



**Pacific Gas and
Electric Company**
Power Generation
Fossil Plant Construction

Gateway Generating Station
3225 Wilbur Ave.
Antioch, CA 94509
(925) 459-7200

April 18, 2007
GGS-L-00016C

GGS Compliance Log # 2007-012

DOCKET 00-AFC-1C	
DATE	APR 18 2007
RECD.	APR 18 2007

Mr. Christopher Meyer
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814

Subject: Gateway Generating Station (Docket 00-AFC-1C)
Revised Water Balances to PG&E's License Petition Amendment Dated December 2006

Dear Christopher:

The water balance provided in Pacific Gas & Electric Company's December 2006 Petition Amendment reflected continuous operation of the Wet Surface Air Cooler (WSAC). After considered review of the engineering design, PG&E has concluded that operation of the WSAC system under most ambient air temperatures occurring at the site would not provide sufficient operational benefits to warrant the increase in water consumption. PG&E has determined that operation of the WSAC could provide sufficient benefits when ambient air temperatures are above 80 °F. Therefore, PG&E is submitting the attached revised water balances to supplement PG&E's License Petition Amendment related to the new dry cooling technology.

The revised water balances present operating conditions at ambient air temperatures of 86 °F and above (Case 3) and 60 °F (Case 5). The peak water consumption is expected to be 115 gallons per minute, with an annual average water consumption of 70 gallons per minute. The maximum daily water consumption is estimated at 165,600 gallons/day, and the annual estimated water consumption is 23 million gallons or 71 acre-feet per year.

Please contact Jerry Salamy at CH2MHill if you have any questions regarding this submittal. He can be reached at (916) 286-0207.

Sincerely,

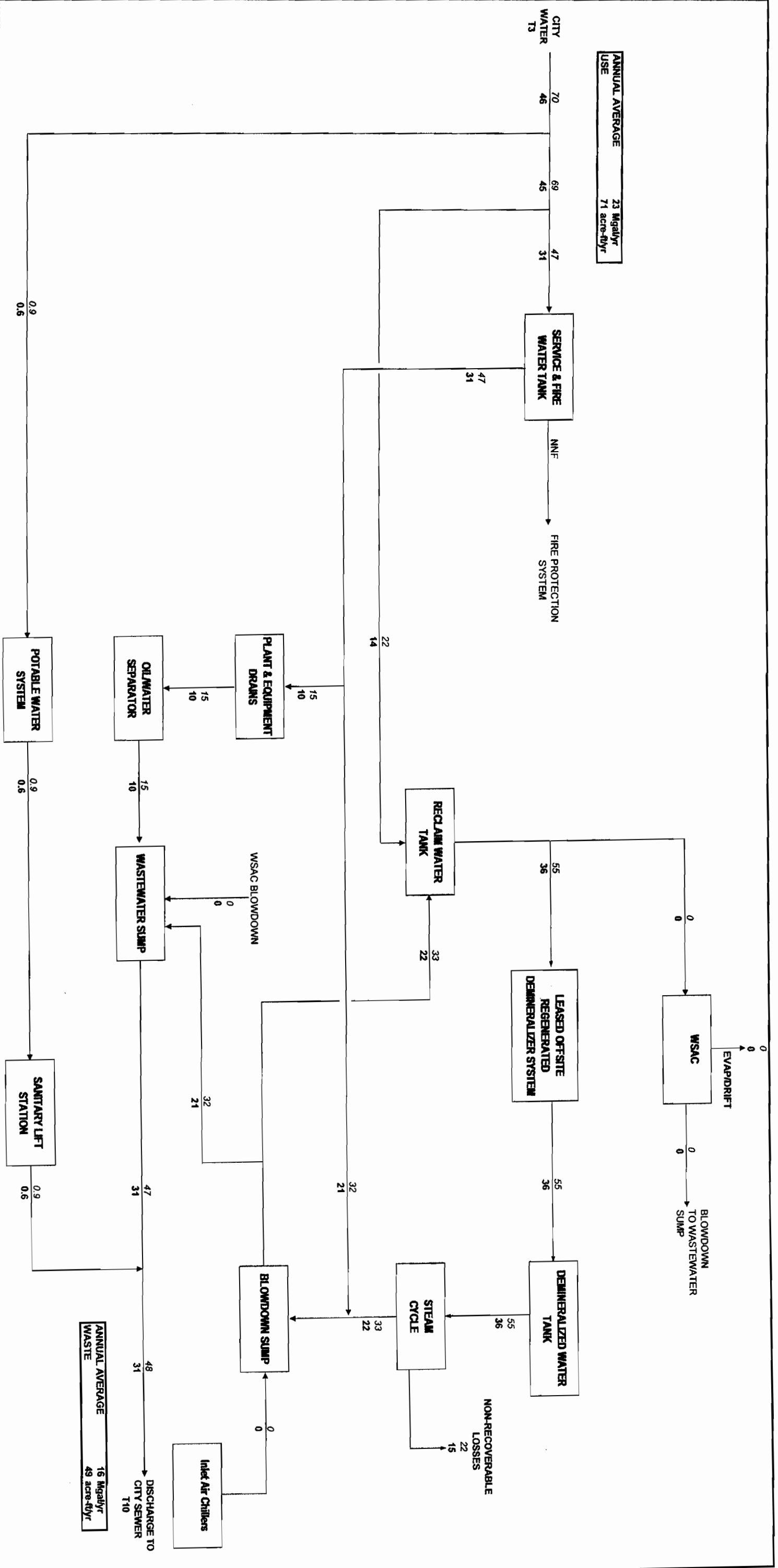
Andrea Grenier
GGS Compliance Manager

Enclosure

AEG/aeg

cc: S. Perkins, PG&E
Hoc Phung, PG&E

ANNUAL AVERAGE 23 Mgal/yr
71 acre-ft/yr
USE



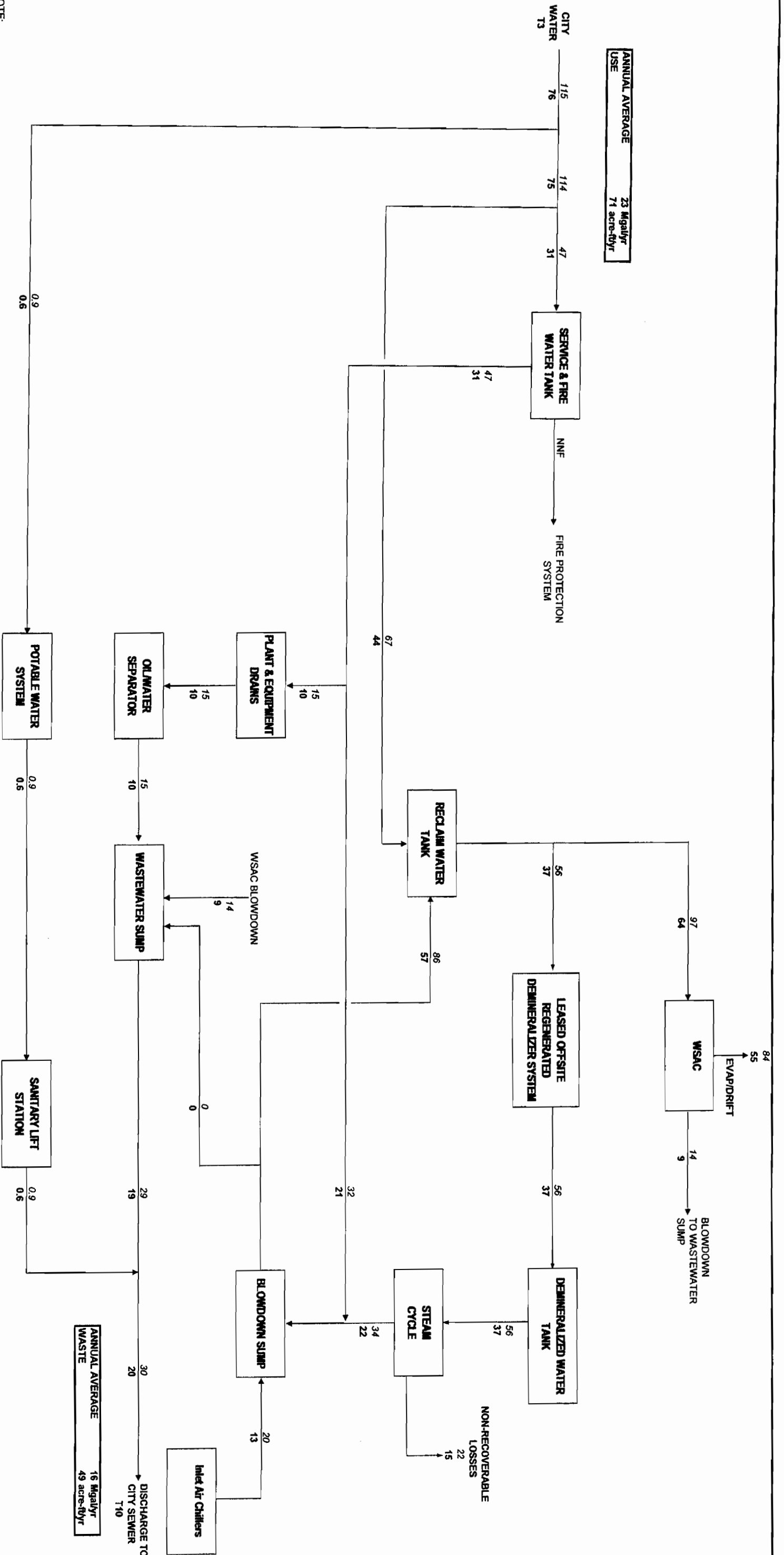
- NOTE:**
1. FLOWS ARE IN GALLONS PER MINUTE (GPM).
 2. FLOWS INDICATED IN BOLD REPRESENT AVERAGE DAILY USAGE BASED ON OPERATING 4992 HOURS PER YEAR.
 3. FLOWS IN ITALICS REPRESENT DAILY AVERAGE FLOWS FOR THIS CASE.
 4. NNF = NORMALLY NO FLOW
 5. ANNUAL AVERAGE WATER CONSUMPTION IS BASED ON OPERATING WSAC 750 HR/YR. WATER CONSUMPTION DURING THESE HOURS IS BASED ON THE 86 OF, 33%RH, CHILLER ON, DUCT FIRED CASE. FOR THE REMAINING OPERATING HOURS THE WATER CONSUMPTION IS BASED ON THE 60 OF, 68%RH, CHILLER ON, DUCT FIRED CASE.
 6. ANNUAL AVERAGE WASTE WATER GENERATION IS BASED ON OPERATING WSAC 750 HR/YR. WASTE GENERATION DURING THESE HOURS IS BASED ON THE 86 OF, 33%RH, CHILLER ON, DUCT FIRED CASE. FOR THE REMAINING OPERATING HOURS THE WATER CONSUMPTION IS BASED ON THE 86 OF, 33%RH, CHILLER ON, DUCT FIRED CASE.

BOILER BLOWDOWN RECYCLE	YES	COMBUSTION TURBINE FUEL	NATURAL GAS	R.O. RECOVERY	N/A	BLACK & VEATCH		Pacific Gas & Electric	Project	146991	Drawing	WNMR-5	Rev	1
CT INLET AIR CHILLER	ON	GROSS PLANT OUTPUT (MW)	605	DEMINEERALIZER EFFICIENCY	100%	Eng: JEB		Gateway Generating Station	OWNER REVIEW ISSUE					
WET SURFACE AIR COOLER	OFF	TURBINE CONFIGURATION	2 x 1"	CYCLE MAKEUP RATE	2%	Dwg: JEB		WATER MASS BALANCE						
MEAN DRY BULB (°F)	60	AMBIENT TEMP (°F)	60	LOAD FACTOR	100%	Check: SAJ		60F-2U 100-DF-C						
RELATIVE HUMIDITY	68%	DUCT FIRING	YES	BOILER LOAD FACTOR	66%	Date: 3/28/2007								

ANNUAL AVERAGE 16 Mgal/yr
49 acre-ft/yr
WASTE

DISCHARGE TO CITY SEWER T10

ANNUAL AVERAGE
 USE 23 Mgal/yr
 71 acre-ft/yr



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BOILER BLOWDOWN RECYCLE	YES	COMBUSTION TURBINE FUEL	NATURAL GAS	R.O. RECOVERY					
CT INLET AIR CHILLER	ON	GROSS PLANT OUTPUT (MM)	600	DEMINEALIZER EFFICIENCY	N/A				
WET SURFACE AIR COOLER	ON	TURBINE CONFIGURATION	2 x 1'F	CYCLE MAKEUP RATE	2%				
MEAN DRY BULB (°F)	86	AMBIENT TEMP (°F)	86	LOAD FACTOR	100%				
RELATIVE HUMIDITY	33%	DUCT FIRING	YES	BOILER LOAD FACTOR	66%				

BLACK & VEATCH		Pacific Gas & Electric Gateway Generating Station WATER MASS BALANCE CASE 3 86F-2U 100-DF-C		Project 148991	Drawing WMB-3	Rev 1
Eng: JEB	Dwg: JEB	Check: SAJ	Date: 3/26/2007	OWNER REVIEW ISSUE		