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December 22, 2011 Project No. 04.71110026

Central Coast Regional Water Quality Control Board 895 Aerovista Place, Suite 101 San Luis Obispo, California 93401-7906

Attention: Mr. Ryan Lodge

Dear Ryan:

This letter is in response to our discussion of December 21, 2011 when we discussed the draft Waste Discharge Requirements (WDR) for the Class II Surface Impoundments (a.k.a., brine ponds) associated with the California Valley Solar Ranch (CVSR) project, located in San Luis Obispo County, California. First - we would like to say that the current WDR language is acceptable and consistent with what other Regional Boards have used for similar projects. In practice, however, some leakage will be detected in the LCRS and the pan lysimeter due to natural diffusion through the geomembrane liner and small imperfections in the liner material or liner construction. The current wording in the WDR presents action that should be taken by the discharger in the context of "previously dry" conditions in the LCRS and pan lysimeter, which will likely never be the case since even for a perfectly intact system, some natural leakage may occur by diffusion through the liner material (typically < 2 gallons per day per acre).

FCI proposes to present a Response Action Plan that will delineate the difference between "actionable leakage" and what is natural/standard for this system. We have initiated the process of preparing this Response Action Plan and have referenced this document as part of the revised CQA Plan (attached). The Response Action Plan will contain the following information:

- 1. Introduction.
- 2. Background.

This is a literature review – summarizing some of the thoughts/methods presented in industry publications. We will recommend a method for calculating the 1) diffusive leakage for each liner material considered for this project; 2) actionable leakage rates.

3. Actionable Leakage for CVSR Brine Pond.

This is a summary of the calculations based upon what is recommended in the background section. These calculations will identify natural and actionable leakage rates for the two different monitoring points including the LCRS and the





pan lysimeter. The actionable rate for the pan lysimeter being much closer to the actual natural rate of leakage due to diffusion, while the LCRS action rate will include some accommodation for small imperfections in the liner material and liner construction.

4. Leakage Response Plan.

This is a plan of what should be done if the leakage rate is between the diffusive leakage rate and the actionable leakage rate. This action will include contacting a liner repair contractor and even ceasing discharge if the rate exceeds the "actionable" leakage rate.

- 5. Appendix 1 Calculations for actionable leakage (Poly-flex Geomembrane Liner).
- 6. Appendix 2 Calculations for actionable leakage (Agru America Geomembrane Liner).
- 7. Appendix 3 Calculations for actionable leakage (Agru America Drain Liner).
- 8. Appendix 4 Datasheets for liner materials.

We recognize that the RWQCB is interested in ensuring that the groundwater quality is protected from possible discharges, which is the basis for the WDR. To this effect, there are several controls already available to this system to monitor the system integrity and protect groundwater quality. These are required by Title 27 and include:

- The LCRS/pan lysimeter has the ability to monitor the quantity of water pumped and returned to the pond each day. Weekly monitoring is required by the WDR.
- Groundwater monitoring wells surround the impoundments and are used to monitor groundwater conditions should a discharge occur and it adversely affects the groundwater quality.

The language in the Draft CQA Plan is consistent with the language used by other Regional Boards in the State of California. The Response Action Plan will be provided for your review in January 2012 presents a path toward identifying what the actionable rates are in the context of the physical abilities of the liner materials. This approach is a more formal approach than that taken by other similar installations. It is proactive and provides a formal vehicle by which the RWQCB and the Owner can work together as the project begins operating.



As indicated previously in this letter, we have updated the Draft CQA Report to include reference to the Response Action Plan presented in this letter. We request that you review this letter and the Draft CQA Plan and provide comments, or we can set up a conference call to discuss. We thank you for your efforts on this project.

Sincerely,

Stephen Osborne, P.E., G.E.

Stephen/J. Osborne, P.E., G.E. Principal/Engineer

FUGRO CONSULTANTS, INC. Ε. liemī Principal Consultant

Copies Submitted: (1) Addressee