



October 16, 2001

Bruce E. Blowey
Licensing Project Manager
Southern California Public Power Authority
225 So. Lake Avenue, Suite 1410
Pasadena, CA 91101

Dear Mr. Blowey

**MAGNOLIA POWER PROJECT
1st ROUND DATA REQUESTS - ADDENDUM**

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

These data requests (#66-155) are being made in the areas of soil, water and visual resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before November 15, 2001, or at such later date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both Commissioner Robert Laurie, Presiding Committee Member for the Magnolia Power Plant Project proceeding, and to me, within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (f)).

If you have any questions, please call me at (916) 653-1245, or E-mail me at jreede@energy.state.ca.us.

Sincerely,

James W. Reede, Jr.
Energy Facility Siting Project Manager

Enclosure
cc: POS

Magnolia Power Project (00-AFC-6)

Data Requests

Technical Area: Soil and Water Resources

Authors: Richard Sidor, James Schoonmaker, John Scroggs and Richard Sapudar,
John Scroggs – Water Supply/wastewater

BACKGROUND

In Section 3.4.7, Attachment 2, Revised Facility Description and Location, is described the proposed water supply from the City of Burbank (COB) Wastewater Reclamation Plant. According to the data provided the COB Reclamation Plant discharges an average of 4.7 MGD of reclaimed water to the Burbank Western Channel. The COB has agreed to supply city water as a backup source for those periods when the Magnolia Power Plant (MPP) demands exceed the availability of reclaimed water supply.

DATA REQUEST

66. The typical daily and maximum water supply requirements for the MPP are shown in Table 3.4-1 to be approximately 1.488 MGD average day and 2.188 MGD maximum day. If the COB discharges an average of 4.7 MGD please provide a description of other existing reclaimed water demands which would prevent the COB from supplying the maximum water demand required at the MPP.

BACKGROUND

Discharge of cooling tower blowdown is proposed to the existing COB Reclamation Plant discharge line (COB Outfall No. 001). In Table 3.4-5 of the Revised Facility Description is presented the typical waste volumes proposed from cooling tower blowdown discharge and from the COB Wastewater Reclamation Plant. An average discharge of 3.067 MGD is proposed from the reclamation plant. We understand that blending of reclaimed wastewater effluent with an average TDS of 732 mg/L together with the cooling tower discharge with an estimated TDS of 3980 mg/L is proposed to meet the current discharge limit of 950 mg/L TDS.

DATA REQUEST

67. Please provide a copy of the current Water Discharge Requirements (WDR) issued by the Regional Water Quality Control Board for COB Outfall No. 001 to the Burbank Western Channel which specifically identifies average and maximum daily discharges and average and maximum TDS concentrations.

BACKGROUND

In Section 3.11 (Alternatives) of the Revised Facility Description is presented cooling tower discharge alternatives. Discharge of cooling tower blowdown to the North Outfall Sewer operated by the City of Los Angeles is possible " but not preferred because of the continuing operational cost". The sewer piping that would be needed to connect to the North Outfall Sewer is relatively short and discharge to this sewer is included in existing discharge agreements between the COB and the City of Los Angeles.

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DATA REQUEST

68. According to cost data presented in Table R-1 and Table R-2 (Appendix R) the increased capital costs associated with the discharge to the North Outfall Sewer is \$775,000. The increased annual operating costs are estimated at \$1,297,000. The annual operating costs estimated for this alternative appear to be unreasonably high. Please provide data which demonstrate how these annual costs were derived.
69. Assuming that it can be demonstrated that annual costs would increase by as much as \$1,297,000 with discharge to the North Outfall Sewer provide data which shows the total annual operating costs estimated for the MPP and the percentage increase in annual operating cost that would result with this discharge alternatives.

BACKGROUND

According to Section 3.4.7, Water Supply and Treatment, of the Revised Facility and Description, the availability of reclaimed water from the COB is constrained in availability because it is affected by diurnal cycles, seasonal upsets and shutdowns.

DATA REQUEST

70. Variations in reclaimed wastewater supply diurnal cycles could be controlled with an onsite storage reservoir. Please evaluate the capacity of onsite storage needed to control daily fluctuation in reclaimed wastewater flow.
71. Please provide information from the COB regarding typical seasonal variations in wastewater discharge quantity. The COB reports daily, monthly average and monthly maximum wastewater discharges to the Regional Water Quality Control Board. Please provide this information over the past 3 to 5 years.
72. Please provide TDS measurements, over the past 3 to 5 years, for the treated wastewater discharged to COB sewer Outfall No .001
73. When plant upsets occur it is understood that COB reclamation plant discharges are directed to the City of Los Angeles North Outfall Sewer. Please provide data which provides a record of discharges to the North Outfall Sewer over the past 3 to 5 years.

BACKGROUND

Other recently proposed energy facilities (Los Esteros Critical Energy Facility, Russell City Energy Center; for example) have proposed the addition of reclaimed water treatment using microfiltration and reverse osmosis processes to reduce the TDS of the reclaimed water source. The pretreatment processes proposed allow for increased cooling water recirculation and reduced water demands. Reducing water demands and reducing reliance on fresh inland water sources is consistent with State Water Resources Control Board Policy 75-58.

DATA REQUEST

74. Expand the description of alternatives to include water supply treatment. With treatment of the reclaimed water supply source, determine the increased number of cooling water cycles that could be provided and the decrease in the water supply requirements.

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75. With increased cooling water circulation and decreased cooling tower makeup water demands available with reclaimed water pretreatment prepare water supply tables and demand figures comparable to Table 3.4-1 (Daily Water Supply Requirements) and Figure 3.4-5A and Figure 3.4-5B for both average day and maximum day conditions.

BACKGROUND

Section 5.5.1.2.2 of the DAR states that the COB discharges approximately 4.3 MGD of wastewater to the Burbank Western Channel. The maximum monthly TDS average of this flow is reported in the DAR to be 583 mg/L. Section 3.4.7 of the Revised Facility Description states that the COB Reclamation Plant discharges an average of 4.7 MGD to the Burbank Western Channel. The “design reclaimed water” quality which would be provided to the MPP is 732 mg/L TDS (Table 3.4-2).

DATA REQUEST

76. Please clarify the average or “design” reclaimed water flow and TDS quality available to the MPP.

BACKGROUND

The COB has provided a will-serve letter to provide water for use as backup cooling water. The source of this water could be onsite wells, MWD water or finished (treated and blended) domestic water.

DATA REQUEST

77. Please provide a copy of the referenced will-serve letter from the COB.

BACKGROUND

The Water-7 Response included in the DAR estimates the water use during construction at:

Annual Demand:	179,000,0000 gallons (179 MGD)
Average Day Demand	490,000 gallons (.49 MGD)
Maximum Day Demand:	6,400,000 gallons (6.4 MGD)

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DATA REQUEST

78. Please identify the source of this water and the proposed discharge of wastewater during construction, if any.

BACKGROUND

The Water-14 Response included in the DAR references a City of Burbank memo and a letter to the SCPA authorizing use of the City's wastewater discharge point at the Magnolia Power Project site.

DATA REQUEST

79. Please provide copies of the referenced memo and letter;

- Memo from Bruce S. Feng, Public Works Director, City of Burbank to Ron Davis, General Manager, Burbank Water and Power, June 6, 2001.
- Letter from Bruce S. Feng, Public Works Director, City of Burbank to Bill Carnahan, Executive Director, Southern California Power Authority, May 21, 2001.

BACKGROUND

Cooling water treatment may require the addition of chemicals such as a pH control agent (acid or caustic), a mineral scale dispersant, a corrosive inhibitor and a biocide (hypochlorite or equivalent). Onsite storage of cooling water treatment chemicals is proposed.

DATA REQUESTS

80. Please identify for each chemical storage and containment system whether it is located inside a covered area or exposed to rainfall.

81. Demonstrate how chemical storage and containment areas are to be drained to the sanitary sewer system with prevention of drainage to the stormwater system or to the Burbank Western Channel.

BACKGROUND

A Data Adequacy response labeled Water-1, was submitted by the applicant. The initiating request (para 1) was for discussion of the impact of the plant on the POTW. The response is that the project will obtain approval from POTW and that "MPP will manage the waters sufficiently to maintain compliance with the discharge limitations." This is not a response that discusses the changes that will occur because of the project.

The last paragraph of the data request asked that "information should be compared with the estimated change in the constituents...". The response in the 3rd para answer is "The NPDES permit for the Burbank Water & Power discharge includes the use of performance goals, rather than performance-based limitations." The "goals" are not listed, and the intent of the question, to determine the impact of the plant on the POTW discharge, is not substantially addressed either in the response or in the revised AFC sections 3 and 5. It is apparent that the MPP will at least "consume" part of the current excess performance of the POTW, but this is not quantified.

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There are 3 references in footnotes for this Response that are not supplied. The third reference particularly is important.

DATA REQUEST

82. Respond to the original data request. Include discussing the impact of the project's wastewater discharge on operational parameters, such as the capacity and ability of the POTW to accept the discharge. Discuss the cumulative impacts of this discharge on the POTW and the waters that receive the POTW's discharge. Identify any impacts and discuss the effectiveness of the mitigation for any impacts identified. Particularly include any consumption of current performance excess by the POTW beyond requirements, whether goals or limits.
83. Supply the references footnoted in the Response.
84. Is the plant going to comply with LARWQCB 98-052, or take advantage of new dates and limits in LARWQCB 98-072?

BACKGROUND

The NPDES permit held by COB is a "hybrid" per Response to Data Adequacy labeled Water-3. This response in essence says that the COB does not and/or will not limit the MPP effluent by prior agreement, i.e.; limits will not be placed on the project, only on the COB.

DATA REQUEST

85. Please explain how conflicts regarding effluent control strategies between the participants to the MPP (i.e.; SCPPA) will be resolved. This should include evidence of a written agreement, or if no written agreement exists between the owners of MPP, then what other mechanism will be used to resolve conflicts. Particularly address the possible need for additional money to fund any improvements required by one participant. Does any owner have the ability to "veto" additional funds for management or operations?

BACKGROUND

Page 5.5-7 Revised AFC 5.5.2.1.1 says that ..."reclaim water use can be revisited." when the Reclaim Facility is modified.

DATA REQUEST

86. What impact would a modified reclaim facility have on the power plant? Is it relevant, or is that something to be considered only if and when a change is proposed? Discuss the relevance for current AFC considerations. Confirm the applicant's commitment to the actions specified in the AFC.

BACKGROUND

Page 5.5-7 Revised AFC 5.5.2.1.1 Average flow of the reclaim plant is 8 mgd, existing uses are 6.5 mgd, with 1.5 mgd "wasted" to the channel. The new plant will consume an "average" of 1.4 mgd. So the "waste" amount will be reduced from 1.5 to 0.1 mgd.

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DATA REQUEST

87. What effect will this reduction have on the quality of the channel water flow, and on the LA River?

BACKGROUND

Several. There is an obvious opportunity to manage the several situations of groundwater contamination, reclaim water consumption, and potable water conservation, through the mechanism of coordinated management of these functions.

DATA REQUEST

88. Has a coordinated management plan been considered?

BACKGROUND

Table 5.5-2. This table describes an apparently arbitrary use of half reclaim water and half potable water for some uses. No on-site well water is assumed. In this table, Cycle Makeup of 94,000 gpd is assumed to be from potable rather than reclaim water as stated in text. Same for equipment drains. There is no logic for the assumption of half potable water. There are no goals described that this is intended to support. The Table is identical to Table 3.4-1 on Page 3.4-10 of the Revised AFC

DATA REQUEST

89. Provide discussion that specifies the logic or purpose of the use of half potable water. Recognizing that there will be occasions of inadequacy of Reclaim Water, discuss objectives or goals that may be achieved with the use of Reclaim, on-site well, and potable water at suitable times. Would it be proper and useful to say that it will be a goal of the combined project to withdraw local well water in order to reduce ground water contamination of hexavalent chromium and VOC's? Or a goal of maximizing health of the LA River? Or managing the overall cost of water treatment for the COB? Is a coordinated water supply management system being considered?
90. What is the basis for the 50% value? Does the applicant intend to warrant in some way the amount of potable water used in a year? What is the purpose or function of the second set of data of this table?

BACKGROUND

Revised AFC Table 3.4-1A Annual Water Consumption. There is no explanation of the derivation of these numbers.

DATA REQUEST

91. Please describe the derivation of the numbers in the table, including the underlying assumptions. Is there any warranting by the parties to this AFC that domestic water consumption will be limited to these amounts?

BACKGROUND

Page 5.5-7 Revised AFC 5.5.2.1.1 In several places in the Data Responses, including here, there are indications that reclaim water will be insufficient volume on at least some occasions.

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There is no indication that the MPP will have first choice of reclaim water, or be junior to irrigation uses. Domestic water is to be used for emergency “and as necessary to meet discharge limitations.”

DATA REQUEST

92. Please describe the policy that will be used to parcel reclaim water to the various users (golf course, irrigation, power plant) when there is a shortage. Discuss the permanence of the practice, and whatever assurances are available that it will not be changed capriciously.
93. What is the meaning of the phrase “... and as necessary to meet discharge limitations.” Who’s limits are referenced, and what frequency will domestic/potable water be required in order to meet them?

BACKGROUND

Referring to Revised AFC 3.4.7 Water supply and treatment. The paragraph states in part “The availability of reclaimed water is constrained because it is affected by diurnal cycles, seasonality, and upsets in the reclamation plant.” Material states that local well water will be treated for VOC.

DATA REQUEST

94. Does this proposed facility have priority over irrigation or other uses? What is the advantage of priority of the various uses? Can you quantify the major causes of constraints listed, at minimum on a historical basis, but preferably on a reliability analysis basis?
95. Discuss the treatment of well water for VOC; when is it to be treated, what is the disposition of waste material?

BACKGROUND

Revised AFC 3.4.7.3 Cooling Tower Makeup. The statement is made “Reclaim water will be available...as necessary to meet discharge regulations.” Further “The circulating water will be ... controlled in order to achieve not more than 5.6 cycles of concentration.”

DATA REQUEST

96. Does this mean that reclaim water will be limited by the operator of MPP? If the goal is minimizing water consumption then the cycles should be maximized, not minimized. Will the applicant adopt a minimum cycles of concentration? Can you describe the logic for the maximum presented?

BACKGROUND

Appendix R has been provided. This is a necessary part of the review of water sources. However, there is no reference to Appendix R in any textual material, nor listing in the Table of Contents.

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DATA REQUEST

97. Include Appendix R in Table of Contents and refer to that in appropriate parts of the Revised AFC textual material.

BACKGROUND

Revised AFC 5.5.1.2.2. This states in part "... RWQCB staff have stated that...cooling tower blowdown to the Reclamation Plant discharge line under the existing NPDES permit will be approved"

DATA REQUEST

98. When will the blowdown be approved, and specifically what will be approved in terms of agreed limits or coordinated operations? Should approval be a constraint on the permit?

BACKGROUND

Revised AFC 5.5.2.1. Boiler Feedwater System states in part "Makeup to this system will be produced from domestic water onsite...". Water Balance Diagrams Figure 3.4-5 ABC&D show reclaim water being the primary source.

DATA REQUEST

99. Please correct the error in the textual material.

BACKGROUND

Revised AFC Page 5.5-19. Table 5.5-5 is apparently the wrong table. It appears to be the Section 3 table, Table 3.4-1. The three paragraphs of references are rendered useless.

DATA REQUEST

100. Correct the error(s).

BACKGROUND

The revised water balance diagrams do not show two discharge points, only "Burbank Western Channel". There is no functional description of the difference of the two discharges. From the Simplified Process Schematic of the POTW it appears that the 001 Discharge is the normal discharge and 002 is for overflow use only. There is no textual description of the two, however.

DATA REQUEST

101. Describe the functional character of the two discharges, including which will be used for MPP discharge (all references in text are to 001 only or indeterminate)

BACKGROUND

Revised AFC Table 3.4-6. Table indicates that 7,500 gals of NaOCL will be stored.

DATA REQUEST

102. Please advise whether this will include secondary containment of some sort.

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BACKGROUND

5.5.2.2 OFFSITE REGENERATION OF DEMINERALIZERS. At this and other locations there is reference to off-site regeneration of the demineralizers which supply treated water to the Steam Cycle.

DATA REQUEST

103. Provide discussion of the off-site regeneration of the demineralizers. Include details of where regeneration is accomplished and what is the effect on the permitted discharges that occur wherever that is? Please provide details of the effect on permits for the regeneration facility. Quantify the effects on flows and any LORS involved?

BACKGROUND

Revised AFC 5.5.2.1.1 RECLAIM WATER MANAGEMENT. The numbers for reclaim and potable water consumption are used through this AFC. There is no indication of how these numbers were derived; underlying assumptions, underlying data such as reclaim plant performance, power plant efficiency and loading, etc.

DATA REQUEST

104. Provide discussion and specific data on underlying assumptions used to derive the values used in the AFC. Provide the assumed load factor for the MPP, for the reliability of supply for the reclaim plant, and for the diurnal variations on reclaim demand, and any other relevant factor.

BACKGROUND

Revised AFC 5.5.2.1.1, Page 5.5-15. Cooling tower blowdown is purported to contain 3,800 ppm or mg/l TDS, whereas 5.6 cycles of 732 reclaim water yields 4099 mg/l, and Table 5.5 says the blowdown is 3,980 mg/l.

DATA REQUEST

105. Explain or Resolve these small variations in the blowdown.

BACKGROUND

Revised AFC 3.4.7.2 states that the Table 3.4-2 is "average" water quality. The Table says it is "design" water quality.

DATA REQUEST

106. Please confirm that both are correct or not.

BACKGROUND

Textual material in section 3 says plant drains will be routed to the cooling tower as makeup. Figure 3.4-5A shows drains to sewer only.

DATA REQUEST

107. Correct the error.

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Data Requests**

BACKGROUND

Table 3.4-4 the column “discharge to 001” could mean the current experience, or the expected values with operation of MPP. If the former, then the TDS “Current Discharge Limits” of 950 TDS seemingly would be exceeded when the 3,980 TDS of “Cooling Tower Blowdown” is added to the 949 TDS listed. The TDS of the “Oil/Water Separator Effluent” is shown at 0, or less than the reclaim supply water. Cooling Tower Blowdown has details that would not be capable of prediction, so seem to be the result of current experience. Since the NPDES “limits” are not limits but goals according to this revised AFC, who sets the “limits” is not obvious.

DATA REQUEST

108. Please clarify what the numbers presented are, and what they mean. Please indicate what can be expected to change with the plant addition that is the subject of this AFC. Specifically, is the column “cooling tower blowdown” the result of current experience or prediction? Is the “discharge” column current experience without the project? How will these change with the plant operational? What are the “limits”, who imposes and enforces them, and which will be exceeded by the operation of the project? Is the current discharge actually exceeding limits as shown for Bis(2-ethylhexyl)-phthalate?

BACKGROUND

Table 3.4-5. the column heading “Typical Wash Volume” does not correspond with anything else, and it is not apparent what is intended by this heading. The cooling tower blowdown etc. is shown at 247,000 gpd, which is an average of 171 gpm, yet “Peak Flows” are 3,050 gpm or 18 times the average, and there is no storage shown on any diagrams. Here the separator effluent goes to the sewer although in 3.4.7.4 it is directed to the cooling tower. This is the only reference to “SCR regeneration water”. Boiler blowdown elsewhere is directed to the cooling tower and not to “reclaim discharge line” which is the subject of this Table.

DATA REQUEST

109. Please modify the table so it conveys meaning; clarify the headings, complete the assumptions used in its derivation, and make it correspond to the text it is supporting.
110. Are oily drains directed to the sewer, as indicated? Will the sewer accept such drains and be in compliance with LORS?

BACKGROUND

Revised AFC Figures 3.4-5A,B,C & D. Diagrams are inconsistent with textual material in that O/W separator goes “normally” to sewer. The A & B versions show the reclaim plant producing 4,555 mgd and directing 1,477 mgd to the MPP, and 3,067 to Burbank Western Channel. The C and D versions show only the 1,464 to MPP, all to MPP, and 1,712 to the Channel.

DATA REQUEST

111. What happened to the rest of the reclaim plant, and the remainder of flow to the Channel?

Magnolia Power Project (00-AFC-6)
Data Requests

BACKGROUND

Revised AFC 3.4.1 Overview. A power output of 12 MW from steam injection is parenthetically mentioned here for the first time in the material. This amount of steam/water is discharged to atmosphere.

DATA REQUEST

112. Is this included in tables, data, annual consumption numbers prior to Tables 3.4-5? How often will this be used?

BACKGROUND

DAR WATER-9 describes the site drainage system and runoff patterns. In addition, figure 3.4-1 depicts the existing and proposed underground storm drain system.

DATA REQUEST

113. Please provide a hydrology report for the site and a hydraulic analysis of the system to confirm that the system is adequately sized to convey the 100 year storm event.
114. Please provide the design drawings or Manufacturers Data sheets for the oil and water separator, including maintenance requirements.

BACKGROUND

DAR WATER-9 Describes the offsite storage area that drains directly into the Burbank Western Channel, and some of the potentially polluting activities that will take place at the site. The response also refers to generic source control BMPs (CDs) that will be used to reduce exposure.

DATA REQUEST

115. Please provide documentation stating what structural controls and treatment controls, as described in the SUSMP, will be constructed to ensure that fuel, lubricants and other potentially polluting materials are not discharged into the channel.
116. Please provide a detailed site map with the Construction SWPPP depicting the layout of the offsite storage area including any post construction BMPs (structural or treatment controls).
117. Please confirm whether the offsite storage area is covered under the existing SWPPP regulated under the NPDES Industrial Permit, or the site specific NPDES permit for Power Plant and Reclamation Facility (Appendix I).

BACKGROUND

Section 7.5.5.1 states that the MPP will prepare a SWPPP.

DATA REQUEST

118. Please confirm whether a SWPPP has been prepared (Per section 7.5.4.2 and Water 6-3) or will be prepared (per 7.5.5.1 and the table in Water-13). Please provide.

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BACKGROUND

The response to Water-8, section 3.5.7 of the revised AFC, section 5.5.2.1.2, and the Water Flow diagrams indicate that flows with the potential for oil contamination will be directed to an oil/water separator and ultimately into the sanitary sewer.

DATA REQUEST

119. Neither the flow diagrams nor the site grading and drainage plan provide adequate detail to show how the potentially oily waters are separated from the other runoff. Please show the oil and water separator on the Site Grading and Drainage Plan. If the oily water is conveyed through a separate system, please show the system. In addition, please provide a detailed site plan showing how the waters are separated.
120. Please describe any other potentially polluting materials (other than oil) that may come in contact with storm water, and the Post Construction BMPs (PCBMPs) that will be employed to remove the pollutants prior to discharge into the MS4.
121. The southern third of the site appears to sheet flow toward Olive Avenue. Please show the drainage patterns for this area and any PCBMPs that will be used to treat the water prior to discharge.

BACKGROUND

Figure 3.2-1 depicts the area between the Burbank Western Channel and the Rail Road, between Magnolia Ave and Burbank Blvd as a Primary offsite parking area. Water-9 describes it as a construction lay down area that will be used as a permanent offsite storage area. Figure Proj.-4 refers to the described storage area as a primary offsite parking area.

DATA REQUEST

122. Please clarify the use of this area.

BACKGROUND

The response to Water-9 states that the area between the Burbank Western Channel and the Rail Road, between Magnolia Ave and Burbank Blvd will not be modified or altered.

DATA REQUEST

123. Please provide a detailed site map of the area showing existing site improvements (paving, gravel, graded areas, storm drain systems, discharge points, etc.), any proposed improvements, and the layout for the proposed storage area.

BACKGROUND

The response to Water-9 refers to CA10, CA31 and 32, CA12 and CA40.

DATA REQUEST

124. For the record please provide in the document, a note or footnote describing the source and meaning of these abbreviations. In addition, please include copies of any such fact-sheets in the SWPPP.

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BACKGROUND

The response to Water-10 states that flow calculations were obtained from the LA County Manuals and that the Underground Storm Drain System was designed using Manning's Equation. The response does not specify the design storm event or the hydraulic design of the system.

DATA REQUEST

125. Please provide detailed hydrology and hydraulic calculations in a report format confirming that the existing and proposed facilities are adequate to protect the site from the 100-year storm event (as required by the NPDES Permit). Hydraulic calculations should be prepared using WSPG or equivalent programming pursuant to local agency requirements and should evaluate the entire system (inlets, junction structures, friction losses, etc.).

BACKGROUND

The table in the response to Water-13 (second row) states that a SWPPP has been prepared for the existing facility.

DATA REQUEST

126. Please provide a copy of the existing facility SWPPP.

BACKGROUND

The table in the response to Water-13 (last row) indicates that the SUSMP requirements will be addressed in the project design and in the construction SWPPP. Because the SUSMP requirements could have a significant impact on the site layout and design it is our opinion that these issues must be addressed at this stage.

DATA REQUEST

127. Please provide a detailed description of the SUSMP requirements and impact on the site, including site maps and PCBMP designs.

BACKGROUND

The response to Water-14 indicates that a letter has been forwarded to the Los Angeles RWQCB to confirm that the existing NPDES Discharge Permit will cover the return of cooling tower blow down from Magnolia Power Project to the Reclamation Plant discharge line.

DATA REQUEST

128. Please provide a copy of the correspondence to the LARWQCB and any response received there from.

DATA REQUEST

129. The Data Requests presented herein are tied to many tables and figures. Please update all tables and figures as appropriate to reflect any changes in response to the Data Requests.

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BACKGROUND

The Siting regulations require the quantification of accelerated soil loss due to wind and water erosion. The DAR section SOILS-1 states that there is attached correspondence that addresses this issue. The correspondence was not found.

DATA REQUEST

130. Please provide a copy of the referenced correspondence.

BACKGROUND

The NPDES permit referenced in table 5.4-3 for the project does not appear to cover construction activities regulated under the NPDES General Permit For Storm Water Discharges Associated With Construction Activity (General Permit) Water Quality Order 99-08-DWQ issued by the SWRCB.

DATA REQUEST

131. Please revise the table to reflect the permit process necessary to comply with the NPDES General Permit for Construction Activities. The process should include the NOI preparation as correctly described the Response WATER-13 and in Response D-4. Table 7.1-1 (Sections 7.5.4 and 7.5.5) should also be revised to reflect the proper procedure. Please check to make sure all other applicable tables are revised to reflect the proper procedure for obtaining coverage under the NPDES construction activities permit.
132. Please provide a copy of the construction SWPPP that has been prepared for the project as referenced in section 7.5.4.2 of the DAR. The SWPPP must be prepared in accordance with the NPDES General Construction Activities Permit. Please ensure that the SWPPP includes a monitoring and sampling plan as required under the recent amendment (2001-046) to the NPDES General Construction Activities Permit. The SWPPP should include a site maps for construction BMPs and Post Construction BMPs . The site plan should be provided at a scale no smaller than 1"=40'. Please ensure that the SWPPP covers offsite laydown areas, storage yards, temporary parking areas, and any other areas related to the construction of the new facilities.

BACKGROUND

Section 7.5.4.2 states that storm water discharges from the MPP site are regulated by the existing NPDES (permit), and that the MPP will comply with the existing permit. However, The SUSMP and corresponding COB Municipal Code were adopted after the Project's NPDES permit was issued.

DATA REQUEST

133. Please describe how the more stringent requirements of the SUSMP and COB Code will be met. In particular, please confirm that Post Construction BMPs have been or will be incorporated into the design to manage the quality of the storm water runoff from the site. Please address this for all areas of the project including any permanent offsite parking areas and storage areas.

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BACKGROUND

The project is essentially using fresh inland water obtained from groundwater for evaporative cooling (wet cooling), and other local surface water sources to augment water supply needs when sufficient reclaimed water is apparently not available. This practice is addressed by State Water Resources Control Board Policy 75-58. Both the project's water supply needs and the wastewater discharge volume are relatively high compared to other combined cycle plants operating in similar or even harsher environments. Reasonable water conservation measures using currently available and in-use power plant water conservation technology and practices are capable of significantly reducing both the volume of water supply needed, and the volume of wastewater discharged. Such technology and practices are capable of limiting the amount freshwater used, to essentially only that needed for heat rejection. The use of reverse osmosis, ion-exchangers, brine concentrators (evaporators), and crystallizers (dryers), filter presses, etc., are common in power plants in the State.

DATA REQUEST

134. Provide a detailed discussion of the water conservation measures, technology, and practices included in the project design, at what point they are applied, and the volume of water conserved and recycled for actual consumption for cooling (heat rejection).
135. Identify both the cycles of concentration and the concentration factor at which the cooling towers will operate. Provide a detailed discussion of the basis for operation of the cooling towers in this manner, what measures would be required to operate the cooling towers at 10-20 cycles of concentration.

BACKGROUND

The discussion of alternative cooling options does not provide sufficient detail to fully evaluate the feasibility of applying available cooling options to the proposed project. A more detailed cost/resource consumption analysis of alternative cooling technologies is required. State Water Resources Control Board Policy 75-58 identifies a need for an analysis of cost and water use associated with alternative cooling technologies for power plants.

DATA REQUEST

136. Provide a detailed discussion of capital and operating costs, effects on plant performance including power output, fuel consumption, and emissions. Provide the principal design specifications of dry cooling and wet-dry hybrid systems incorporated into the MPP. Include the following:
137. Provide an analysis for the cost and water use associated with the proposed MPP. The analysis should include a table which compares wet, wet/dry, and dry cooling technologies, along with the estimated capital and operating costs, and the anticipated water demand.
138. Provide the assumptions and calculations underpinning the capital costs, discussions of whether labor and financing costs are included in the estimates, and the performance levels for the technologies specified.
139. Provide energy balances for the combined cycles at 50 percent, 75 percent, 100 percent and peak loads, at both 41°F and 95°F. Include any effects of inlet cooling and power augmentation.

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140. Provide the quantities of water used and wastewater discharged, and estimates of water, treatment, clean-up, and any other chemicals required for the various configurations
141. Provide a discussion of the relative environmental advantages and disadvantages of wet, wet/dry, and dry cooling technologies. Include an evaluation of water demand, particulate matter emissions, visual resource implications, and land use requirements associated with the use of the three cooling options.
 - a. Quantify air emissions from the project stacks and cooling towers, efficiency and capacity losses, and increased parasitic loads for the three cooling options under conditions of both constant and maximum fuel use.
 - b. Quantify the footprints and dimensions of the cooling towers for the three cooling options.
 - c. Quantify the occurrence and size of visible plumes and the noise levels for the three cooling options.

BACKGROUND

California Water Code § 13550 requires the use of reclaimed water, where available. The use of potable domestic water for nonpotable uses, including industrial uses, is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution if recycled water is available. If recycled/reclaimed water is available, combined cycle power plants in the State have demonstrated the feasibility of using fresh or potable water for only sanitary, potable, and fire water purposes

DATA REQUEST

142. Provide a detailed discussion and supporting facts or evidence that reclaimed from the COB facility is not sufficient for the projects non-potable water needs.
143. Identify all other sources of reclaimed/recycled water or conveyance facilities in proximity to the project (within a 20-mile radius of the facility). Discuss the feasibility of the project using any additional sources of reclaimed/recycled available within this radius.
144. Discuss water conservation and/or treatment practices or technologies (see Staff Data Request 69) that would conserve sufficient water such that the recycled/reclaimed water supply available to the project will not require supplementation with either fresh groundwater or potable water.
145. Provide a detailed discussion of the feasibility of the project using available groundwater relative to potable water.

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Technical Area: Visual Resources - Plume

Author: William Walters

BACKGROUND

The Applicant has indicated in the AFC (Section 5.13, p. 5.13-12) that there are numerous existing visible water vapor plume sources at the adjacent Olive Avenue Plant, and the Applicant has also stated that the area surrounding the site is industrial. In order to assess the project's visible water vapor plume impacts staff requires more information regarding the existing plume setting.

146. Please provide a list of all of the visible water vapor plume sources located on the Olive Avenue plant and on other property adjacent or near to the project site. Also, please provide a map showing the location of each visible water vapor plume source provided in the list.
147. For all currently existing Olive Avenue Plant visible water vapor plume sources please identify how often they operate, and for cooling towers please identify their normal operating heat rejection load in Megawatts. Also, please identify the Olive Avenue Plant visible plume sources that are planned to be decommissioned.
148. For other adjacent or nearby visible water vapor plume sources please specify whether any are both frequent and visually dominant.

BACKGROUND

The Applicant has provided expected cooling tower plume dimension data in the AFC (Section 5.13, p. 5.13-12), and has provided staff with the Seasonal/Annual Cooling Tower Impact (SACTI) plume modeling files used to determine these expected plume dimensions. Staff's review of the modeling and meteorological files indicates that potentially erroneous "Standard Wind Direction" inputs were used, and staff also believes that more representative meteorological data is readily available from the National Climatic Data Center. Staff needs clarification regarding the SACTI modeling assumptions and meteorological data used in the Applicant's modeling analysis.

DATA REQUEST

149. Please identify why the three standard wind directions used in the SACTI modeling were not perpendicular to the tower axis, along the tower axis and at 45° to the tower axis as recommended in the SACTI user's manual.
150. Considering that several years of hourly meteorological data is available for Burbank Airport from NCDC, please identify why 1981 LAX meteorological data was used in the SACTI modeling analysis. Please note that the use of SCAQMD approved data, or data from the SCAQMD base meteorological year data of 1981, is not necessary or desired for plume modeling.

BACKGROUND

Staff plans to perform a plume modeling analysis for the cooling tower using both the SACTI model and the CSVP model. Staff will require additional project data to complete this analysis.

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DATA REQUEST

151. Please at a minimum provide the operating exhaust temperatures and exhaust flows from the cooling tower that correspond to the following ambient conditions. The values presented should correspond to maximum anticipated heat rejection at the specified ambient conditions.

Ambient Condition	Exhaust Flow Rate (lbs/hr/cell)	Exhaust Temperature (°F)
40°F, 90% RH		
40°F, 60% RH		
40°F, 30% RH		
60°F, 90% RH		
60°F, 60% RH		
60°F, 30% RH		
80°F, 90% RH		
80°F, 60% RH		
80°F, 30% RH		

BACKGROUND

The visible water vapor plume discussion provided in the Visual Resources section of the AFC (Section 5.13 pg 5.13-12) does not provide information regarding the frequency, duration and size characteristics of the heat recovery steam generator (HRSG) water vapor plumes. Staff will conduct a HRSG plume modeling analysis using the CSVP model to determine plume frequency and plume dimensions. Staff will require additional project data to complete this analysis.

DATA REQUEST

152. For staff to conduct CSVP modeling of the plume abated HRSG exhaust, please at a minimum provide HRSG exhaust parameter data to fill the following table. The values must correspond to maximum heat rejection operating conditions at the specified ambient conditions.

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Ambient Condition	Moisture Content (% by weight)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)
Full load with Duct Firing and Power Augmentation			
40°F, 90% RH			
40°F, 60% RH			
40°F, 30% RH			
60°F, 90% RH			
60°F, 60% RH			
60°F, 30% RH			
80°F, 90% RH			
80°F, 60% RH			
80°F, 30% RH			
Full load with Power Augmentation no Duct Firing			
40°F, 90% RH			
40°F, 60% RH			
40°F, 30% RH			
60°F, 90% RH			
60°F, 60% RH			
60°F, 30% RH			
80°F, 90% RH			
80°F, 60% RH			
80°F, 30% RH			
Full load no Duct Firing and no Power Augmentation			
40°F, 90% RH			
40°F, 60% RH			
40°F, 30% RH			
60°F, 90% RH			

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60°F, 60% RH			
60°F, 30% RH			
80°F, 90% RH			
80°F, 60% RH			
80°F, 30% RH			

153. Please provide a short discussion regarding the operating assumptions and basis for the HSRG exhaust parameter data that is provided, including power augmentation (i.e. water injection) and duct burner operating status. Also, please indicate any relationship between the use of duct burners and/or power augmentation with ambient conditions (i.e. note temperature/relative humidity conditions when either or both are not expected to be operated).

BACKGROUND

In addition to the HRSG, Staff may also model the plume frequency and dimensions of the auxiliary boiler. In order for staff to complete the plume assessment of the auxiliary boiler additional operating data is needed.

DATA REQUEST

154. Please at a minimum provide auxiliary boiler HRSG exhaust parameter data to fill the following table. The values must correspond to maximum heat input at the specified ambient conditions.

Ambient Condition	Moisture Content (% by weight)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)
40°F, 90% RH			
40°F, 60% RH			
40°F, 30% RH			
60°F, 90% RH			
60°F, 60% RH			
60°F, 30% RH			
80°F, 90% RH			
80°F, 60% RH			
80°F, 30% RH			

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155. In lieu of the responding to the data request listed above, please identify if the Applicant is willing to limit operations of the auxiliary boiler to the 156 hours per year listed in the AFC (Section 5.2, p. 5.2-50), or to another similarly low number of hours per year. If the desired annual hourly limit is not 156 hours per year, please identify the desired annual hourly limit.