

Supplemental Information

to the

Project Description

Application for Certification

for the

Roseville Energy Park

Roseville, California

03-AFC-01

Submitted to the

California Energy Commission

Submitted by

Roseville Electric

October 2004

Contents

INTRODUCTION.....1

2.0 PROJECT DESCRIPTION.....2

5.0 NATURAL GAS PIPELINE8

7.0 WATER SUPPLY16

Introduction

This supplement to Roseville Electric's Application for Certification (AFC) for the Roseville Energy Park (03-AFC-01), provides a description of minor changes to Roseville Electric's (RE's) project description. Key changes that have taken place since RE filed the AFC in October 2003 include changes in the location of the construction laydown, parking, and construction office locations; the addition of a new natural gas pipeline alternative route, called Alternative D; and minor changes to the water treatment system. These changes are discussed in separate sections, below, that correspond with their appropriate chapters in the AFC: Chapter 2 for information about the power plant site boundary and construction laydown areas, and Chapter 5 for information about the new natural gas pipeline alternative route, and Chapter 7 for changes to the water treatment system. The section on the natural gas pipeline includes a brief discussion of the environmental consequences of pipeline Alternative D.

2.0 Project Description

This section addresses changes to the project site plan and layout that have been taken place since the AFC was filed in October of 2003. It also addresses minor changes and corrections to AFC Chapter 2. These changes to Chapter 2 are discussed item by item, keyed to the AFC Chapter 2 sections.

2.1 Changes to the Site Plan

The figures attached at the end of this section (Site Plan, Site Layout, and Construction Laydown), show REP project features as revised. The most important difference between the site plan, layout, and construction laydown plan as proposed in the AFC and as reconfigured in this document is that the construction laydown area has been moved from a location immediately north of the power plant site to a new location west of the REP and south of Phillip Road. The new location is adjacent to and just west of the Pleasant Grove Waste Water Treatment Plant (PGWWTP). The new project location is currently open pastureland that is planned for industrial development under the West Roseville Specific Plan (WRSP). This change will allow the project to significantly reduce both direct and indirect impacts to wetlands and vernal pools. It also allows for a significant reduction in short-term, temporary impacts to raptor foraging habitat. Although wetlands, vernal pools, and raptor foraging habitat exist in the new laydown area, the effects of any development under the WRSP, including REP's use of the site for construction laydown area and eventual industrial development under the WRSP, have been taken into consideration in the WRSP's permitting process.

The WRSP permitting process has three main components for biological resources impacts. The impacts that involve the fill of jurisdictional wetlands are taken into consideration under a Clean Water Act Section 404 permit under the jurisdiction of the U.S. Army Corps of Engineers (USACE). The impacts to threatened and endangered species, such as the vernal pool fairy shrimp for which seasonal wetlands found in the project area provide habitat, are taken into consideration through the United States Fish and Wildlife Service (USFWS) Biological Opinion on the WRSP. The Biological Opinion outlines the WRSP's potential effects on species listed as threatened or endangered under the Endangered Species Act (ESA). The WRSP's potential impacts to species that are protected under the California Endangered Species Act (CESA), such as Swainson's hawk and white-tailed kite, are taken into consideration consistent with California Department of Fish and Game (CDFG) policy through the California Environmental Quality Act (CEQA) review process. By moving the construction laydown area, temporary impacts to approximately 14 acres of raptor foraging habitat are avoided (moved to an area for which mitigation for this impact has already been developed). The USACE Section 404 permit, the USFWS Biological Opinion, and the CESA CEQA review and mitigation for the WRSP will cover the use of this area for construction laydown because the activities permitted for the WRSP (industrial development of this area) would cause impacts to wetlands and threatened and endangered species that would be greater than or the same as those associated with REP construction laydown.

Other minor site plan changes have also been made in order to avoid wetlands and other biological resources. These changes include a rerouting of the storm water outfall to avoid wetlands, an adjustment

to the facility's outer fenceline at its northwestern corner to avoid wetlands impacts, and a change in the project switchyard fenceline to avoid direct impacts to wetlands and vernal pool branchiopods.

2.2 Changes to AFC Text

The changes to the site plan discussed above result in minor changes and corrections to the AFC Chapter 2 text. These are itemized below, keyed to the AFC section in which they appear.

Section 2.1 Introduction—The revised fenced power plant acreage is 8.9 acres. This includes a 7.8-acre power plant area and a 1.1-acre switchyard.

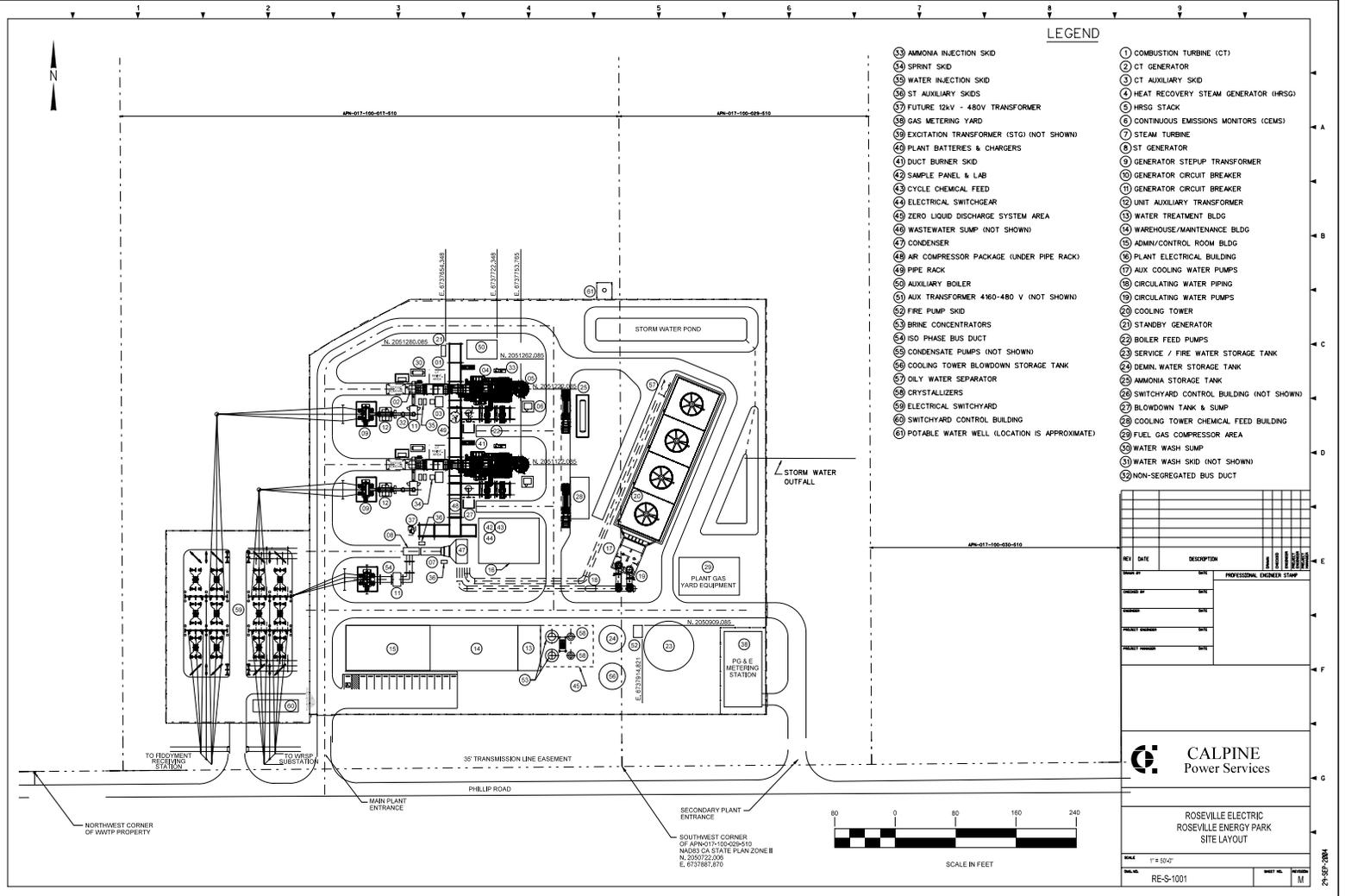
Section 2.2.1 Site Plan and Access—The revised fenced power plant acreage is 8.9 acres. This includes a 7.8-acre power plant area and a 1.1-acre switchyard. The revised construction zone will encompass 32.8 acres, including the power plant and switchyard (8.9 acres), construction parking (3.7 acres), construction offices area (2.4 acres), and off-site laydown area (17.8 acres). The attached Construction Laydown drawing is a new drawing showing the new construction laydown area location.

Section 2.2.9.1 Waste Water Collection, Treatment, and Disposal—Replace the final sentence in the first paragraph with the following statement: “The ZLD system will treat cooling tower blowdown water, concentrating the salts into a salt cake and returning distilled water back to the cooling tower.”

Section 2.2.15 Project Construction—As indicated in RE's comments on the Preliminary Staff Assessment, RE expects CEC certification by December 2004. Because of the lead-time necessary to fill major equipment orders after the permits are issued, however, on-site construction will commence approximately mid-2005. The on-site construction duration remains 18 to 20 months, with an anticipated commercial operation date of January, 2007.

Section 2.2.19 Construction Laydown and Worker Parking Areas—As described above, the revised fenced power plant acreage is 8.9 acres. This includes a 7.8-acre power plant area and a 1.1-acre switchyard. The revised construction zone will encompass 32.8 acres, including the power plant and switchyard (8.9 acres), construction parking (3.7 acres), construction offices area (2.4 acres), and off-site laydown area (17.8 acres). The attached Construction Laydown drawing is a new drawing showing the new construction laydown area location.

REVISED PROJECT DRAWINGS



LEGEND

- ① AMMONIA INJECTION SKID
- ② SPRINT SKID
- ③ WATER INJECTION SKID
- ④ ST AUXILIARY SKIDS
- ⑤ FUTURE 12kV - 480V TRANSFORMER
- ⑥ GAS METERING YARD
- ⑦ EXCITATION TRANSFORMER (STG) (NOT SHOWN)
- ⑧ PLANT BATTERIES & CHARGERS
- ⑨ DUCT BURNER SKID
- ⑩ SAMPLE PANEL & LAB
- ⑪ CYCLE CHEMICAL FEED
- ⑫ ELECTRICAL SWITCHGEAR
- ⑬ ZERO LIQUID DISCHARGE SYSTEM AREA
- ⑭ WASTEWATER SLUMP (NOT SHOWN)
- ⑮ CONDENSER
- ⑯ AIR COMPRESSOR PACKAGE (UNDER PIPE RACK)
- ⑰ PIPE RACK
- ⑱ AUXILIARY BOILER
- ⑲ AUX TRANSFORMER 4160-480 V (NOT SHOWN)
- ⑳ FIRE PUMP SKID
- ㉑ BRINE CONCENTRATORS
- ㉒ ISO PHASE BUS DUCT
- ㉓ CONDENSATE PUMPS (NOT SHOWN)
- ㉔ COOLING TOWER BLOWDOWN STORAGE TANK
- ㉕ DILY WATER SEPARATOR
- ㉖ CRYSTALLIZERS
- ㉗ ELECTRICAL SWITCHYARD
- ㉘ SWITCHYARD CONTROL BUILDING
- ㉙ POTABLE WATER WELL (LOCATION IS APPROXIMATE)
- ① COMBUSTION TURBINE (CT)
- ② CT GENERATOR
- ③ CT AUXILIARY SKID
- ④ HEAT RECOVERY STEAM GENERATOR (HRSG)
- ⑤ HRSG STACK
- ⑥ CONTINUOUS EMISSIONS MONITORS (CEMS)
- ⑦ STEAM TURBINE
- ⑧ ST GENERATOR
- ⑨ GENERATOR STEPIUP TRANSFORMER
- ⑩ GENERATOR CIRCUIT BREAKER
- ⑪ GENERATOR CIRCUIT BREAKER
- ⑫ UNIT AUXILIARY TRANSFORMER
- ⑬ WATER TREATMENT BLDG
- ⑭ WAREHOUSE/MAINTENANCE BLDG
- ⑮ ADMIN/CONTROL ROOM BLDG
- ⑯ PLANT ELECTRICAL BUILDING
- ⑰ AUX COOLING WATER PUMPS
- ⑱ CIRCULATING WATER PUMPS
- ㉒ COOLING TOWER
- ㉓ STANDBY GENERATOR
- ㉔ BOILER FEED PUMPS
- ㉕ SERVICE / FIRE WATER STORAGE TANK
- ㉖ DEMIN. WATER STORAGE TANK
- ㉗ AMMONIA STORAGE TANK
- ㉘ SWITCHYARD CONTROL BUILDING (NOT SHOWN)
- ㉙ BLOWDOWN TANK & SLUMP
- ㉚ COOLING TOWER CHEMICAL FEED BUILDING
- ㉛ FUEL GAS COMPRESSOR AREA
- ㉜ WATER WASH SLUMP
- ㉝ WATER WASH SKID (NOT SHOWN)
- ㉞ NON-SEGREGATED BUS DUCT

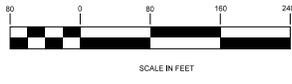
REV	DATE	DESCRIPTION	DESIGNED BY	DATE	CHECKED BY	DATE	PROJECT NUMBER	DATE

CALPINE
Power Services

ROSEVILLE ELECTRIC
ROSEVILLE ENERGY PARK
SITE LAYOUT

SCALE: 1" = 50'-0"

RE-S-1001



SOUTHWEST CORNER OF APN01711004009-510, NAD83 ON STATE PLAN ZONE II, N. 2009722.000, E. 87371887.870

TO WASTEWATER RECEIVING STATION

TO WTRSP SUBSTATION

35' TRANSMISSION LINE EASEMENT

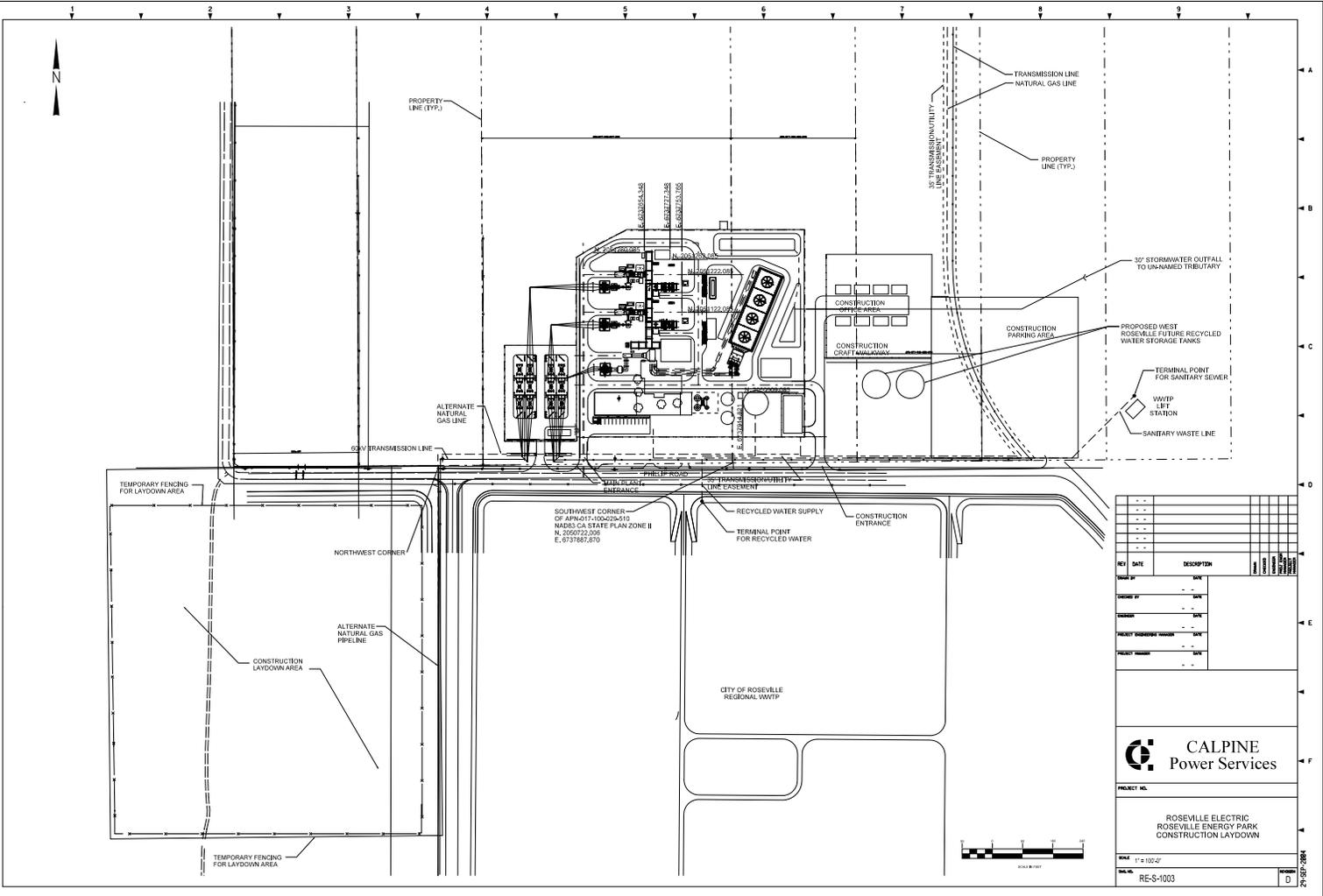
PHILLIP ROAD

MAIN PLANT ENTRANCE

SECONDARY PLANT ENTRANCE

NORTHWEST CORNER OF WWTP PROPERTY





REV	DATE	DESCRIPTION	BY	CHECKED
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

CALPINE
Power Services

PROJECT NO. ROSEVILLE ELECTRIC ROSEVILLE ENERGY PARK CONSTRUCTION LAYDOWN

SCALE: 1" = 100'-0"

TITLE: RE-S-1003

DATE: 02/25/2008

BY: [Signature]

24/36

5.0 Natural Gas Pipeline

As described in the AFC, a new pipeline will supply natural gas to the Roseville Energy Park (REP). The natural gas pipeline will be designed, constructed, and owned by Pacific Gas & Electric Company (PG&E). This section provides an update to the description of the REP's natural gas pipeline found in AFC Chapter 5. The update is necessary because PG&E has recently informed the City of Roseville that it intends to build a regional pipeline to serve future demand in West Roseville and that the REP would be more effectively served from this regional pipeline than under the plan described in the AFC. A copy of the PG&E letter is attached at the end of this section.

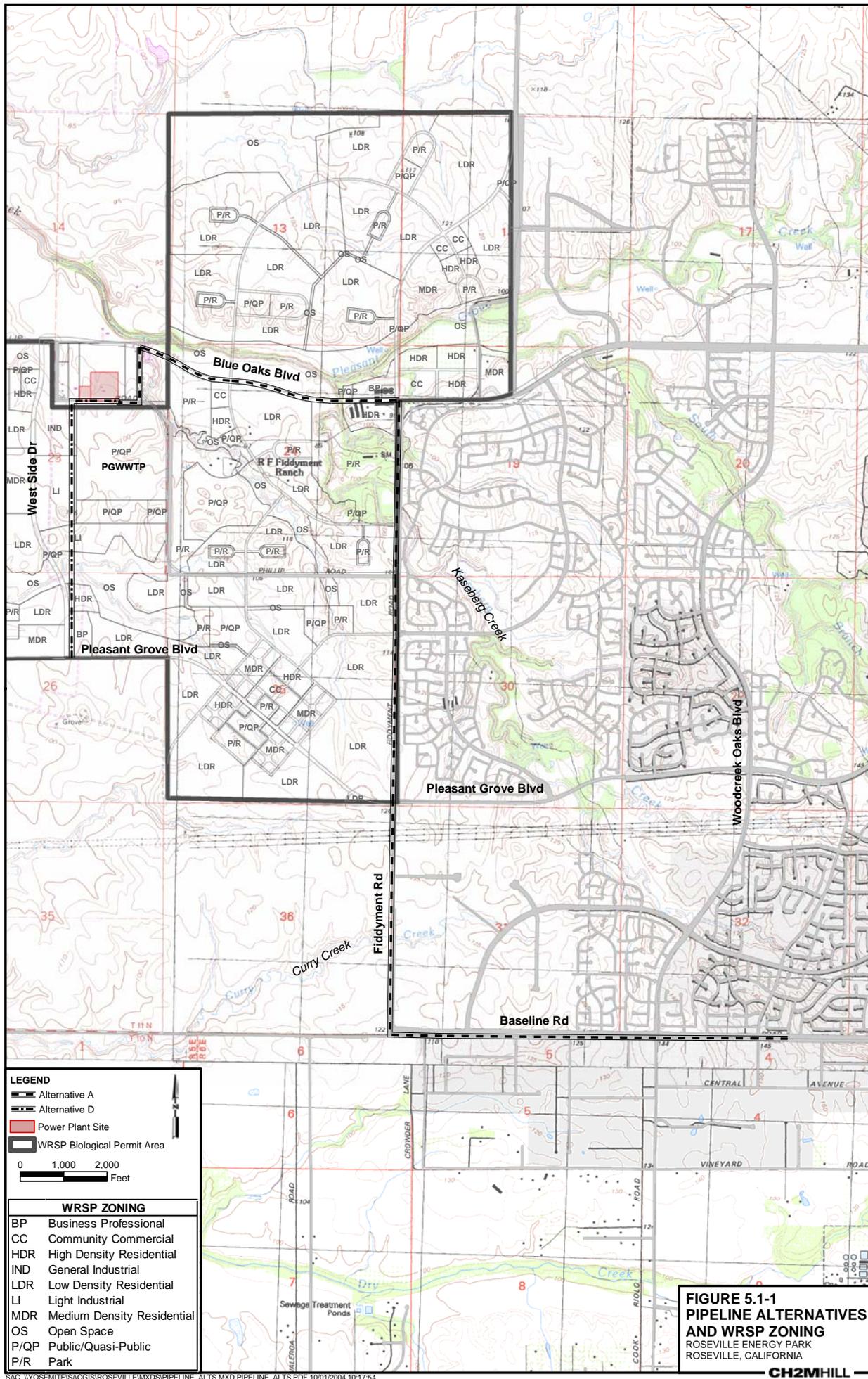
This supplement to AFC Chapter 5 describes the new natural gas pipeline alternative route, Alternative D that would connect the REP to PG&E's regional pipeline. Pipeline route Alternative A, as described in the October 2003 AFC, remains under consideration. AFC Alternatives B, B1, and C, however, are no longer considered. This supplemental filing describes Alternatives A and D, and is designed to replace the discussion of pipeline alternatives provided as Section 5.1 in the AFC. The other portions of AFC Section 5 (AFC Sections 5.2 through 5.6) do not require revision. An environmental assessment of the new pipeline route is included below in Section 5.2 of this supplement.

5.1 Alternative Natural Gas Pipeline Routes

Two alternative natural gas pipeline routes are included in this AFC, as revised. (The AFC as originally filed included three alternative routes with a small variation on one route making a fourth alternative). Alternative A connects with PG&E's distribution pipeline in the Roseville area, Line 123. This connection is located near the corner of Baseline Road and Country Club Drive, east of the project site in Roseville (Figure 5.1-1). New pipeline Alternative D connects with a planned PG&E distribution feeder main and distribution regulation station that will be located in the West Roseville Specific Plan (WRSP) area near the corner of future Pleasant Grove Boulevard and West Side Drive.

Alternative A begins just east of the intersection of Baseline Road and Country Club Drive. The route travels west along Baseline Road and then turns north along Fiddymont Road. At the intersection with Blue Oaks Boulevard, the route turns west into the WRSP area and continues on the future extension of Blue Oaks Boulevard. It then turns south into the future alignment of Phillip Road. It then turns west on the existing alignment of Phillip Road and into the REP site at the gas metering station. This route is approximately 6.0 miles long. Construction would be primarily by open trench. Where the pipeline crosses busy paved roads, jack and bore techniques may be used for the crossing. The crossing of Kaseberg Creek would likely use horizontal directional drill (HDD) techniques.

Alternative D replaces Alternatives B, B1, and C described in the AFC as filed in October 2003. Alternative D begins near the corner of future Pleasant Grove Boulevard and future West Side Drive, as these roadways are described in the WRSP (Figure 5.1-1). It travels north along the east side of West Side Drive, running in a 35-foot-wide utility easement that has been planned as part of the WRSP. Just north of Pleasant Grove Boulevard, the route diverges from West Side Drive, running due north in the utility easement. This route crosses areas planned for residential, open space, and light and general industry in the WRSP, running north for approximately 1.2 miles to Phillip Road along the western boundary of the Pleasant Grove Waste Water Treatment Plant. At Phillip Road, the route turns east,



**FIGURE 5.1-1
PIPELINE ALTERNATIVES
AND WRSP ZONING
ROSEVILLE ENERGY PARK
ROSEVILLE, CALIFORNIA**

running in Phillip Road to the gas metering station located in the southeast corner of the power plant site. The length of Alternative D is 1.5 miles.

PG&E has proposed Alternative D as a more practicable and cost-effective alternative routing for the project than Alternative A. This new routing would be consistent with PG&E's planned distribution system for the future growth in West Roseville. Based on an analysis of projected future demand for natural gas in West Roseville, PG&E plans to install a gas distribution feeder main between distribution line 123 and a new distribution regulation station to be located near the intersection of Pleasant Grove Boulevard and West Side Drive. The need for PG&E's new distribution feeder main and distribution regulation station facilities is based on general residential and industrial demand in West Roseville and is not predicated on the gas requirements of the REP. This line, furthermore, would be permitted independently of the REP. The REP's first point of interconnection would be the new PG&E distribution feeder main at Pleasant rove Boulevard. To serve the REP, PG&E would tap the distribution feeder main and install a 10-inch pipeline to the REP. PG&E's letter to RE describing this new alternative is attached at the end of this section.

5.2 Environmental Assessment of Alternative D

The following is a brief environmental assessment of natural gas pipeline Alternative D. This assessment follows the list of disciplines found in the AFC.

5.2.1 Air Quality

There would be no significant differences in air quality impacts between Alternatives A and D during operation. Alternative D would have less potential to generate fugitive dust and diesel particulate emissions during construction, however, because it is shorter (1.5 miles versus 6 miles). Furthermore, because Alternative D is not located near residential areas likely to be occupied at the time of pipeline construction, fugitive dust and diesel particulate emissions during construction would have little potential to create a nuisance to local residents. Alternative A runs adjacent to residential areas along Baseline Road and Fiddymment Road.

5.2.2 Biological Resources

Alternative D would have fewer biological resources impacts than Alternative A. Considering these differences, however, is complicated by the fact that most of Alternative D and much of Alternative A lie within the WRSP area, so that their biological resources impacts will be considered and mitigated under the WRSP and by the WRSP developers.

For Alternative D, the only area along the route not permitted under the WRSP is the area along the existing Phillip Road. Alternative D reaches Phillip Road just west of the PGWWTP, and turns east onto Phillip Road, running east to the REP gas metering station. Although this portion of Phillip Road does not lie within the permitted portion of the WRSP, the natural gas pipeline would not encounter any sensitive biological resources there that would not already be impacted by REP construction.

In crossing through the WRSP area, Alternative D would encounter biological resources not permitted for removal under the WRSP permitting actions. The WRSP includes an open space preserve that Alternative D would cross about 0.3 miles north of Pleasant Grove Boulevard. This open space area includes an intermittent drainage, vernal pool, and a flood detention pond area. In order to avoid impacting this area, it would be necessary to cross using horizontal directional drilling methods. If this

method were used, there would be no impacts to the wetlands, vernal pools, or other biological resources in the open space area. The management plan for this open space area includes a provision for a utility easement for both electrical power and natural gas to cross the open space in this location.

For Alternative A, there are two areas that are not permitted under the WRSP. These include the portion of the route that runs along Baseline Road, then turns north on Fiddymment and runs in Fiddymment Road to Pleasant Grove Boulevard. Although there are wetlands near this route, including a storm water storage pond along Baseline Road, and the Woodcreek Oaks vernal pool preserve south of Pleasant Grove Boulevard, Alternative A would have no impact on these resources because it would be constructed entirely in the street. Alternative A would also cross Curry Creek, an intermittent drainage fed by irrigation runoff, but this water of the U.S. could be avoided by directional drilling.

The second area along the route of Alternative A that is not permitted under the WRSP permits is the City of Roseville property immediately east and north of the REP. Future Blue Oak Boulevard and future Phillip Road cross into this property, and Alternative A follows the utility easements belonging to these two roadways. The portions of these roadways that are located on the City’s property, however, have not been included in the WRSP’s permit applications. Figure 5.1-1 shows the WRSP permit area boundary. The WRSP developers will permit these features in the near future. In the meantime, the REP will seek permits for REP facilities in these areas that are located on City property.

Potential impacts of Alternative A in this property have been considered and quantified previously. Alternative D would involve a decrease in these impacts, because this Alternative would not include any routing along future Blue Oaks Boulevard or Phillip Road (see Table 5-1). Alternative D would thus avoid the potential impacts, both direct and indirect, to wetlands and vernal pool branchiopod habitat, associated with portions of the Alternative A routing.

TABLE 5-1
Wetland and Vernal Pool Fairy Shrimp Habitat Impacts Acreage, Alternatives A and D (non-WRSP portion)

Wetland type	REP site and Alternative A		REP site and Alternative D	
	Seasonal wetland	Ephemeral stream	Seasonal wetland	Ephemeral stream
Direct impact acres*	0.51	0.38	0.40	0.0
Indirect impact acres	2.54	0.00	1.90	0.0
Total acres	3.05	0.38	2.30	0.0

*Acreages include impacts of the REP, switchyard, construction parking and office areas, and the portions of the pipeline alternatives that are not located within the WRSP permitted area.

5.2.3 Cultural Resources

The potential impacts of Alternative D on cultural resources would be slightly less than those of Alternative A. Although neither of these pipeline routes would have direct impacts on known cultural resources, Alternative A will be located near areas of relatively high sensitivity to contain buried archaeological deposits of the prehistoric or historic era. These areas include the terraces adjacent to Kaseberg Creek and its main tributaries, as well as stream terraces near Pleasant Grove Creek. Several historic sites and one prehistoric site are located within 500 feet of Alternative A.

Alternative D, by contrast, is not located near any major stream channels. Although it does cross one unnamed seasonal drainage, this drainage does not support riparian vegetation or oak woodland and is thus much less likely that other areas to contain archaeological deposits. No recorded historic or prehistoric sites are located near Alternative D. Three archaeological finds, labeled “non-formal sites” by PAR Environmental Services (2001), are located less than 1,000 feet and more than 500 feet from

Alternative D. These include a structure pad (Ft[nf]-1), a rural refuse dump (Ft[nf]-2), and windmill components (Ft[nf]-4). None of these finds was found to meet the criteria for significance.

In general, Alternative D would have lower potential to encounter buried archaeological resources than Alternative A, because it is much shorter (1.5 miles versus 6 miles) and because the area it traverses is of much lower archaeological sensitivity than that of Alternative A.

5.2.4 Geological Hazards and Resources

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of geological hazards and resources. The seismic hazard is the same for the two routes, and neither is located near significant geological resources such as gravel deposits, or mineral deposits of economic or recreational value.

5.2.5 Hazardous Materials Handling

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of the handling of hazardous materials. Because it is shorter and runs through open space and an industrial area, however, Alternative D would be less likely to cause property damage or bodily injury in the unlikely event of a pipeline rupture.

5.2.6 Land Use

Current land use along Alternative D is agricultural (unirrigated pasture). Current zoning is per the WRSP and Public/Quasi-Public for the PGWWTP, which abuts the pipeline route on its northern end, and REP site (City of Roseville). With the annexation of the WRSP area and the implementation of the WRSP, Alternative D will run in a planned 35-foot-wide utility easement that runs due north from the future extension of Pleasant Grove Boulevard near its corner with West Side Drive to Phillip Road. Figure 5.1-1 shows future zoning under the WRSP in relation to the Alternative D route.

Beginning at Pleasant Grove Boulevard, the utility easement occupies a paseo (walkway) along the eastern margin of West Side Drive, adjacent to areas zoned Business Professional and High Density Residential (east side of West Side Drive) and Medium and Low Density Residential (west side of West Side Drive). The route then crosses an area zoned Open Space. Beginning approximately 0.4 miles north of Pleasant Grove Boulevard, the area adjacent to both sides of the utility easement is zoned Light Industrial. Further north, the adjacent zoning is Light Industrial on the west and Public/Quasi-Public (PGWWTP) on the east. Closer to Phillip Road, the adjacent zoning to the west changes to General Industrial.

Alternative D, running in an easement through these areas, would have no adverse effects on land use or zoning. In this location, the pipeline would be consistent with the WRSP (which has designated this routing as a utility corridor) and other applicable plans, ordinances, and policies. It would be necessary to cross the designated open space preserve and its drainage and wetland areas, however, by horizontal direction drilling in order to avoid conflicts with the conservation plans for this area.

5.2.7 Noise

There would be only minor differences in impacts between Alternatives A and D during project operation or construction, in terms of noise. Short-term construction noise impacts to residential areas would be greater with Alternative A because it is located adjacent to existing residential areas along Baseline and

Fiddymment Roads. Alternative D will not be located near any existing residential areas or areas planned for early (Phase I) development under the WRSP that will be occupied at the time of pipeline construction.

5.2.8 Paleontological Resources

There would be only minor differences in impacts between Alternatives A and D during project operation or construction, in terms of paleontological resources. Buried paleontological resources are equally likely to occur along both routes. Alternative D would involve significantly less excavation, and would therefore involve less opportunity to disturb buried paleontological resources.

5.2.9 Public Health

There would be only minor differences in impacts between Alternatives A and D during project operation or construction, in terms of public health. Alternative D would involve significantly less excavation, and would therefore generate less fugitive dust and fewer diesel particulate emissions.

5.2.10 Socioeconomics

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of socioeconomics. Alternative D would be shorter and thus less costly to construct. It would therefore decrease the project's economic benefit to the Sacramento Region in terms of wages, salaries, supplies, and equipment, though by a negligible amount.

5.2.11 Soils and Agriculture

There would be only minor differences in impacts between Alternatives A and D during project operation or construction, in terms of soils and agriculture. Alternative D would involve significantly less excavation, and would therefore have less potential to cause soil erosion. Both routes would displace a small amount of land that is currently agricultural, but this land is planned for development under the WRSP and the effects of development were previously taken into account through the WRSP EIR.

5.2.12 Traffic and Transportation

There would be only minor differences in impacts between Alternatives A and D during project operation or construction, in terms of traffic and transportation. Alternative D would be constructed in a new utility easement, rather than along existing and planned roadways, except for a small portion of the route along Phillip Road near the REP site. For this reason, constructing Alternative D would require little traffic delay, compared with Alternative A, which would be constructed partly in Baseline and Fiddymment Roads.

5.2.13 Visual Resources

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of visual resources. The pipelines will be underground and will not be seen. Both routes would cause short-term and temporary visual impacts.

5.2.14 Waste Management

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of waste management. Wastes associated with constructing

Alternative D would be less in quantity than those associated with Alternative A because Alternative D is shorter and would require less construction effort. Both would involve management of directional drilling spoils such as bentonite drilling mud.

5.2.15 Water Resources

There would be small differences in impacts between Alternatives A and D during project operation or construction, in terms of water resources. Alternative D would involve significantly less excavation, and would cross only one drainage and would therefore have less potential to cause stream sedimentation compared with Alternative A, which crosses several drainages.

5.2.16 Worker Health and Safety

There would be no significant differences in impacts between Alternatives A and D during project operation or construction, in terms of worker health and safety.

5.3 References Cited

PAR Environmental Services. 2001. Cultural resources investigation of the Westpark/Fiddymont Ranch and Liveoak Enterprises/Signature Property Development Project. Placer County, California. Report on file, California Historical Resources Information System, North Central Information Center, Sacramento, California.

Letter From Pacific Gas & Electric Company

Pacific Gas and Electric Company

77 Beale Street
San Francisco, CA 94105

Mailing Address

Mail Code B16A
P.O. Box 770000
San Francisco, CA 94177
415/973-7000



Via Fax and Mail

September 22, 2004

Mr. Russ Nichols
City of Roseville/Roseville Electric
2090 Hilltop Circle
Roseville, CA 95747

Subject: Application for Gas Service, City of Roseville, Roseville Energy Park

Dear Mr. Nichols:

Pacific Gas and Electric Company (PG&E) proposes to construct a gas service pipeline to the City of Roseville's (Applicant) Roseville Energy Park (Facility) via the route identified on the attached drawing. This route was selected because it minimizes ratepayer costs and environmental impacts while serving the gas demands of the Applicant and other customers in the adjacent area.

PG&E continually reviews the ability of its gas pipeline system to serve future load growth, and has recently identified that additional gas capacity is required south and west of the Applicant's Facility. To obtain this capacity, PG&E plans to install a gas distribution feeder main (DFM) and Distribution Regulation Station (Station) in the vicinity of Pleasant Grove Boulevard and West Side Drive. This planned DFM would be required regardless of whether the Facility were to be served, or not.

PG&E proposes to serve the Facility via an extension from the proposed DFM. PG&E's preferred Standard Facilities Design would be to tap the DFM in the vicinity of Pleasant Grove Boulevard and West Side Drive and install 1.5 miles of 10-inch gas service pipeline from the proposed DFM along the Applicant's power line easement to the Facility. PG&E estimates that utilizing the Fiddymont to Blue Oaks route will increase the Standard Facilities cost for serving the Facility by \$1,600,000 over this proposed route, and will also significantly increase costs to serve other development in the area.

Mr. Russ Nichols
September 22, 2004
Page 2



A service extension from the proposed DFM will not change the Applicant's previously provided Standard Facilities Design cost allocation. Applicant will be responsible for the extension cost from the nearest existing Distribution Main, which is located at the intersection of Fiddymont and Blue Oaks Road. This route will be the basis for the Applicant's cost allocation with either route alternative.

PG&E proposes that we meet to discuss this route selection in more detail and to answer questions you may have. Please call Mike O'Brien at 415-973-5652 to set up this meeting.

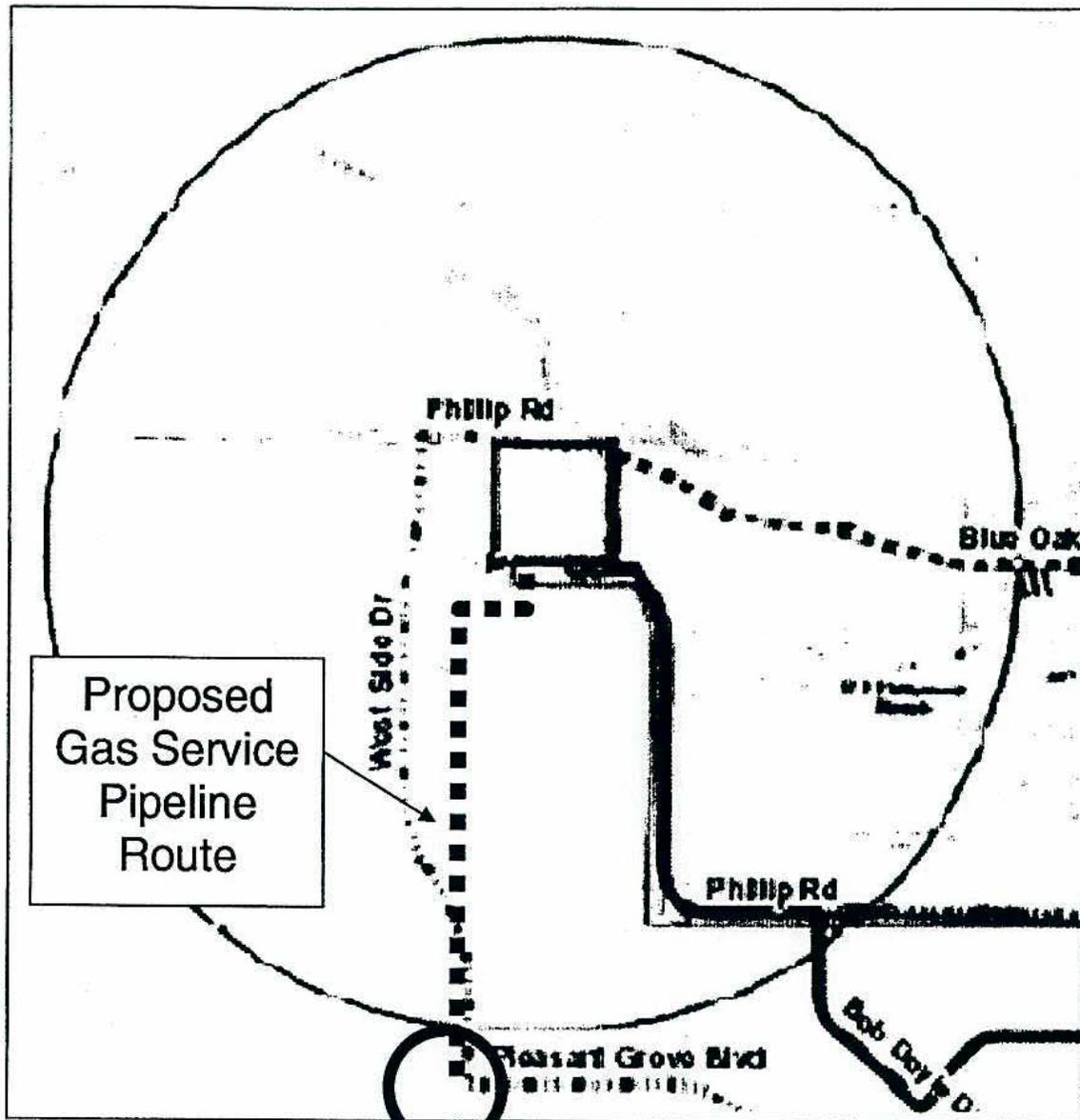
Sincerely,

Rod Boschee / MDO

Rodney A. Boschee
Director, Contract Development and Management

Attachment

Pipeline Route Map from PG&E Proposed DFM to the Roseville Energy Park



Proposed Gas Service Pipeline Route

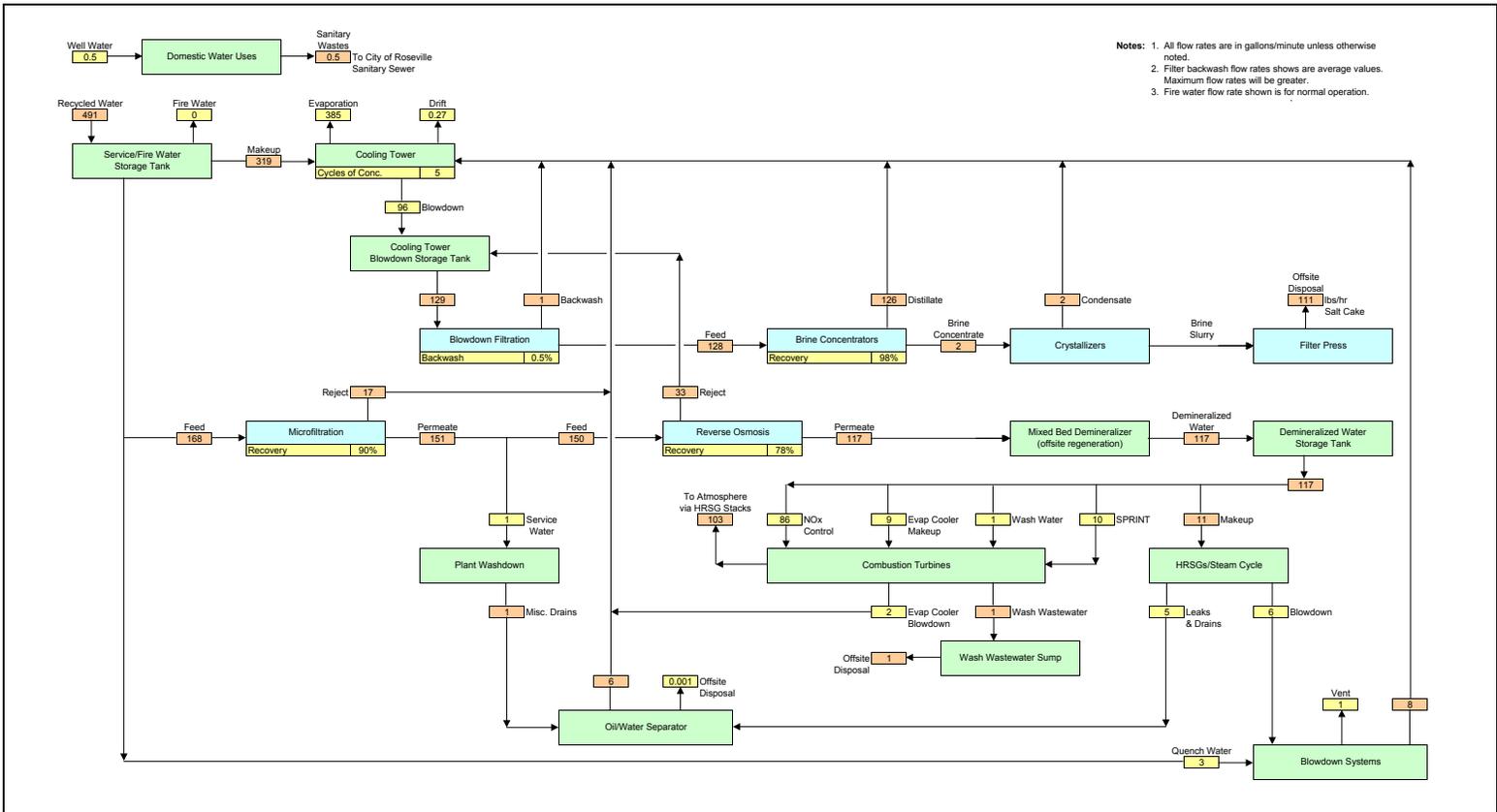
Tap into PG&E Proposed DFM

7.0 Water Supply

This section describes two minor changes to the water treatment system and provides new water balance diagrams that incorporate these changes. The original project design, as described in the AFC, used distillate from the Zero Liquid Discharge (ZLD) system brine concentrator as makeup to the demineralizer, with any excess distillate discharged to the cooling tower. This design has been modified such that excess distillate from the brine concentrator is no longer used as demineralizer makeup water. Also, the modified design adds microfilters upstream of the reverse osmosis system.

Water balance figures 7.1-1, through 7.1-4 have been revised in accordance with these changes (attached at the end of this section). Please note that the plant's overall water consumption remains unchanged.

REVISED WATER BALANCE DIAGRAMS

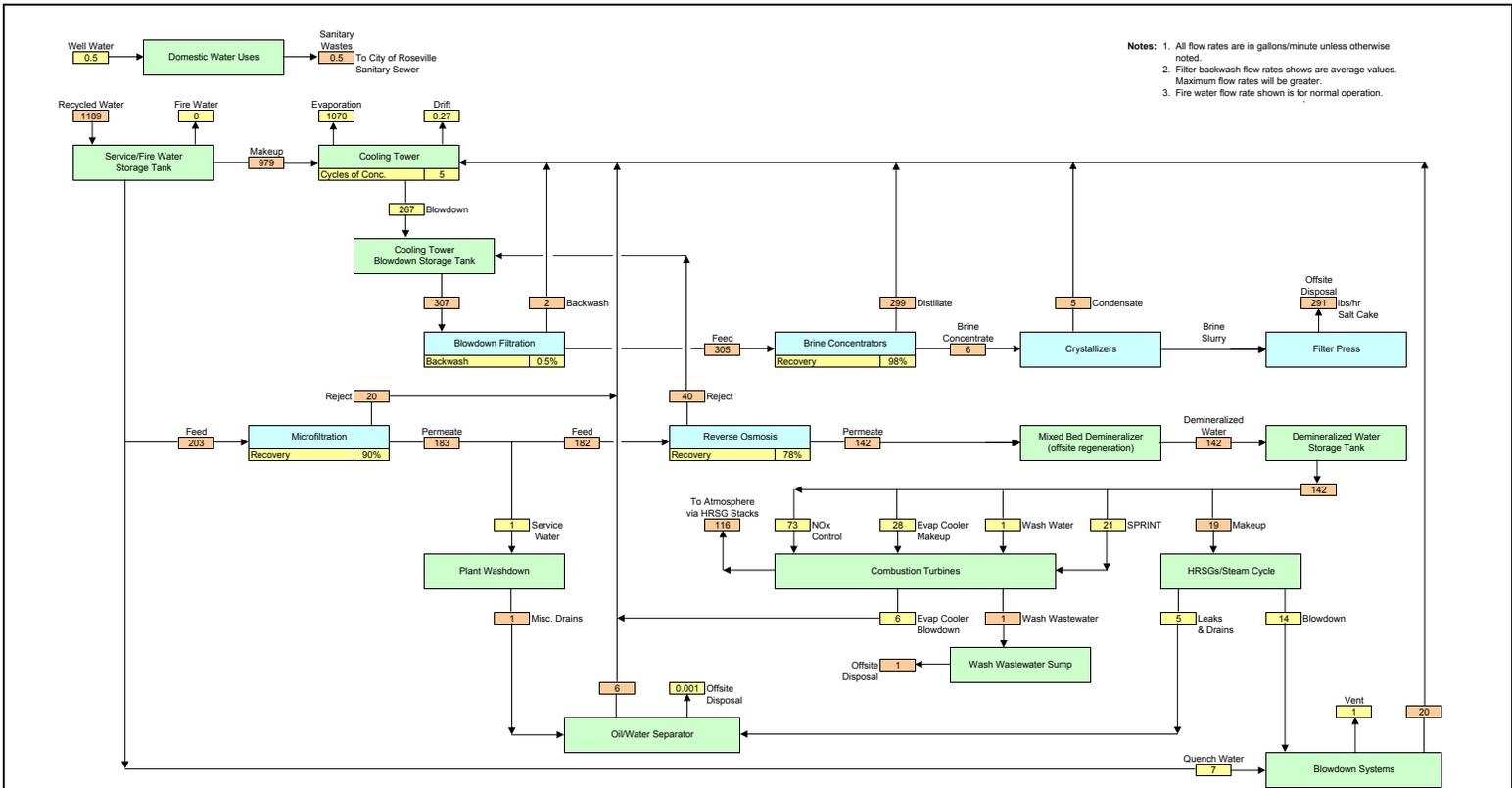


6.00	Added Microfiltration / Issued for ZLD Specification	JBM	5/24/04
5.00	Re-issued for AFC	JBM	10/15/03
4.00	Issued for AFC	JAM	10/9/03
3.00	Included makeup RO Train	JAM	8/23/03
2.00	Updated development H2's and Ailsom CT's	JAM	8/18/03
1.00	Initial format and calculations	JAM	
Rev.	Description	By	Date

Design Case:	GE LM6000 Combustion Turbines
Configuration:	2 x 1, HPD
Base Load - Average Ambient	
Dry Bulb Temp.:	62 deg F
Wet Bulb Temp.:	53 deg F
Amb. Pressure:	14.64 psia
CTG Inlet Air Cooling:	On
CTG SPRINT:	On
HRSG Duct Firing:	Off



Roseville Energy Park	
Water Balance (GE LM6000), Average Ambient	
Figure 7.1-1	Rev. 6.00

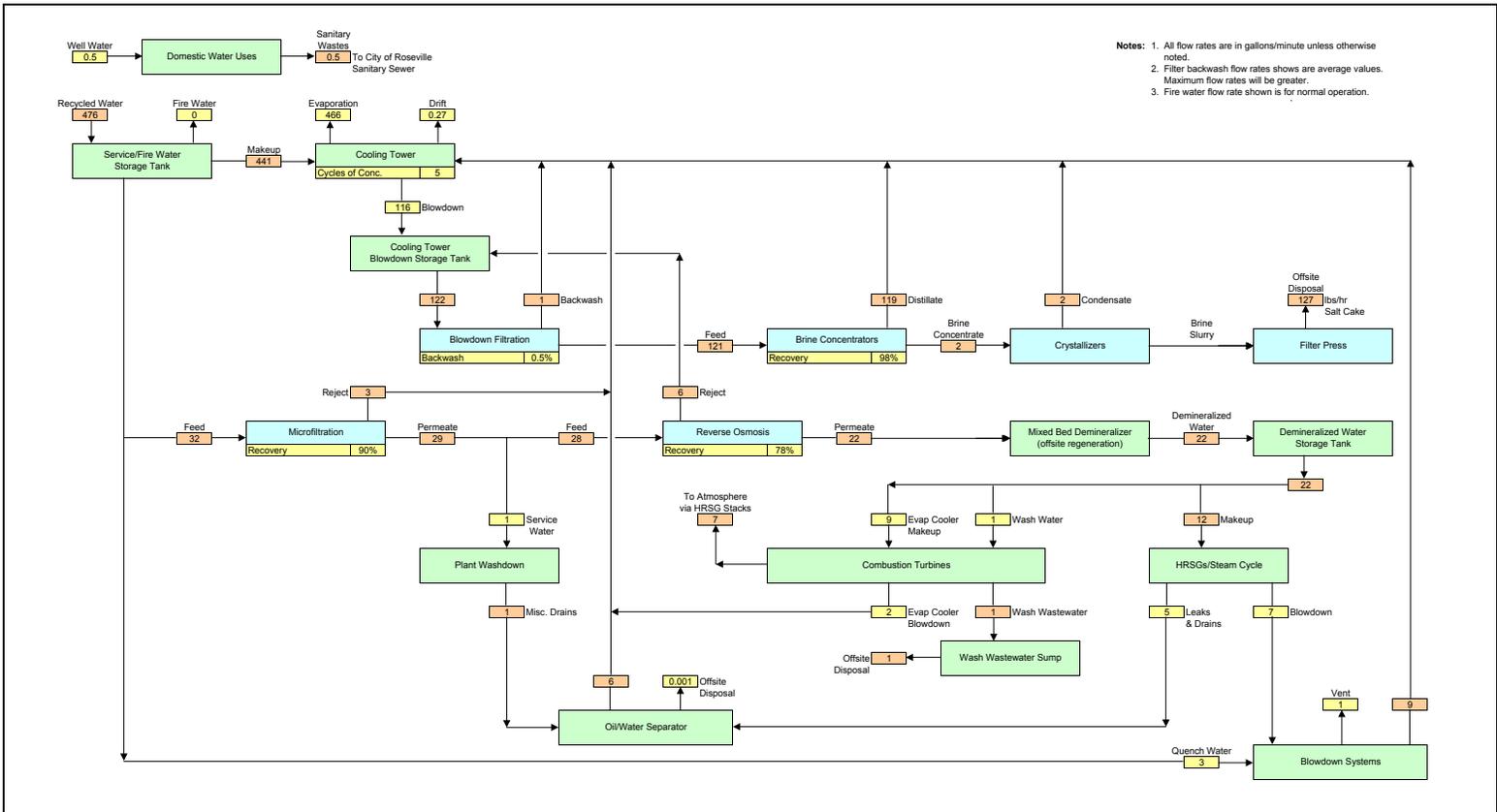


6.00	Added Microfiltration / Issued for ZLD Specification	JBM	5/24/04
5.00	Re-issued for AFC	JBM	10/15/03
4.00	Issued for AFC	JAM	10/9/03
3.00	Included makeup RO Train	JAM	8/23/03
2.00	Updated development H2's and Allisom CT's	JAM	8/18/03
1.00	Initial format and calculations	JAM	
Rev.	Description	By	Date

Design Case:	GE LM6000 Combustion Turbines
Configuration:	2 x 1, HPD
Dry Bulb Temp.:	99 deg F
CTG Inlet Air Cooling:	On
CTG SPRINT:	On
HRSG Duct Firing:	Off
Peak Load - Hot Ambient	Amb. Pressure: 14.64 psia
	Wet Bulb Temp. 70 deg F



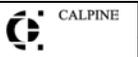
Roseville Energy Park	
Water Balance (GE LM6000), Summer Ambient	
Figure 7.1-2	Rev. 6.00



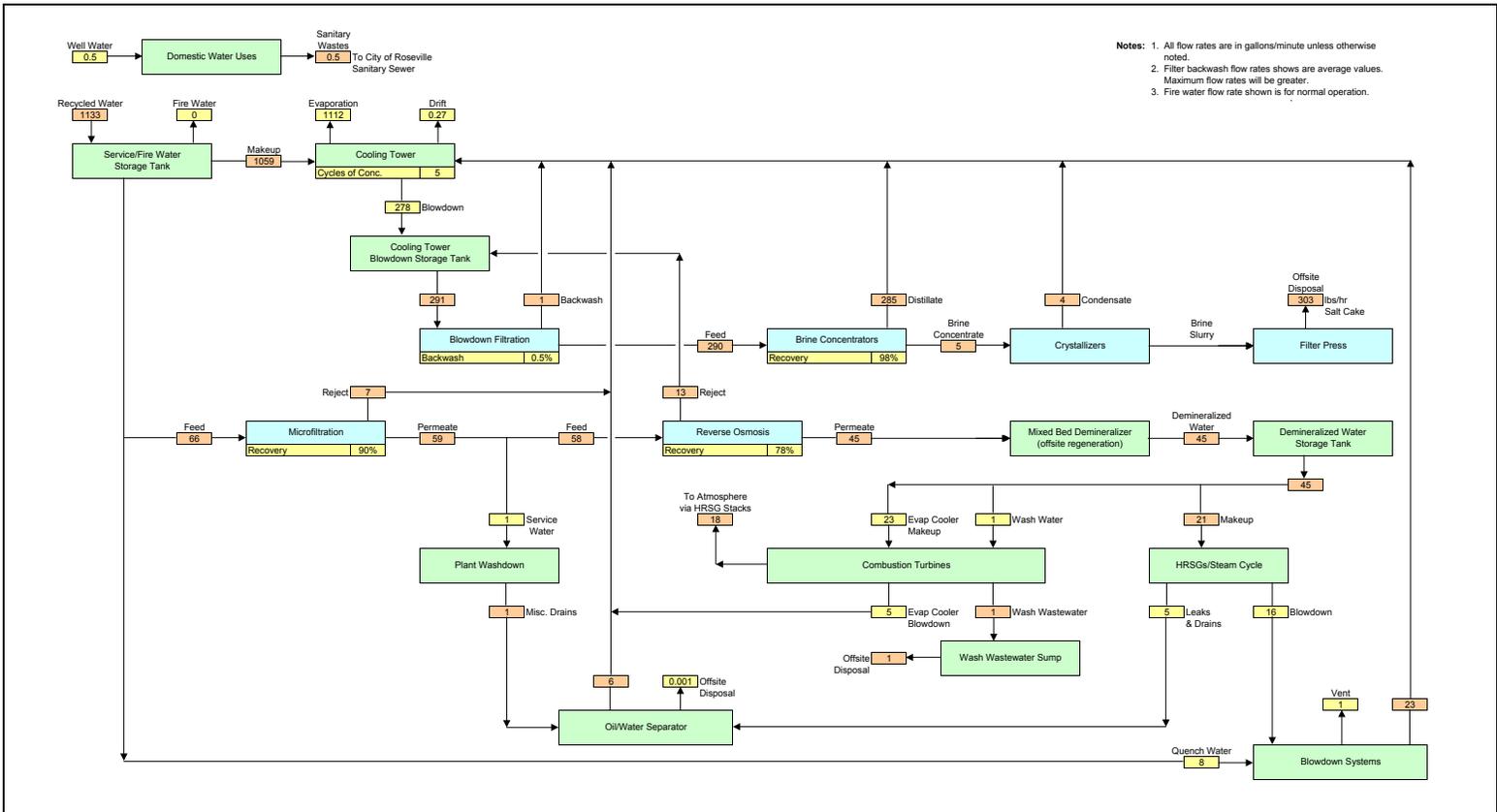
Notes: 1. All flow rates are in gallons/minute unless otherwise noted.
 2. Filter backwash flow rates shows are average values. Maximum flow rates will be greater.
 3. Fire water flow rate shown is for normal operation.

6.00	Added Microfiltration / Issued for ZLD Specification	JBM	5/24/04
5.00	Re-issued for AFC	JBM	10/15/03
4.00	Issued for AFC	JAM	10/9/03
3.00	Included makeup RO Train	JAM	8/23/03
2.00	Updated development H2's and Ailsom CT's	JAM	8/18/03
1.00	Initial format and calculations	JAM	
Rev.	Description	By	Date

Design Case:	GTX100 Combustion Turbines		
Configuration:	2 x 1, HPD	Amb. Pressure:	14.64 psia
Dry Bulb Temp.:	62 deg F	Wet Bulb Temp.:	53 deg F
CTG Inlet Air Cooling:	On		
CTG SPRINT:	On		
HRSG Duct Firing:	Off		



Roseville Energy Park	
Water Balance (Alistom GTX100), Average Ambient	
Figure 7.1-3	Rev. 6.00



6.00	Added Microfiltration / Issued for ZLD Specification	JBM	5/24/04
5.00	Re-issued for AFC	JBM	10/15/03
4.00	Issued for AFC	JAM	10/9/03
3.00	Included makeup RO Train	JAM	8/23/03
2.00	Updated development H2's and Ailsom CT's	JAM	8/18/03
1.00	Initial format and calculations	JAM	
Rev.	Description	By	Date

Design Case:	GTX100 Combustion Turbines
Configuration:	2 x 1, HPD
Peak Load - Hot Ambient:	Amb. Pressure: 14.64 psia
Dry Bulb Temp.:	99 deg F
Wet Bulb Temp.:	70 deg F
CTG Inlet Air Cooling:	On
CTG SPRINT:	On
HRSG Duct Firing:	Off



Roseville Energy Park	
Water Balance (Ailstom GTX100), Summer Ambient	
Figure 7.1-4	Rev. 6.00