

MEMORANDUM

Date: February 12, 2013 November 9, 2012
To: TERI WISSLER ADAM, EMC PLANNING GROUP
From: STEVEN G. TANAKA
Subject: PARAIISO SPRINGS RESORT – REVIEW OF WASTEWATER SYSTEM

This memorandum provides Wallace Group's brief comments and replies to responses from the Applicant regarding Wallace Group's November 9, 2012 memorandum/peer review comments.

COMMENTS TO APPLICANT'S RESPONSE TO COMMENTS – WASTEWATER

General: It would be beneficial to all parties involved if the technical responses to the peer review comments would be incorporated into the technical reports and project documents. This is not Wallace Group's prerogative to require this, but we are suggesting this as a means of clarity and completeness for future reference to the technical documents related to this project.

1. Original Comment: Page 1, Estimated Wastewater Production. We concur in general with the approach on wastewater production, using 90% of indoor potable water demand. However, the Project should be capable of handling/treating a peak day wastewater flow at 100% hotel occupancy and 100% of all other Project Features. This statement should be clarified with that stated on Page 3, "Irrigation and Storage", and the "Input Value" of 36,495 gpd Phase 4 build-out flow. There appears to be a conflict in the report as to whether full occupancy flows are being used, or 85% hotel occupancy is being used, as the basis for peak day wastewater flows. Response: *We are in general agreement with the Applicant's response, however, we recently worked on a very similar project where the Regional Board required that the WWTP be designed to handle 100% occupancy flows for a particular proposed hotel development.*
2. Original Comment: Page 1, Proposed Wastewater Treatment. Although we concur that an MBR process is viable for this Project, the Report does not provide any details as to the analysis of other treatment alternatives and how the Project Proponent arrived at the recommended process. Response: *We did not see a response to this comment. We believe that a very simple overview of alternatives considered, their merits and drawbacks, and particularly relative land/space requirements, would be helpful to EMC in the environmental review/analysis of the project. For example, a constructed wetlands would take up considerable land and may have much more significant environmental impacts than a mechanical plant.*



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3. Original Comment: Table 3, Footnote. The footnotes in this table now define “full occupancy” as 85 percent occupancy for hotel and 100 percent occupancy for all other elements of the Project. As with Comment 1 above, the treatment and collection system should be capable of handling full occupancy wastewater flows, including some nominal value for inflow/infiltration. Response: See comment 1.
4. Original Comment: Page 5, Seasonal Storage. It is indicated that supplemental makeup water will be needed during times when irrigation demand exceeds wastewater flows and accumulated storage. A discussion should be included as to how the recycled water/irrigation reservoir will be filled with potable water (via air gap separation/connection). Also, in light of the proposed ultraviolet disinfection process, and length of time water will be stored during winter months, provisions for adding chlorine residual to the stored recycled water should be considered. Response: No further comment.
5. Original Comment: Z-Mod Data Sheet. The Report should discuss and list the intended Make/Model of the unit to be selected, verifying that the selected Plant meets the design requirements for average day and peak day wastewater flows and organic loading for the Project. There also should be a brief discussion of the required plant operator licensing requirements and how the Project Proponent intends to comply with this requirement. Response: No further comment.
6. Original Comment: Wastewater Collection System. There is no discussion or information on the proposed wastewater collection system. Response: No further comment.
7. Original Comment: Treatment. It is understood that wastewater will be treated to Title 22 tertiary 2.2 standards. However, the Report should discuss and define probable influent waste characteristics (BOD, TSS at a minimum), average and peak wastewater flows, and discuss how this waste strength compares to the design parameters of the recommended treatment plant. The Report should also list probable waste discharge requirements and effluent quality expected from the WWTP. A discussion should be provided as to what backup power provisions will be provided at the plant to ensure no raw sewage spills, bypassing of sewage, or other concerns associated with extended power outages. The Project should clearly state its intent of “zero discharge”, meaning that all treated effluent will be stored and used, and that there will be no surface water discharge as part of this Project. Response: We believe that the stated influent waste strengths of 250 mg/L BOD and TSS might be low. We have commonly seen higher waste strengths due to water conservation measures, demand from food establishments/restaurants, etc. This will not impact EMC’s environmental review, but this should be considered as part of detailed design and selection of treatment plant equipment.
8. Original Comment: WWTP and Storage Tank Siting. A discussion should be included as to how the Project derived the recommended WWTP and storage tank location, and how the facilities are protected from the 100-Year



flood elevation. Discussion should be included as to the potential for odor generation during the wastewater collection/treatment process, and what steps may be taken to control potential odors. Response: No further comment.

9. Original Comment: Solids Handling. Discussion should be included as to what will be done with biosolids, how they will be managed, processed and/or hauled off site for disposal. Response: No further comment.
10. Original Comment: Regulatory Process Overview. A discussion should be included that outlines the requirements for filing a Report of Waste Discharge with the Regional Water Quality Control Board, RWQCB/CDPH permitting process, and what will be required for the Engineering Report to address treatment, storage, and irrigation requirements. Although it is premature to prepare details and design document, a general outline of the regulatory requirements should be included as part of the Project elements. Response: No further comment.
11. Original Comment: Irrigation System. Although details of the irrigation system design are not required or warranted at this time, a discussion should be included as to the requirements and expectations for irrigation systems that use recycled water, including “purple pipe” color coding, signage, setbacks, cross-connection control and separation from potable water systems, user manual/ordinance requirements for operating recycled water irrigation systems. Response: No further comment.
12. Original Comment: Disposal of Pool and Spa Water. This was not discussed as part of this Report. However, given that the pool/spa water will be chlorinated, the best means of disposing of the water is through the WWTP, so that the water can be re-captured and reused on-site. Whether the pool/spa water can bypass the WWTP and go directly to the storage reservoir (with dechlorination) is another question. Likely the answer to this question is no, given that there is the possibility of bacteriological contamination with this water source. The best way to dispose of the pool/spa water is to discharge the water to the sewer collection system gradually so as not to overwhelm the WWTP and/or collection system. Response: No further comment.

SGT