment). Major structures and equipment shall be added to or deleted from Tables 1, 2 and 3 only with CPM approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

Please see the enclosed for the addition of Table 1 (Major Structures and Equipment List), the renumbered Table 2 (Major Equipment List) and renumbered Table 3 (Major Structures and Equipment).

If you have any questions, please contact Ila Lewis, Compliance Project Manager, at (916) 654-4678, or by e-mail at ilewis@energy.state.ca.us

Sincerely,



ROBERT L. THERKELSEN, Deputy Director
Systems Assessment & Facilities Siting

Enclosure

cc: Ila Lewis, Energy Commission
Steve Baker, Energy Commission

TABLE 1
MAJOR STRUCTURES AND EQUIPMENT LIST

EQUIPMENT/SYSTEM	NOTES/COMMENTS
<u>Combustion Turbine(s) (CT)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable</u>
<u>Steam Turbine(s) (ST)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable</u>
<u>Combustion Turbine Generator(s) (CTG)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable</u>
<u>Steam Turbine Generator(s) (STG)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable</u>
<u>Heat Recovery Steam Generator(s) (HRSG)</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation, assembly of field assembled modules, and design review of casing structures. Black Box definition and procedures applicable</u>
<u>Auxiliary Transformer(s)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable</u>
<u>CT Inlet Air Plenum Structure(s)</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation, and assembly of field assembled structures. Black Box definition and procedures applicable</u>
<u>CT Inlet Air Evaporative Cooler(s)</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation, and assembly of field assembled structures. Black Box definition and procedures applicable</u>

TABLE 1
MAJOR STRUCTURES AND EQUIPMENT LIST

<u>EQUIPMENT/SYSTEM</u>	<u>NOTES/COMMENTS</u>
<u>Cooling Tower/Air Cooled Condenser</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation, and assembly of field assembled structures. Black Box definition and procedures applicable</u>
<u>CT & ST Building Structure(s) including generator auxiliary compartment (GAC), primary electrical center (PEC) & mechanical accessory compartment</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation. Black Box definition and procedures applicable.</u>
<u>Secondary Unit Substation/Transformer(s)</u>	<u>To include all applicable code plan review and inspection for foundations & connections to foundations. Black Box definition and procedures applicable.</u>
<u>Electrical/Control Center(s) (switchgear)</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation. Black Box definition and procedures applicable.</u>
<u>CEMS Building</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation. Black Box definition and procedures applicable.</u>
<u>Boiler Feed Water Pump(s)</u>	<u>To include all applicable code plan review and inspection for foundation & connection to foundation. Black Box definition and procedures applicable.</u>
<u>Condenser Structure</u>	<u>To include all applicable code plan review and inspection for foundation & connection to foundation. Black Box definition and procedures applicable.</u>
<u>CT static starter motor</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation. Black Box definition and procedures applicable.</u>
<u>Fuel Gas Compressor Building</u>	<u>To include all applicable code plan review and inspection for foundation & connections to foundation & any field assembled components.</u>
<u>ST Lube Oil Package</u>	<u>To include all applicable code plan review and inspection for foundation & connections to foundation. Black Box definition and procedures applicable</u>

TABLE 1
MAJOR STRUCTURES AND EQUIPMENT LIST

<u>EQUIPMENT/SYSTEM</u>	<u>NOTES/COMMENTS</u>
<u>Ammonia Tank</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation and any field assembled components.</u>
<u>Ammonia Blower Injection Skid</u>	<u>To include all applicable code plan review and inspection for foundation, connections to foundation and any field assembled components. Black Box definition and procedures applicable.</u>
<u>Pipe Rack(s)</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure. Representative pipe hangers / supports to be reviewed.</u>
<u>High Pressure Piping</u>	<u>Review of design philosophy and criteria. Representative larger diameter and high pressure pipe designs to be individually reviewed.</u>
<u>Stairways, Ladders & Platforms</u>	<u>To include all applicable code plan review and inspection of all stairways and ladders providing equipment access. Miscellaneous ladders & platforms designed for equipment access less then 30" above grade not included.</u>
<u>Fire/Service Water Storage Tank</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure.</u>
<u>De-mineralized Water Storage Tank</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure.</u>
<u>Fire Water Pump Skid</u>	<u>To include all applicable code plan review and inspection for foundation & connection to foundation. Black Box definition and procedures applicable.</u>
<u>De-mineralized Water Treatment Building</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure. Black Box definition and procedures applicable to water treatment equipment within building.</u>
<u>Administration/Warehouse/Mechanical Shop Building(s)</u>	<u>To include all applicable plan review code inspections.</u>

TABLE 1
MAJOR STRUCTURES AND EQUIPMENT LIST

<u>EQUIPMENT/SYSTEM</u>	<u>NOTES/COMMENTS</u>
<u>Fire Pump Building(s)</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure.</u>
<u>Switchyard Control Building</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure.</u>
<u>Switchyard, Busses & Towers</u>	<u>If designed & inspected by utility standards, no CBO review required. Any portion designed and installed by applicant to include all applicable code plan review and inspection.</u>
<u>Boiler Feed Pump Building</u>	<u>To include all applicable code plan review and inspection for foundation & field assembled structure.</u>
<u>Potable Water Systems</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Drainage Systems</u> <u>(Including sanitary drain and waste)</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Building Energy Conservation Systems</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Temperature Control and Ventilation Systems</u> <u>(Including water and sewer connections)</u>	<u>To include all applicable code plan review and inspections.</u>
<u>HVAC and Refrigeration Systems</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Permanent Eye Stations</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Chemical Feed System Containment</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Water Treatment System Chemical Containment</u>	<u>To include all applicable code plan review and inspections</u>
<u>Ammonia System</u>	<u>To include all applicable code plan review and inspections.</u>
<u>Electrical Systems</u>	<u>All Building Energy Conservation installations, exiting installations, and all hazardous location installations to include all applicable code plan review and inspections. All other electrical installations subject to applicable code inspections. Final scope of electrical plan review subject to submission by applicant of proposed plan list.</u>

Table 4 2: Major Equipment List

QTY	DESCRIPTION	SIZE/CAPACITY(1)	REMARKS
2	CTG – Combustion Turbine	170 MW	Dry low NoX combustion control and starter package
2	STG – Steam Turbine	90 MW	Condensing reheat type
2	Generator	300 MVA	TEWAC or hydrogen cooling system
2	CTG inlet filter	725,000 CFM	
2	Inlet air cooling		Evaporative type
2	Fuel gas filter – separator	80,000 lb/h	623 psig minimum inlet pressure
2	HRSG – Heat recovery steam generator	480,000lb/h	HP and LP
2	HRSG – Stack	18'-6" Ø x 131' high	
2	CO catalyst		Sized to achieve BACT/LAER
2	SCONOX™ skid		Sized to achieve BACT/LAER
4	HP HRSG feedwater pump	1,200 gpm	
1	Fire/service water storage tank	450,000 gal	
2	Demineralized water pump	500 gpm	
1	Demineralized water treatment package	100 gpm	
1	Demineralized water storage tank	90,000 gal	
4	Condensate pump	1,200 gpm	
2	Air cooled condenser	600 MMBtu/h	
1	Fire water pump skid	2,500 gpm	
2(2)	Step-up transformer	18/230 kV	To electrical grid

(1) All sizes and capacities are approximate and may change during final design.

(2) Three step-up transformers are required for the GE 7FA-combined cycle unit.

Table 2 3: Major Structures and Equipment

QTY	Description	Dimensions (ft)(1)		
		Length	Width	Height
2	Combustion gas turbine with starter package (CT)	50	45	20
2	CT air inlet filter with air cooling	100	20	35
2	Generator with enclosure	40	20	25
2	Fuel gas filter – separator	10	10	40
2	Heat recovery steam generator (HRSG)	70	45	65
2	HRSG stack	--	18'-6" Ø	131
2	SCONOX™ skid	20	15	10
2	Generator breaker	15	20	25
2	Steam turbine pedestal w/turbine	45	50	30
2	Air cooled condenser	165	100	76
2	Auxiliary transformer	20	20	25
2	Step-up transformer	45	30	25
1	Demineralized water storage tank	--	50' Ø	48
1	Fire/service water storage tank	--	70' Ø	48
1	Water treatment building	100	75	20
1	Administration building	205	60	27
1	Fire pump building	15	30	12
1	Switchyard, busses and towers	360	360	35
1	Electrical control building	40	30	27
1	Switchyard control building	20	20	14
1	Warehouse/mechanical shop(2)	100	60	27
1	Boiler feed pump building	25	20	12

(1) All dimensions are approximate and may change during project final design.

(2) Rooms are located within the administration building.