

# **CONTRA COSTA UNIT 8 POWER PROJECT**

**(00-AFC-1C)**

Petition for Conditional Approval of Ownership Addition

Request for Updated Construction Milestones

Petition for Approval of Equipment Enhancements

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**PART ONE**  
**Introduction and Summary**

On May 30, 2001, the California Energy Commission (“Commission”) certified the Contra Costa Unit 8 Power Project (“Unit 8”) proposed by Mirant Delta, LLC (“Mirant Delta”) in its Application for Certification dated January 31, 2000 (“AFC”). Unit 8 will be a nominal 530-megawatt natural gas-fired, combined cycle combustion turbine power plant located within the site complex of Mirant Delta’s existing Contra Costa Power Plant (“CCPP”) in Contra Costa County, just north of the City of Antioch.<sup>1</sup> In its decision granting certification for Unit 8 (“AFC Decision”), the Commission noted that construction of Unit 8 would increase the generating capacity of the CCPP to a total of approximately 1,210 net megawatts.<sup>2</sup>

Mirant Delta began construction of Unit 8 in late 2001. Due to a number of circumstances beyond Mirant Delta’s control, including an economic downturn in the power industry, tightening of the capital markets and significant changes in the California power markets, Mirant Delta was forced to suspend construction in February 2002. Construction of Unit 8 remains suspended.

Mirant Delta submits this filing to provide an update regarding recent developments that affect the planned construction of Unit 8, and to seek authorizations that are needed to enable construction to recommence. On January 14, 2005, Mirant Delta and a number of its affiliates entered into a settlement of claims asserted in Mirant Delta’s bankruptcy proceedings by several government entities and electric utilities in California (“California Settlement”). The settled claims were pursued in a number of disputed regulatory proceedings, appellate proceedings, litigation and investigations regarding issues and allegations arising from events in the California and western energy markets during 2000 and 2001. The California Settlement also resolves claims regarding certain rates and potential refunds associated with services and payment obligations provided for in Mirant Delta’s reliability must-run agreements with the California Independent System Operator Corporation.

Among other provisions, the California Settlement provides for one of the utility claimants, Pacific Gas and Electric Company (“PG&E”), potentially to acquire certain

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<sup>1</sup> See Figures and Drawings in Attachment A.

<sup>2</sup> AFC Decision at 3.

assets associated with Mirant Delta's planned development of Unit 8 ("CC8 Assets"). As explained in Part Two below, if certain conditions are satisfied (including obtaining the approvals requested in Part Two and Part Three below), PG&E will have the ability, subject to obtaining Commission approval, to assume responsibility for construction of Unit 8, and to own and operate Unit 8 for the use and benefit of its ratepayers.

To prepare for a potential resumption of construction, Mirant Delta also has reviewed the design of Unit 8 and identified four equipment enhancements that would improve the project in light of changed circumstances. Mirant Delta's request for approval of these enhancements is set forth in Part Four below.

The remainder of this filing is organized into the following parts.

Part Two:      Petition for Conditional Approval of Ownership Addition.  
Part Two describes the circumstances under which PG&E may acquire the CC8 Assets and requests conditional authorization for PG&E, if it does acquire the CC8 Assets, to own, construct and operate Unit 8, and to be added as an additional party responsible for compliance with all requirements in the AFC Decision.

Part Three:      Request for Updated Construction Milestones.  
Part Three requests approval of construction milestones that will accommodate the closing deadline in the settlement documentation with PG&E.

Part Four:      Request for Approval of Equipment Enhancements.  
Part Four requests approval of four equipment enhancements in Unit 8's design, namely: (1) installation of a water treatment facility for Unit 8; (2) enhancement of the process for treating cooling tower blowdown from Unit 8; (3) installation of a separate oil water separator for Unit 8; and (4) enlargement of the planned Unit 8 administration building. As explained in Part Four, these enhancements can be accomplished in compliance with the existing conditions of certification in the AFC Decision, and will not require any change to those conditions. As also explained in Part Four, the enhancements will not result in any adverse impact on the environment that will not be mitigated to less than significant levels by the existing conditions and requirements in the AFC Decision, or prevent Unit 8 from complying with applicable laws, ordinances, regulations and standards ("LORS").

**PART TWO**  
**Petition for Conditional Approval of Ownership Addition**

Pursuant to Section 1769(b) of the Commission's regulations, Mirant Delta hereby requests conditional approval for the addition of PG&E as an owner of Unit 8 if PG&E acquires the CC8 Assets. Set forth below are: (1) a description of the circumstances under which PG&E could acquire the CC8 Assets; (2) a description of the extent to which Unit 8 was designed to rely on the existing CCPP systems, and an explanation of how that reliance affects responsibility for compliance with the AFC Decision; and (3) a request for authorization for PG&E, if it acquires the CC8 Assets, to construct, own, use, operate and maintain Unit 8, and to be added as a party responsible for compliance with all requirements and conditions of certification in the AFC Decision.

**I. PG&E's Potential Acquisition of the CC8 Assets**

Among other provisions, the California Settlement required Mirant Delta and its affiliate, Mirant Special Procurement, Inc. ("Mirant Procurement"), and PG&E to use good faith commercially reasonable efforts to execute an agreement that provides for PG&E to acquire the CC8 Assets. The CC8 Assets are comprised of equipment and other assets procured or otherwise held by Mirant Delta and Mirant Procurement in connection with the planned development of Unit 8, including two natural gas-fired combustion turbines, two heat recovery steam generators and a reheat steam turbine generator.

After several months of negotiations, Mirant Delta, Mirant Procurement and PG&E executed an Asset Transfer Agreement for the CC8 Assets on June 10, 2005 ("ATA"). The ATA requires Mirant Delta and Mirant Procurement to transfer and assign the CC8 Assets to PG&E if certain conditions are satisfied. Included in those conditions is a requirement that Mirant Delta must use commercially reasonable efforts to obtain written authorization from the Commission: (1) for PG&E to own the CC8 Assets, and to own, construct, use, operate and maintain Unit 8 pursuant to the AFC Decision, subject to PG&E providing a declaration to the Commission agreeing under penalty of perjury to comply with and be bound by all provisions of the AFC Decision; and (2) to extend the construction milestones for Unit 8 as needed to accommodate the possibility that the ATA closing date (and the transfer of the CC8 Assets to PG&E) could occur as late as June 30, 2008. As discussed further in Part Three below, while the ATA provides for this deadline to be accommodated in the updated milestones, Mirant Delta and PG&E are optimistic that the ATA closing date actually will occur much sooner, potentially as early

as the third quarter of 2006.<sup>3</sup>

If the closing conditions are not satisfied by June 30, 2008, or if other triggering events specified in the ATA and the California Settlement were to occur, PG&E would not take ownership of the CC8 Assets and instead would receive alternative consideration provided for in the California Settlement. Due to the nature of certain closing conditions and triggering events, PG&E's right to acquire the CC8 Assets has been described as being akin to an "option" that allows PG&E to acquire the CC8 Assets based on its reasonable satisfaction with factors such as the status of permits and approvals required to construct and operate Unit 8, and its acceptance of material changes (if they occur) in the projected costs for completing construction. Until the closing conditions are satisfied and PG&E actually acquires the CC8 Assets, Mirant Delta remains the owner of the CC8 Assets and the developer and sponsor of Unit 8.

## **II. Integration of Unit 8 with Mirant Delta's Existing CCPP**

Unit 8 has been designed to be located wholly within the site of Mirant Delta's existing CCPP.<sup>4</sup> In addition to being located on site, Unit 8 has been designed and permitted to rely on many of CCPP's existing systems, including the existing cooling water supply system, water supply systems for process make-up water, the fire water supply system and the ammonia supply system. Unit 8's use of the existing CCPP systems is reflected on page 3 of the AFC Decision, which states that "since the new unit would be constructed wholly within the site of the existing CCPP, it would rely on many of the existing plant's systems such as plant process make-up water, wastewater treatment system, cooling water supply, fire water supply, ammonia supply, and other ancillary systems."<sup>5</sup> If PG&E acquires the CC8 Assets, these existing systems at the

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<sup>3</sup> Another closing condition in the ATA is that the California Public Utilities Commission ("CPUC") must have issued an order authorizing PG&E to acquire the CC8 Assets on the terms specified in the ATA without modifications or conditions that are unacceptable to PG&E, Mirant Delta or Mirant Procurement. On June 17, 2005, PG&E filed an application with the CPUC seeking approval of the ATA and related agreements, and adoption of cost recovery and ratemaking mechanisms related to the acquisition of the CC8 Assets and the completion and operation of Unit 8 as early as 2008. PG&E's application is pending.

<sup>4</sup> See Figures and Drawings in Attachment A.

<sup>5</sup> As discussed in Part Four below, Mirant Delta proposes to install a separate water treatment facility, a cooling tower blowdown treatment facility and a separate oil water separator for Unit 8. These new facilities will not change Unit 8's dependence on the CCPP systems. Supply water for the Unit 8 water treatment facility will be provided from the CCPP water intake and delivery system, and wastewater from the Unit 8 water treatment facility, cooling tower blowdown treatment facility and oil water separator will discharge into the CCPP wastewater discharge outfalls.

CCPP will continue to be owned and operated by Mirant Delta. Mirant Delta and PG&E will enter into an agreement governing the terms under which Mirant Delta will allow PG&E to use the existing CCPP systems in connection with PG&E's construction and operation of Unit 8.

Several authorizations from other agencies that apply to Mirant Delta's operation of the CCPP also apply to operations at Unit 8. For example, the National Pollutant Discharge Elimination System ("NPDES") permit issued by the Central Valley Regional Water Quality Control Board ("Regional Board") applies to discharges from the entire CCPP, including discharges from Unit 8 once it is constructed. In contrast, the air permit issued by the Bay Area Air Quality Management District ("BAAQMD") applies exclusively to Unit 8.

If PG&E acquires the CC8 Assets, PG&E will complete construction of Unit 8, and will own and operate Unit 8 as a PG&E-owned power plant. PG&E's construction, ownership and operation of Unit 8 will be subject to all of the conditions of certification in the AFC Decision, and LORS that would have applied to Mirant Delta's construction of Unit 8. At the same time, Mirant Delta will continue to own the CCPP, including the water and ammonia supply and delivery systems that are used for operation of Unit 8 and other units of the CCPP. As the owner and operator of the CCPP, Mirant Delta will continue to act as the permit holder for all of the permits and authorizations that apply to both the CCPP and Unit 8. For example, Mirant Delta will remain the permit holder for the NPDES permit and other authorizations issued by resource agencies such as the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The air permit issued by the BAAQMD will be transferred to PG&E.

Given Unit 8's dependence on CCPP systems that will continue to be owned and operated by Mirant Delta, and on permits for which Mirant Delta will continue to be the permit holder, Mirant Delta is not proposing to transfer sole responsibility for compliance with the AFC Decision to PG&E. Instead, Mirant Delta and PG&E have agreed that both entities will be responsible directly to the Commission for compliance with the AFC Decision. Under this structure, the Commission could look to both parties to ensure that all conditions of certification in the AFC Decision are satisfied.



### **III. Request for Conditional Authorization for PG&E to Own, Construct, Use, Operate and Maintain Unit 8**

Mirant Delta hereby requests authorization for PG&E, if it acquires the CC8 Assets, to own the CC8 Assets and to own, construct, use, operate and maintain Unit 8 pursuant to the AFC Decision on the terms specified below. As explained above, Mirant Delta is not proposing to transfer sole responsibility for compliance with the AFC Decision to PG&E. Instead, Mirant Delta and PG&E have agreed that they both will be responsible directly to the Commission for compliance with the AFC Decision.

To formalize its obligation to comply with all requirements in the AFC Decision, PG&E has agreed to execute and file a verified statement in accordance with Section 1769(b)(1)(C) of the Commission's regulations. Specifically, PG&E has agreed to file a verified statement in the form attached as Attachment B upon the occurrence of the closing under the ATA. As required in Section 1769(b)(1)(C) and Section 1707 of the Commission's regulations, the statement will be signed by an officer of PG&E, who will attest under penalty of perjury that PG&E understands and agrees to comply with all conditions of certification in the AFC Decision.

Mirant Delta is required to use commercially reasonable efforts to seek the authorization requested in this Part Three before the ATA transaction will close. Mirant Delta therefore seeks a written order authorizing PG&E, if PG&E acquires the CC8 Assets, to own the CC8 Assets, and to own, construct, use, operate and maintain Unit 8 pursuant to the AFC Decision. Mirant Delta requests that that the effectiveness of this authorization be conditioned on: (1) occurrence of the closing under the ATA; (2) PG&E's actual acquisition of the CC8 Assets; and (3) execution by PG&E and filing of the verified written statement in the form attached as Attachment B, which shall be signed by an officer of PG&E with authority to bind the company.

Mirant Delta will notify the Commission once the closing under the ATA occurs, and simultaneously will file an executed version of the PG&E verified statement. Mirant Delta requests that the Commission specify that the authorization for PG&E to own, construct and operate Unit 8, and the recognition that both Mirant Delta and PG&E will be responsible for ensuring compliance with the conditions of certification in the AFC Decision, will become effective automatically upon the filing of the notice of closing and PG&E's executed verified statement.

**PART THREE**  
**Request for Updated Construction Milestones**

The construction milestones for Unit 8 were modified in December 2002 and again in August 2004. In approving the second modification, the Commission concluded that a further extension of the construction milestones would help facilitate a potential transfer of ownership and subsequent construction of Unit 8.<sup>6</sup> The Commission recognized that “without another extension of the construction milestones, the status of Mirant’s certificate would be in question and could jeopardize negotiations to transfer ownership.”<sup>7</sup>

Mirant Delta now requires a third extension of the construction milestones to preserve the viability of Unit 8, and to facilitate a potential transfer of ownership to PG&E on the terms described in Part Two above. Mirant Delta’s request for updated construction milestones is set forth below.

Mirant Delta and PG&E are working toward closing PG&E’s acquisition of the CC8 Assets as soon as possible after the conditions specified in the ATA are satisfied, potentially as early as the third quarter of 2006. In fact, PG&E has informed the CPUC in its application seeking approval of the Unit 8 transaction that it intends to be in a position to: (1) resume construction in September 2006; (2) deliver all major equipment to the Unit 8 site by September 2007; (3) complete installation of major equipment by February 2008; and (4) begin commercial operation by August 2008.<sup>8</sup>

Despite these goals and the parties’ commitment to work toward achieving them, the ATA allows PG&E to take ownership of the CC8 Assets as late as June 30, 2008. The ATA also requires Mirant Delta to request written authorization from the Commission to extend the construction milestones for Unit 8 as needed to accommodate “the possibility” of an ATA closing date occurring on June 30, 2008. To satisfy this condition in the ATA, Mirant Delta hereby requests approval of the updated construction milestones set forth below, and requests that they be approved as a replacement for the milestones approved in the Commission’s August 2004 order. This list includes the

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<sup>6</sup> Order Approving Request to Extend Construction Milestones, Order No. 04-0825-04 (August 25, 2004).

<sup>7</sup> *Id.*

<sup>8</sup> This projected schedule also was communicated to the Commission’s compliance division in a letter dated July 28, 2005.

approved milestones that already have been satisfied, and links the unfinished milestones to the actual ATA closing date as follows:

- |  |                              |
|--|------------------------------|
| 1. Begin pouring major foundation concrete:  | Complete                     |
| 2. Begin installation of major equipment:    | Complete                     |
| 3. Begin gas pipeline construction:          | Complete                     |
| 4. Complete gas pipeline interconnection:    | Complete                     |
| 5. Recommence construction efforts:          | ATA Closing Date + 3 months  |
| 6. Deliver all major equipment to site:      | ATA Closing Date + 13 months |
| 7. Complete installation of major equipment: | ATA Closing Date + 18 months |
| 8. Begin commercial operation:               | ATA Closing Date + 24 months |

These updated construction milestones are designed to comply with the ATA's requirements while allowing flexibility for the actual closing date to occur as soon as possible. Linking each milestone date to the actual ATA closing date is preferable to establishing specific dates that move forward from a "worst case" ATA closing date of June 30, 2008 because the "linked dates" better reflect the realistic likelihood that the ATA closing date and recommencement of construction could occur much sooner, as explained above.<sup>9</sup> Linking the milestones to the actual ATA closing date will establish a more expedited timeline for construction in the event that closing does occur within the next year, consistent with current realistic expectations.

Commission approval of the milestones outlined above will ensure that construction of Unit 8 recommences as quickly as possible after PG&E acquires the CC8 Assets, while avoiding the need to revise the milestones further if the closing date slips beyond the current projected time frame. Commission approval of these milestones also will satisfy the closing condition in the ATA that addresses the need for updated construction milestones, and thereby facilitate a closing at the earliest possible date. Finally, assuming that the ATA closing date occurs by September 2006, Commission approval of these milestones will allow construction to proceed in accordance with the construction schedule that PG&E has submitted to the CPUC.

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<sup>9</sup> If linking the milestones to the actual ATA closing date is not an acceptable approach, Mirant Delta would need to submit proposed milestones that assume an ATA closing date of June 30, 2008 to ensure consistency with its obligations under the ATA.

**PART FOUR**  
**Petition for Approval of Equipment Enhancements**

In preparation for the recommencement of construction, Mirant Delta has reviewed the existing design of Unit 8 and identified four equipment enhancements that would optimize Unit 8 and improve its efficient operation in light of changed circumstances. As described below, these four enhancements involve:

- Installation of a water treatment facility to serve Unit 8's process water needs;
- Enhancement of Unit 8's cooling tower blowdown treatment system by adding sand filters to remove suspended solids and a dechlorination system to remove residual chlorine;
- Installation of a separate oil water separator for Unit 8 in lieu of using the CCPP's existing oil water separator; and
- Enlargement of the Unit 8 administration building so that it has a footprint of 100 feet by 140 feet.

Pursuant to Section 1769(a) of the Commission's regulations, Mirant Delta requests approval of these equipment enhancements. If approved, they will enable Unit 8 to be operated more efficiently and effectively, including in the event that a third party owner such as PG&E acquires Unit 8. The enhancements therefore will optimize the potential value of Unit 8 and increase the likelihood that it will be built and placed into operation.

As explained below, the enhancements can be accomplished in compliance with the existing conditions of certification in the AFC Decision, and will not require any change to those conditions. As also explained below, the enhancements will not result in any adverse impact on the environment that will not be mitigated to less than significant levels by the existing conditions and requirements in the AFC Decision, or prevent Unit 8 from complying with applicable LORS.

The proposed enhancements should facilitate the efficient operation of Unit 8, and reflect some potential environmental improvements to Unit 8 relative to what was contemplated in the AFC. For example, as discussed below, the new water treatment system will utilize demineralizers that will be regenerated off-site, thus precluding the

need to use the existing CCPP neutralization system for Unit 8, as well as the need for additional storage of regeneration and neutralization acid and caustic for Unit 8. In addition, the proposed enhancements to the Unit 8 cooling tower blowdown system will provide greater assurance that Unit 8 blowdown will not exceed the NPDES permit limits in light of the variable quality of makeup water supplied to the facility from the San Joaquin River.

Set forth below for each of the enhancements is the information required by Section 1769(a)(1) of the Commission's regulations, namely:

- A complete description of the proposed enhancement, including new language for any conditions that will be affected (Section 1769(a)(1)(A));
- A discussion of the necessity for the proposed enhancement (Section 1769(a)(1)(B));
- If the enhancement is based on information that was known by the petitioner during the certification proceeding, an explanation of why the issue was not raised at that time (Section 1769(a)(1)(C));
- If the enhancement is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted (Section 1769(a)(1)(D));
- An analysis of the impacts the enhancement may have on the environment and proposed measures to mitigate any significant adverse impacts (Section 1769(a)(1)(E));
- A discussion of the impact of the enhancement on the facility's ability to comply with applicable laws, ordinances, regulations and standards (Section 1769(a)(1)(F));
- A discussion of how the enhancement affects the public (Section 1769(a)(1)(G));
- A list of property owners potentially affected by the enhancement (Section 1769(a)(1)(H)); and

- A discussion of the potential effect on nearby property owners, the public and other parties in the application proceedings (Section 1769(a)(1)(I)).

The information required in Section 1769(a)(1)(A)-(G) and (I) is set forth below. As required in Section 1769(a)(1)(H), a list of the property owners potentially affected by the proposed enhancements is provided in Attachment C.

To the extent that the enhancements affect submittals that already have been made in the compliance process, those submittals will be amended to reflect the approved enhancements once construction of Unit 8 recommences.

## **I. Water Treatment Facility**

### **A. Description**

Mirant Delta proposes to construct a separate water treatment facility to supply Unit 8's needs for process water. The water treatment facility will utilize clarification, ultrafiltration, reverse osmosis membrane filtration, and ion exchange demineralization to produce plant process water. Mirant Delta previously proposed to supply treated water for Unit 8 from the existing water treatment facility at the CCPP. Further review indicates that it will be more effective to install a separate water treatment facility for Unit 8, as explained in subpart C below.

Consistent with the original design described in the AFC, raw water from the San Joaquin River will be obtained from the CCPP intake system and pumped to Unit 8 using the existing CCPP station service water pumps. Booster pumps will be provided, if required, to pump the water across the CCPP site to Unit 8. The treated water reject streams will be returned from Unit 8 back to the existing CCPP water treatment area and discharged at CCPP Outfall 001, as originally planned in the AFC. A schematic flow diagram for the new water treatment facility is included in Attachment D. An updated water mass balance that shows the water stream into the water treatment facility and the wastewater streams out of the water treatment facility, with maximum daily and annual average daily flows, is provided in Attachment G.

The quantity of process water to meet Unit 8 requirements will not exceed the existing system peak design rate of 850 gallons per minute. River water will be extracted from the existing CCPP system intake and conveyed through a 10-inch pipe to a new Unit 8 water treatment building and pretreatment area, located east of the CCPP rail spur

and north of the existing aqueous ammonia storage tanks. The piping system for conveying river water will be routed on the east west pipe corridor in the location of an existing oil pipeline.

The water treatment facility will be housed in a new building, with additional equipment to be located in a pretreatment area that will be adjacent to the new building, all as shown in the Figures and Drawings in Attachment A. The water treatment building will have a single story and a footprint of approximately 60 feet by 100 feet, as shown on the Updated Site Plan included in the Figures and Drawings in Attachment A. The footprint for the pretreatment area will be approximately 55 feet by 100 feet, as also shown in the Updated Site Plan included in the Figures and Drawings in Attachment A. Water treatment equipment located in the pretreatment area will have the following dimensions:

- Solids contact unit: 40 feet diameter x 20 feet high
- Thickener: 14 feet diameter x 20 feet high
- Clarified water storage tank: 14 feet diameter x 26 feet high (straight side)
- Ultrafilter filtrate tank: 10 feet diameter x 16 feet high (straight side)
- Reverse osmosis permeate tank: 10 feet diameter x 16 feet high (straight side)

The quantity and use of chemicals at the water treatment facility will be consistent with those originally described in the AFC, with three exceptions. The ultrafiltration system will require the use of acid (citric or hydrochloric) and sodium hypochlorite for backwashes, and a coagulant (ferric chloride) to aid in filtration. These chemicals are widely used in the water treatment industry for ultrafiltration processes. These additional chemicals were not included in the list of chemicals originally provided in the AFC.

The new water treatment facility will utilize clarification as the pretreatment process, and ultrafiltration, reverse osmosis and off-site regenerated demineralizers for plant makeup water treatment. The design features of the water treatment system are described in more detail below.

## **1. Pretreatment Process**

Pretreatment of raw river water from the San Joaquin River will consist of high rate clarification to produce water with a low concentration of total suspended solids (“TSS”) for use in Unit 8 as service water and as makeup to the water treatment system. River water will be routed to the clarification equipment located outside the new water treatment building. The river water will be conditioned with coagulant and polymer chemicals prior to entering the clarifier. The conditioned water will flow through a reaction chamber and then to the clarification section where solids will settle and clarified water will be directed to a clarified water tank. A portion of the settled solids will be blown down to dewatering equipment located in the pretreatment area and in the water treatment building. The remainder of the solids will be circulated within the process to enhance clarification. A portion of the clarified water will be pumped to a new 250,000-gallon service water storage tank that will be used for service water uses on site. The remainder of the clarified water will be pumped to the process water system for further treatment.

## **2. Process Water Treatment System**

The process water treatment system will include ultrafiltration, a two-pass reverse osmosis unit and ion exchange polishing. The system will produce demineralized water suitable for high pressure boiler makeup, power augmentation, and for blending with clarified water to feed the combustion turbine inlet evaporative coolers.

Clarified water will be pumped to the ultrafiltration unit. All components of the ultrafiltration system will be located inside the new water treatment building except for the ultrafiltration filtrate tank, which will be located just outside the new building in the pretreatment area.

Ultrafiltration is a low pressure, membrane-based filtration process that removes solids and high molecular weight species while allowing salts and low molecular weight species to pass. Water will be pumped through a series of membrane filter cartridges housed in modules where solids and high molecular weight species will be retained. The membranes will be periodically backwashed with filtered water to remove the solids. In addition to the filtered water backwash, the membranes will be periodically backwashed with chemical solutions containing dilute sodium hypochlorite and acid (either citric or hydrochloric). A filter aid (ferric chloride) may be fed to increase the removal of solids.



Backwash waste from the ultrafiltration membranes will be recycled to the clarifier to capture the backwash water and to remove the solids in the dewatering system.

Ultrafiltration will ensure a consistent quality of water to the reverse osmosis system, which is located downstream in the water treatment process. This is especially important in light of the extreme variability in quality of the raw water from the San Joaquin River. Ultrafiltration will reduce potential organic foulants in the reverse osmosis supply water, as well as suspended solids. This will help protect the reverse osmosis membranes and promote longer service life.

Filtered water from the ultrafiltration system will be pumped to the first pass reverse osmosis unit. Reverse osmosis pumps will provide sufficient pressure to overcome the osmotic pressure of the feed water and drive the reverse osmosis process. The product water from the first pass reverse osmosis will be re-pumped through a second pass reverse osmosis to increase the quality of the water. Each pass of the reverse osmosis system consists of a series of membrane filter cartridges housed in modules. The overall reverse osmosis recovery is expected to be 60 to 70 percent, with an overall salt rejection of 98 percent. The brine reject water from the reverse osmosis will be pumped to CCPP Outfall 001, which is the current discharge point for CCPP's existing water treatment system.

Reverse osmosis product water will be routed to a storage tank, and then pumped to the mixed bed ion exchange polishers. Following treatment in the polishers, the water will be sent to the demineralized water storage tank. The mixed bed ion exchange polishers will be portable and regeneration of the mixed beds will be accomplished off-site. In the AFC, Mirant Delta proposed to use the existing CCPP neutralization system to process demineralizer regeneration wastes on site prior to discharge. The off-site regenerated polishers being proposed will preclude the need to utilize the existing CCPP neutralization system, as well as the need for additional storage of regeneration and neutralization acid and caustic for Unit 8.

## **B. Compliance with Existing Conditions of Certification**

Construction of a separate water treatment facility for Unit 8 will comply with the existing conditions of certification in the AFC Decision. No new language will be needed in the conditions.

### **C. Necessity and Basis for the Change**

Mirant Delta originally planned to use the existing CCPP water treatment system for Unit 8. Further review indicates that it will be more effective to provide a new standalone water treatment facility for Unit 8. In addition, significant work would be required to refurbish the existing facility so that it could accommodate the needs of Unit 8.

Rather than refurbishing an existing facility, it will be more efficient and cost-effective to construct a separate facility to serve Unit 8. Locating the facility on the Unit 8 site also will enable the owner of Unit 8 to operate and service the water treatment facility more efficiently.

The need for this modification was not known when the AFC was submitted or when the AFC Decision was issued. The need for this modification also is not based on information that changes or undermines the assumptions, rationale, findings, or other bases of the AFC Decision.

### **D. Analysis of Potential Environmental Impacts**

The water treatment facility will be constructed at the same time as the remainder of Unit 8 and will not extend the 22-month construction period assumed in the AFC Decision. River water will be taken from the same points and discharged at the same points as originally contemplated in the AFC. There will not be any new impacts associated with the piping system used to deliver the water to the Unit 8 water treatment facility because the AFC already contemplated construction of a piping system to deliver treated water from the existing CCPP water treatment system to Unit 8. Impacts associated with that piping system, which now will be used to transport river water rather than treated water, therefore are already addressed in the AFC Decision. Thus, any potential adverse environmental impacts that may be associated with the new water treatment facility will be mitigated to less than significant levels by the existing conditions of certification in the AFC Decision.

The potential impacts of the new water treatment system are discussed further below in the context of each resource area addressed in the Environmental Quality section of the AFC Decision.

***Air Quality:***

The water treatment facility will not increase emissions from Unit 8, extend the 22-month

construction period assumed for Unit 8 or result in additional site disturbance. Any impact on air quality will be mitigated by existing conditions of certification.

***Public Health:***

The chemicals to be used in the water treatment system are consistent with those described in the AFC, other than the use of ferric chloride, and sodium hypochlorite and acid for backwashes, which are discussed in the context of hazardous materials below. There will be no new impacts on public health.

***Hazardous Materials:***

The only additional hazardous materials to be used in the water treatment system will be the chemicals required for operation of the ultrafiltration system. These chemicals are ferric chloride, and sodium hypochlorite and acid for backwashes (either citric acid or hydrochloric acid). These chemicals will be handled in accordance with the Hazardous Materials Business Plan applicable to the CCPP and Unit 8. Any potential impacts therefore will be mitigated to less than significant levels.

***Waste Management:***

Solid waste will be generated in the pretreatment process. The solid waste will be hauled off-site and disposed of in a landfill. There should be no new impacts in this area.

***Land Use:***

The water treatment facility is consistent with all applicable zoning and land use requirements and designations.

***Traffic and Transportation:***

Construction of the water treatment facility will not change the 150 average daily construction personnel trips or the 275 peak daily construction personnel trips that were modeled in the AFC and analyzed for purposes of the AFC Decision. During the operation period, regeneration of the mixed beds in the demineralizer will occur off-site. This will occur only 1-2 times a week. In addition, solid waste from the water treatment process will be hauled from the site as necessary. These additional truck trips will not create traffic and transportation impacts in excess of those analyzed in the AFC Decision.

***Noise and Vibration:***

Noise generated by the water treatment facility will be well below noise levels generated by other Unit 8 components. The water treatment facility will not increase the noise levels of Unit 8.

***Visual Resources:***

The water treatment facility will be designed to have a

low visual profile and the minimum footprint needed to ensure functionality. It will be a one story pre-engineered structure with an eave height of approximately 20 feet. The addition of a water treatment facility will not be noticeable among the structures already being added for Unit 8, and will not significantly alter the visual characteristics or the size of the completed Unit 8, as shown in the Figures and Drawings in Attachment A. Any visual impacts therefore will be mitigated to less than significant levels by the existing conditions of certification.

***Cultural Resources:***

There will be no new impacts in this area because there will be no new areas of ground disturbance on the Unit 8 site.

***Socioeconomic Resources:***

There will be no new impacts in this area.

***Biological Resources:***

Adding a water treatment facility will not expand the project footprint or increase the height of Unit 8 beyond what was contemplated in the AFC. The new water treatment facility therefore will not increase impacts on terrestrial species. Impacts on aquatic species also will not increase because the water used in the water treatment facility will be from the same source and in the same quantities as originally proposed in the AFC. Similarly, wastewater from the facility will be discharged to the same point as the existing CCPP water treatment system and will meet the limits of the NPDES permit, as discussed further in subpart E below. The only change to the NPDES permit related to the water treatment system will be an updated description of the reverse osmosis reject water flow, which will remain within the limits of the NPDES permit. Impacts on biological resources therefore will be mitigated to less than significant levels by the existing conditions.

***Soil and Water Resources:***

Water will be drawn from the same source as proposed in the AFC, and in the same quantities. Wastewater generated by the new treatment facility will be discharged to the same point as the existing CCPP water treatment system, and will remain within the limits of the NPDES permit. Unit 8's compliance with the NPDES permit is discussed in more detail in subpart E below. As a result, there will be no new impacts in this area.

***Geology and Paleontology:***

Construction and operation of the water treatment facility will occur within the Unit 8 footprint. There will be no new impacts in this area.

## **E. Compliance with LORS**

Construction of a separate water treatment facility for Unit 8 will not affect Unit 8's ability to comply with LORS. In particular, construction of a separate water treatment facility will not affect compliance with the NPDES permit applicable to the entire CCPP, including Unit 8. Unit 8's compliance with the NPDES permit is described in more detail below.

The current NPDES permit for the CCPP (No. CA0004863), which expires in April 2006, provides for the construction and operation of Unit 8 as described in the AFC.<sup>10</sup> The existing discharge limits in the current NPDES permit anticipate and accommodate Unit 8. Unit 8's reuse of CCPP Units 6 and 7 circulating cooling water will not increase the volume of water discharged, increase discharge temperature, or significantly change the material properties of the discharged water. The Regional Board found that Unit 8 "is integrated with the existing CCPP," and that "it proposes the same type of activity as the existing source because it adds to the generating capacity of the existing CCPP." Accordingly, the Regional Board found that Unit 8 is not "substantially independent" of the CCPP and does not constitute a "new source" for the purposes of the Clean Water Act. Because the discharge will not change materially and no new discharges are planned, and because Unit 8 is not a new source, Unit 8 does not require a new or modified NPDES permit.

The current NPDES permit describes the operation of Unit 8 relative to the regulated discharge as follows:

Operation of the [Unit 8] cooling towers will result in a requirement for make-up water, which will consist of cooling water diverted from the existing Units 6 and 7 discharge. With both Units 6 and 7 operating, the water demand for [Unit 8] represents approximately 2.2 percent of the Unit 6 and 7 cooling water flow. Losses of water from the cooling towers occur as a result of evaporation, drift, and blowdown that is discharged to control the concentration levels of minerals in the water. The cooling tower blowdown will be discharged back to the return water of the Units 6 and 7 cooling water system prior to discharge. This loss due to the Unit 8 steam cycle will result, on average, in a two percent net reduction in volume of the Units 6 and 7 discharge. . . . The consumptive loss of water in the Unit 8 steam cycle will result in a corresponding increase in effluent pollutants, including salts and other inorganic constituents.

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<sup>10</sup> A copy of the current NPDES permit is provided in Attachment H.

The current NPDES permit provides effluent limits for the CCPP, including the effluents resulting from the addition of Unit 8.

The current NPDES permit establishes TSS and oil and grease effluent limits for the Unit 8 discharge of cooling tower blowdown, heat recovery steam generator blowdown/water analysis, and evaporative cooler blowdown. The current NPDES permit also limits the cooling tower blowdown and combined effluent discharged from Unit 8 to CCPP Outfall 002 to 15 percent of the total discharge to CCPP Outfall 002. Pursuant to the Monitoring and Reporting Program in the current NPDES permit, the point of compliance for the Unit 8 discharges, which make up the bulk of the low-volume water streams discharged to CCPP Outfall 002, will be located “downstream from the last connection at which discharges can be admitted into the cooling water infrastructure.” This is distinct from the point of compliance for monitoring final effluent, including the cooling water discharge for CCPP Unit 6 and 7, for CCPP Outfall 002, which is required to be sampled downstream from the last connection through which wastes can be admitted into CCPP Outfall 002. Monitoring results must be submitted monthly to the Regional Board.

Mirant Delta filed a NPDES permit renewal application with the Regional Board on October 3, 2005.<sup>11</sup> The permit renewal application includes a description of the equipment enhancements included in this CEC filing that are relevant to water quality. For example, the permit renewal application includes an update to the average annual flow expected from the reverse osmosis reject waste stream. This flow rate has been revised to more accurately reflect the waste streams that will be contributed by Unit 8. It should be noted, however, that this is merely a descriptive change, and that total flows to CCPP Outfalls 001 and 002 will remain well below the permitted maximums in the current NPDES permit. As a result, no change to the effluent limits in the NPDES permit will be required.

The CCPP is subject to the requirements of Clean Water Act section 316(b), which requires the location, design, construction and capacity of cooling water intake structures to reflect the best technology available for minimizing adverse environmental impacts.<sup>12</sup> In July 2004, the U.S. Environmental Protection Agency promulgated new

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<sup>11</sup> A copy of that application is provided in Attachment I.

<sup>12</sup> 33 U.S.C. § 1326(b).

section 316(b) regulations, commonly referred to as the Phase II Rule (69 Fed. Reg. 41576), which establish requirements for cooling water intake structures at existing facilities. The Phase II Rule provides five compliance alternatives for achieving impingement mortality and entrainment reduction standards of 80 to 95 percent and 60 to 90 percent, respectively.

In its renewed NPDES permit, the CCPP will be required to comply with the Phase II Rule for the first time. Mirant Delta believes that the conservation measures already adopted at the CCPP meet the entrainment reduction standard, but plans to conduct both entrainment and impingement studies as required by the Phase II Rule to provide an updated characterization of the effects of the cooling water intake system. Mirant Delta may be required to further reduce flows at the CCPP, and/or the Pittsburg Power Plant, under the terms of a combined Resource Management Program (“RMP”) in the NPDES permit, to comply with the requirements of the Phase II Rule. Unit 8’s closed-cycle mechanical draft cooling tower is deemed to comply with the 316(b) performance standards under the terms of the Phase II Rule,<sup>13</sup> and will operate independently of the RMP. As described above, Unit 8 is already included in the current NPDES permit, and the renewed NPDES permit will not require any material changes to provide for the operation of Unit 8.

#### **F. Potential Effect on the Public, Property Owners and Parties**

Construction of a separate water treatment facility will not result in any new impacts on the public, nearby property owners or other parties that have not been addressed and mitigated through measures approved in the AFC Decision. As discussed in the context of impacts on visual resources, adding the water treatment facility will not significantly change the visual characteristics of Unit 8 as viewed from the neighboring properties or other viewing locations.

## **II. Enhanced Cooling Tower Blowdown Treatment System**

### **A. Description**

Mirant Delta proposes to enhance Unit 8’s cooling tower blowdown treatment system by adding sand filters to remove suspended solids and a dechlorination system to

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<sup>13</sup> See 40 CFR § 125.94(a)(1)(i).

remove residual chlorine.<sup>14</sup> Both enhancements will ensure that Unit 8 will remain within the limits of the NPDES permit for the CCPP, as explained in subpart C below.

First, the cooling tower blowdown treatment system will include sand filters to reduce suspended solids to levels acceptable for discharge per NPDES permit limits. Continuous sand filters are granular media filters that incorporate continuous backwash. The filter media will be cleaned by an internal washing system. The filter backwash will be transferred to the raw water pretreatment system for solids removal. Energy consumption will be low and continuous sand filters are typically capable of handling high levels of suspended solids. Due to the high level of solids that may be present in the Unit 8 cooling tower blowdown, a filter aid (a polymer) may be required to ensure sufficient removal to meet discharge limits. The filter modules will be installed in tanks. The sand filter equipment will be approximately 80 feet by 30 feet by 20 feet high, and will be located adjacent to the cooling tower on the southeastern side, as shown in the Figures and Drawings in Attachment A.

Second, the cooling tower blowdown treatment system also will include a dechlorination system. The AFC did not include a fully designed dechlorination system for cooling tower blowdown. A dechlorination system is now planned to remove residual chlorine from the cooling tower blowdown to ensure compliance with NPDES limits. The dechlorination chemical, sodium bisulfite, was included as an option in the AFC and is already provided for in the NPDES permit.

The dechlorination system will be located immediately downstream of the sand filters, and will include two skid-mounted positive displacement feed pumps. The pumps will take suction from a chemical feed tote situated adjacent to the pump skid. The chemical feed rate will be adjusted depending on the actual residual chlorine present in the cooling tower blowdown. The pump skid will include all required piping, valves and instrumentation. The skid also will include a local control panel that will house the pump controls. The pumps will take suction from a chemical feed tote, which will be separate from the skid.

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<sup>14</sup> The Unit 8 design originally included the following systems for circulating water chemical feed: (1) sodium hypochlorite feed for biological fouling control; (2) sulfuric acid feed for pH control; and (3) scale inhibitor feed for scale build-up control. None of these systems have changed.



A schematic flow diagram for the enhanced cooling tower blowdown treatment system is included in Attachment E.

**B. Compliance with Existing Conditions of Certification**

Adding sand filters and a dechlorination system to the cooling tower blowdown treatment system will comply with the existing conditions of certification in the AFC Decision. No new language will be needed in the conditions.

**C. Necessity and Basis for the Change**

The proposed enhancements to the cooling tower blowdown treatment system improve the reliability of the blowdown treatment system and provide greater assurance that Unit 8 blowdown will not exceed the NPDES permit limits in light of the variability of the natural TSS level in the San Joaquin River. Additional information on river water quality has indicated that the source river water, independent of any process discharge, could potentially be above discharge limits. The seasonal and year-to-year variations in the river quality could cause these exceedances; therefore, these treatment enhancements are being proposed to ensure discharge limits can be met. Adding sand filters and a dechlorination system will not change or undermine the assumptions, rationale, findings or other basis of the AFC Decision.

**D. Analysis of Potential Environmental Impacts**

The addition of sand filters and a dechlorination system to Unit 8's cooling tower blowdown treatment system will be incorporated in the project design and constructed at the same time as the rest of Unit 8, utilizing the same construction team and equipment as originally planned. The proposed enhancements will further mitigate potential environmental impacts from the Unit 8 cooling tower by reducing constituents in the blowdown waste stream to keep them below the levels specified in the NPDES permit. Further, the use of sodium bisulfite, the chemical that will be used in the dechlorination system, was included as an option in the AFC and is allowed under the NPDES permit. Thus, any potential adverse environmental impacts that may be associated with the use of sand filters and a dechlorination system will be mitigated to less than significant levels by the existing conditions of certification in the AFC Decision.

The potential impacts of adding sand filters and a dechlorination system are discussed further below in the context of each resource area addressed in the Environmental Quality section of the AFC Decision.

<b><i>Air Quality:</i></b>	The changes to the blowdown treatment system will not increase emissions from Unit 8, extend the 22-month construction period assumed for Unit 8 or result in additional site disturbance. Any impact on air quality will be mitigated by existing conditions of certification.
<b><i>Public Health:</i></b>	There will be no new impacts on public health. The chemical to be used in the dechlorination system was included in the AFC as an option, and is provided for in the NPDES permit.
<b><i>Hazardous Materials:</i></b>	The only additional hazardous material to be used in the enhanced cooling tower blowdown treatment system will be sodium bisulfite, the chemical used in the dechlorination system. As noted above, use of this chemical was provided for in the AFC and is allowed under the NPDES permit. Sodium bisulfite also will be handled in accordance with the Hazardous Materials Business Plan applicable to CCPP and Unit 8. Any potential impacts therefore will be mitigated to less than significant levels by the existing conditions.
<b><i>Waste Management:</i></b>	Use of sand filters will increase the amount of solid waste generated at Unit 8. Solids that would have been part of the cooling tower blowdown will be dewatered and hauled off-site for disposal in a landfill.
<b><i>Land Use:</i></b>	The sand filters and dechlorination system are consistent with all applicable zoning and land use requirements and designations.
<b><i>Traffic and Transportation:</i></b>	Adding sand filters and a dechlorination system will not change the 150 average daily construction personnel trips or the 275 peak daily construction personnel trips that were modeled in the AFC and analyzed for purposes of the AFC Decision. During operation of Unit 8, solid waste generated by the sand filters will be hauled off-site for disposal in a landfill. These additional truck trips will occur relatively infrequently and will not create traffic and transportation impacts in excess of those analyzed in the AFC Decision.
<b><i>Noise and Vibration:</i></b>	Noise generated by the sand filters and dechlorination system will be minimal and well below noise levels generated by other Unit 8 components. The addition of this equipment will not increase the noise levels of

Unit 8.

***Visual Resources:***

The blowdown treatment system will have a slightly expanded footprint to accommodate the concrete tanks that house the sand filter modules, and the pump skids for the dechlorination system. The slight increase in the size of the system will not be noticeable among the structures already added to the site for Unit 8, as shown in the Figures and Drawings in Attachment A. The cooling tower should block views of the new equipment from the east, and the addition of this equipment should not be noticeable from other directions because of the larger cooling tower in the background. These changes therefore will not significantly alter the visual characteristics or the overall size of Unit 8. Any visual impacts will be mitigated to less than significant levels by the existing conditions of certification.

***Cultural Resources:***

There will be no new impacts in this area because there will be no new areas of ground disturbance on the Unit 8 site.

***Socioeconomic Resources:***

There will be no new impacts in this area.

***Biological Resources:***

These changes will not significantly expand the project footprint beyond what was contemplated in the AFC, as shown in the Figures and Drawings in Attachment A. The proposed enhancements to the blowdown treatment system therefore will not increase impacts on terrestrial species. The enhancements will help ensure consistency with the NPDES permit and maintain the water quality of the river.

***Soil and Water Resources:***

The enhancements will improve the blowdown treatment system's reliability and will help to ensure that the facility continues to comply with the TSS limits in the NPDES permit. As a result, there should be no new impacts in this area.

***Geology and Paleontology:***

Construction and operation of the sand filters and dechlorination system will occur within the Unit 8 footprint. There will be no new impacts in this area.

**E. Compliance with LORS**

The proposed enhancements to the cooling tower blowdown treatment system will not affect Unit 8's ability to comply with LORS. Adding sand filters and a

dechlorination system will help ensure that the cooling tower blowdown from Unit 8 consistently meets the TSS and residual chlorine limits in the NPDES permit.

**F. Potential Effect on the Public, Property Owners and Parties**

The proposed enhancements to the cooling tower blowdown treatment system will not result in any new impacts on the public, nearby property owners or other parties that have not been addressed and mitigated through measures approved in the AFC Decision.

**III. Oil Water Separator**

**A. Description**

Mirant Delta proposes to construct a standalone oil water separator for Unit 8 that will discharge to the same point as the existing CCPP oil water separator. Unit 8's oil water separator drains will be routed to a holding tank for visual inspection prior to discharging to the same point as CCPP's existing oil water separator.

The separator will consist of a horizontal cylindrical tank designed for underground installation. The separator will allow for settling solids, and baffles and coalescers designed to optimize separation of free oil from water. The design of the tank will allow for storage of the separated oil and will be designed to prevent discharge of free oil that has been separated from the water. Access will be provided to service the tank internals and for cleanout of collected solids, sludge and free oil. Fittings will be provided for vent, oil pump-out, sampling and gauging. A schematic flow diagram for the oil water separator system is included in Attachment F.

**B. Compliance with Existing Conditions of Certification**

Construction of the proposed oil water separator for Unit 8 will comply with the existing conditions of certification in the AFC Decision. No new language will be needed in the conditions.

**C. Necessity and Basis for the Change**

The new standalone oil water separator is needed to ensure that all potential oily water sources are collected and managed. The Unit 8 design originally contemplated using CCPP's existing oil water separator to process potentially oily drains. Further evaluation of the existing oil water separator during the construction of Unit 8 showed that the existing oil water separator did not have sufficient treatment capacity during peak

storms. The Regional Board was notified of the addition of an oil water separator during initial construction of Unit 8. The NPDES reapplication submitted on October 3, 2005 also refers to the separate oil water separator for Unit 8. Adding an oil water separator for Unit 8 will not change or undermine the assumptions, rationale, findings or other basis of the AFC Decision.

#### **D. Analysis of Potential Environmental Impacts**

The oil water separator system will be constructed at the same time as the remainder of Unit 8 and will not extend the 22-month construction period assumed in the AFC Decision. Any impacts associated with construction of a piping system to connect Unit 8's oil water separator to the discharge point for the CCPP are already addressed in the original project design, which assumed that discharge from oily drains at Unit 8 would be piped to the existing oil water separator at the CCPP. Thus, any environmental impacts associated with the new oil water separator will be mitigated to less than significant levels by the existing conditions of certification in the AFC Decision.

The potential impacts associated with the new oil water separator are discussed below in the context of each resource area addressed in the Environmental Quality section of the AFC Decision.

***Air Quality:***

The oil water separator is expected to require an authority to construct permit from the BAAQMD because the above-ground components of the separator are considered to be a source of emissions. The oil water separator will not extend the 22-month construction period assumed for Unit 8 or result in additional site disturbance. Any construction impact on air quality therefore will be mitigated by existing conditions of certification.

***Public Health:***

There will be no new impacts on public health. Only clean water will be pumped to the existing oil water separator discharge. Separated oil will be removed from the site by a licensed disposal contractor.

***Hazardous Materials:***

The only hazardous substance associated with the new oil water separator will be recovered oil, which will be removed from the site by a licensed disposal contractor and recycled. The AFC Decision already contemplates the use and presence of petroleum-containing materials at the Unit 8 site. The impacts associated with oil recovered through the oil

water separator therefore will be mitigated by existing conditions of certification.

***Waste Management:***

The oil water separator will not increase the level of waste generated by Unit 8, other than to generate recovered oil, which will be hauled off-site by a licensed contractor.

***Land Use:***

The oil water separator is consistent with all applicable zoning and land use requirements and designations.

***Traffic and Transportation:***

Adding the oil water separator will not change the 150 average daily construction personnel trips or the 275 peak daily construction personnel trips that were modeled in the AFC and analyzed for purposes of the AFC Decision. During operation of Unit 8, recovered oil will be hauled off-site by a licensed contractor. These additional truck trips will occur infrequently and will not create traffic and transportation impacts in excess of those analyzed in the AFC Decision.

***Noise and Vibration:***

The oil water separator will not be a significant source of noise and will not increase the noise levels of Unit 8.

***Visual Resources:***

The addition of an oil water separator will not significantly alter the visual characteristics or the size of the completed Unit 8. The oil water separator will be buried underground and the only above-ground equipment will be the holding tank, pumps and accessories. The oil water separator will be located on the western side of the turbines near the boundary between the CCPP and Unit 8, as shown on the Figures and Drawings in Attachment A. Given its placement among several larger structures, the oil water separator should not be noticeable when viewed from neighboring viewpoints. Any visual impacts therefore will be mitigated to less than significant levels by the existing conditions of certification.

***Cultural Resources:***

There will be no new impacts in this area because there will be no new areas of ground disturbance on the Unit 8 site.

***Socioeconomic Resources:***

There will be no new impacts in this area.

***Biological Resources:***

Adding an oil water separator will not expand the project footprint beyond that contemplated in the AFC. The oil water separator therefore will not increase impacts on terrestrial species. Impacts on

aquatic species also will not increase because the discharge from the oil water separator will connect to the same point as the CCPP's oil water separator and will be subject to discharge limits in the NPDES permit. Impacts on biological resources therefore will be mitigated to less than significant levels by the existing conditions.

***Soil and Water Resources:*** Wastewater discharged from the oil water separator will be discharged to the same point as the existing CCPP oil water separator, and will be subject to the same conditions in the NPDES permit. As a result, there should be no new impacts in this area.

***Geology and Paleontology:*** Construction and operation of the oil water separator will occur within the Unit 8 footprint. There will be no new impacts in this area.

#### **E. Compliance with LORS**

Installation of an oil water separator for Unit 8 will not affect Unit 8's ability to comply with LORS.

#### **F. Potential Effect on the Public, Property Owners and Parties**

Installation of an oil water separator for Unit 8 will not result in any new impacts on the public, nearby property owners or other parties that have not been addressed and mitigated through measures approved in the AFC Decision.

### **IV. Enlarged Administration Building**

#### **A. Description**

Mirant Delta proposes to enlarge the planned administration building for Unit 8 so that it has a footprint of 100 feet by 140 feet. As described in the AFC Decision on page 5, the Commission authorized the construction of a separate administration building on the Unit 8 site to house Unit 8's communication and control equipment. As approved, the Unit 8 administration building "will be a low-rise, one-story industrial type structure, . . . located on the west side of Unit 8 steam turbine generator, having little visibility from

neighboring viewing locations.”<sup>15</sup> The administration building was designed to be “approximately 75 feet by 75 feet.”<sup>16</sup>

Mirant Delta proposes to construct the same administration building that is approved in the AFC Decision with one change. Instead of constructing a building that is 75 feet by 75 feet, Mirant Delta proposes to construct a building that is 100 feet by 140 feet. This change is reflected in the Figures and Drawings in Attachment A.

**B. Compliance with Existing Conditions of Certification**

Enlarging the Unit 8 administration building will comply with the existing conditions of certification in the AFC Decision. No new language will be needed in the conditions.

**C. Necessity and Basis for the Change**

When Unit 8 was originally designed and proposed, Mirant Delta expected to utilize the existing buildings at the CCPP for administrative office space. The administration building proposed for Unit 8 reflected this, and therefore was designed only to accommodate Unit 8’s control and communication equipment. At the time, it was anticipated that a building footprint of 75 feet by 75 feet would be sufficient for this purpose.

Since then Mirant Delta has identified a need to construct a larger administrative building for Unit 8. An enlarged building will better accommodate the equipment and personnel to be devoted to Unit 8 even if Mirant Delta proceeds with Unit 8 as its own plant. In addition, Mirant Delta now contemplates that Unit 8 is likely to be constructed, owned and operated by an unaffiliated entity that will require its own separate administrative office space. In particular, if PG&E acquires the CC8 Assets, PG&E will require its own office space to facilitate its operation of Unit 8. Mirant Delta therefore seeks authorization for an expanded building footprint that will accommodate a third party owner and operator of Unit 8.

The need for this modification was not known when the AFC was submitted or when the AFC Decision was issued. The need for this modification also is not based on

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<sup>15</sup> AFC Decision at 5.

<sup>16</sup> *Id.*



information that changes or undermines the assumptions, rationale, findings, or other bases of the AFC Decision.

#### **D. Analysis of Potential Environmental Impacts**

Expanding the footprint of the Unit 8 administration building will not result in any new significant adverse impacts to the environment. This is explained below in the context of each resource area addressed in the Environmental Quality section of the AFC Decision.

<i><b>Air Quality:</b></i>	Enlarging the administration building will not increase emissions from Unit 8, extend the 22-month construction period assumed for Unit 8 or result in additional site disturbance. Any impact on air quality will be mitigated by existing conditions of certification.
<i><b>Public Health:</b></i>	There will be no new system, facility or activity in the enlarged administration building that will result in exposure to emissions, discharges or dangerous substances. There will be no new impacts in this area.
<i><b>Hazardous Materials:</b></i>	No new hazardous materials will be used during the construction or operation of the enlarged administration building. There will be no new impacts in this area.
<i><b>Waste Management:</b></i>	The enlarged administration building will not significantly increase the waste generated by Unit 8. There will be no new impacts in this area.
<i><b>Land Use:</b></i>	The enlarged administration building is consistent with all applicable zoning and land use requirements and designations.
<i><b>Traffic and Transportation:</b></i>	Enlarging the administration building will not change the 150 average daily construction personnel trips or the 275 peak daily construction personnel trips that were modeled in the AFC and analyzed for purposes of the AFC Decision. During operation of Unit 8, the enlarged building will accommodate the additional operations personnel that a third party owner and operator of Unit 8 is likely to require. Mirant Delta intended to add only 10 full time personnel to operate Unit 8, based on the assumption that a number of existing personnel at the CCPP also would have responsibility for operations at Unit 8. A third party owner and operator such as PG&E should not require

more than 30 full time operations personnel. The addition of 20 workers on site during the operational phase will not trigger the Contra Costa Transportation Authority's requirements for a traffic impact study because they will not generate more than 100 peak hour trips. In addition, operating personnel will work in shifts, which will further reduce potential traffic impacts during peak hours. Any impacts in this area therefore will be mitigated to less than significant levels by the existing conditions of certification.

***Noise and Vibration:***

The enlarged administration building will not be a significant source of noise and will not increase the noise levels of Unit 8.

***Visual Resources:***

As the AFC Decision recognizes, the administration building was sited in a manner that minimizes visual impacts to neighboring viewing locations.<sup>17</sup> The existing overall appearance and siting of the building will not change. Expanding the administration building's footprint will not significantly alter the visual characteristics of the completed administration building or the overall size of Unit 8, as shown in the Figures and Drawings in Attachment A. Any visual impacts therefore will be mitigated to less than significant levels by the existing conditions of certification.

***Cultural Resources:***

There will be no new impacts to cultural resources because there will be no new areas of ground disturbance on the Unit 8 site.

***Socioeconomic Resources:***

There will be no new impacts in this area.

***Biological Resources:***

Expanding the administration building will not expand the project footprint beyond what was contemplated in the AFC. There will be no new impacts in this area.

***Soil and Water Resources:***

Construction and operation of the enlarged administration building will occur within the Unit 8 footprint. There will be no new impacts in this area.

***Geology and Paleontology:***

Construction and operation of the enlarged administration building will occur within the Unit 8 footprint. There will be no new impacts in this area.

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<sup>17</sup> AFC Decision at 5.

**E. Compliance with LORS**

Enlargement of the Unit 8 administration building will not affect Unit 8's ability to comply with LORS.

**F. Potential Effect on the Public, Property Owners and Parties**

Expanding the footprint of the Unit 8 administration building also will not result in any new impacts on the public, nearby property owners or other parties that have not been addressed and mitigated through measures approved in the AFC Decision. As recognized in the AFC Decision, the administration building was relocated on the site to minimize visual impacts on the neighboring Sportsmen's Yacht Club. The expanded building footprint will not materially change the appearance of the administration building as viewed from the Sportsmen's Yacht Club or other viewing locations. Any impacts will be mitigated to less than significant levels by the existing conditions of certification. ⊕

## **ATTACHMENT A**

### **Figures and Drawings:**

- (1) Updated Site Plan (DS-0030)
- (2) Site Arrangement Plan (DS-0031)
- (3) Site Arrangement Elevation Looking North (DS-0032)
- (4) Site Arrangement Elevation Looking East (DS-0033)
- (5) Simulation (Photo) – Plan View
- (6) Simulation (Photo) – Aerial Perspective From Northeast
- (7) Simulation (Rendering) – Aerial Perspective From Southwest
- (8) Simulation (Rendering) – Elevation Viewing to the North
- (9) Simulation (Rendering) – Elevation View Looking South
- (10) Simulation (Rendering) – Elevation View Looking East
- (11) Simulation (Rendering) – Elevation View Looking West

**ATTACHMENT B**

**Form of PG&E Verified Statement**

**ATTACHMENT C**

**List of Property Owners**

**ATTACHMENT D**

**New Water Treatment System Schematic**

**ATTACHMENT E**

**Enhanced Cooling Tower Blowdown Treatment System Schematic**



**ATTACHMENT F**

**Oil Water Separator System Schematic**

**ATTACHMENT G**

**Water Mass Balance**

**ATTACHMENT H**

**Current NPDES Permit**

**ATTACHMENT I**

**Application for Renewal of NPDES Permit (submitted October 3, 2005)**