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September 24, 2009

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Patrick T. Treffry, REHS
Environmental Health Review Services
1270 Natividad Road
Salinas, CA 93906

Subject: Paraiso Springs Resort – PLN040183
Response to Comments from Monterey County ESD Letter dated May 22, 2009

Dear Mr Treffry:

We have reviewed your comments contained in the above referenced letter and offer the following responses:

1. ***Swimming Pool and Spa***

The main swimming pool and spa would be supplied by the Soda Springs Well, as previously identified. It is our understanding that this well has been supplying water for the swimming pools and spas on the site since 1892. The Project plan includes continuing this function. In California, hot or mineral springs water does not require treatment so long as the pass through rate of the water meets the requirements of the California code, as indicated in Maryann Dennis's attachment from her email dated May 08, 2009. The attachment is a copy of guidelines from CCDEH pool committees. Guideline 3101B titled "Hot Springs" states:

Issue – Should mineral/hot springs comply with requirements of the pool code?
Discussion – Natural pools of water from hot or mineral springs or flowing creeks and rivers would not be considered public spa pools. However man made artificial basins or water entering a pool from natural springs would be considered a public spa pool. The latter should comply with requirements of the pool code. If the flow-through rate of the spring is greater than a thirty minute turnover rate, the spa should be augmented by a filtration

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system. The free Chlorine residual should be maintained at a minimum of 1.0 ppm. Bacterial water quality must be maintained as required in the pool code.

Hot springs or mineral water which is used in the traditional "swimming pool" type environment, where the water is not passing through in the pool or spa, is required to be filtered and disinfected. Filtering and disinfection of the pool/spa water originating from the Soda Springs well, will be provided for the future pool and spa as required when the water is recirculated. This level of treatment is similar to that required by Napa County for similar natural spring-fed pools. The disinfection treatment, most likely by ozonation, would not affect the dissolved minerals in the natural spring water.

We believe this issue to be a simple operational requirement for complying with State and local ordinances and does not have any effect on the Environmental Impact Report (EIR). Please explain further your concerns about this issue as it relates to the EIR?

2. Water Demand Factors/Potable Water

At your request, we have re-analyzed the Monterey Peninsula Water Management District (MPWMD) requirements relative to calculating water demand, and more specifically, their *Table 2: NON-RESIDENTIAL WATER USE FACTORS*. We have applied this table to the individual uses for the project. A spreadsheet summarizing potable water use, based on the Table 2 factors, is attached for your review. This spreadsheet indicates that the total Project potable water demand is estimated to be 34.34 acre-feet per year, or a usage of 21.29 gallons per minute (gpm). These numbers compare very closely to the 20.41 gpm potable water use presented in our January 27, 2009 Memorandum previously reviewed by the County.

Please note that the attached Water Calculation Spreadsheet includes potable water usage values for the Time Share Villas/Condominiums. We have used the same water use factor in this current spreadsheet as we used in our January 2009 analysis, or 45.2 gallons per capita per day (gpcd), or 0.15 acre–feet per year per unit. We believe this factor to be much more realistic than the 75 gallons per person per day suggested by the Health Department. That number is actually 5 gallons per person per day more than the per capita consumption in the Cal Am service area on the Monterey Peninsula. Keep in mind that the 70 gallons per person per day used on the Monterey Peninsula includes outdoor landscaping, homes with older fixtures and homes that are full time residences with laundry facilities. None of these circumstances exist for the Paraiso project.

We again direct your attention to the attached 2001 water use reference for a typical national multi-family dwelling per capita water usage factor of 45-70 gpd. We used the low end value of 45.2 gpcd/villa and condominium unit for the following reasons:

- These buildings are not full-time residences.

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- These units would include state-of-the-art water conservation features such as low-flush toilets, tankless water heaters and low-flow shower heads.
- Laundry appliances would not be included in the Time Share Villa/Condominium units.

In addition, we are attaching another reference from the AWWA Research Foundation/Sustainable Water Resources Management manual which indicates an average single-family housing indoor water usage factor of 188 liters per capita per day, or 50 gpcd (based on 3.7854 liters/gallon), including laundry. This water usage rate assumes the residences contain water conservation facilities similar to those outlined above. This data supports the applicability of the 45.2 gpcd factor, because again these units do not contain laundry facilities. We request County consideration of this data when evaluating estimated Project potable water use.

3. Wet Weather Wastewater Storage.

Our project design included County mandated wet weather effluent storage based on 64% Project occupancy. Subsequently, we have received information from the Monterey County Convention & Visitors Bureau (see attached letter) that indicates that the average winter time occupancy rate is 50-53%. Therefore, we propose to initially construct the Project based on a water balance calculation using a 50-60% occupancy level for those wet weather months. We also propose to monitor wastewater flow as the Project develops and expand storage as needed for full Project build-out and any increases in occupancy rates. Overbuilding wastewater storage infrastructure would be an unnecessary expenditure of funds for the applicant during the critical start up phase of the project. It seems much more prudent to phase the storage and monitor actual conditions.

4. Soil Percolation Testing

The request in your previous correspondence for soil percolation testing ignores the fact that we are not percolating wastewater on the site similar to a typical septic system, but disposing of it through landscape irrigation. The Project Geologic and Soil Engineering Feasibilty Report, dated December 2004 and prepared by Landset Engineers, Inc. states that "the proposed development is predominantly underlain by alluvium composed of unconsolidated to semiconsolidated sand, silt, and clay with minor gravels and cobbles." Please refer to the attached Exhibit which shows the Project Site Plan overlaid on the Geologic Map. While some of the condominium units do fall outside of the mapped "alluvium soils", soil borings B-12, B-16 & B-18 indicate the presence of approximately four (4) feet of sandy soil over dense rock material. This area is still suitable for irrigation. The mapped alluvium soils are present on approximately 72 acres of the Project site. When we account for the approximately 23 acres of hardscape for the development features, there

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remains approximately 49 acres of alluvium soil area available for the proposed wastewater disposal thru landscape irrigation.

As you can also see from reviewing the Natural Resources Conservation Service (NRCS) soil map data for this area (http://websoilsurvey.nrcs.usda.gov/app/websoilsurvey.aspx), over the majority of the development footprint, there is greater than 80 inches of soil above any restrictive feature, soils are well drained to excessively drained, and range from moderately low to very high hydraulic conductivity. These types of soils drain sufficiently well to allow irrigation.

Ample acreage exists on the property to allow for variations in soil properties to be addressed in final design, and to provide the 23.8 acres planned for irrigation. Actual percolation rates are currently unnecessary, given the agronomic irrigation rates we are currently proposing for use of the reclaimed wastewater. Our current proposal does not include "subsurface disposal", so percolation data is really of no engineering benefit at this time.

We will gladly discuss these matters further with you, at your convenience, in hopes of moving this Project forward in the review process.

Thanks.

Sincerely,

CH2M HILL

David Von Rueden
Sr. Project Manager

Attachments

c: Bill Thompson
John Thompson
Lew Baughman/Monterey County

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