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January 15, 2009

Inyo County Water Commission
P. O. Box 337
135 South Jackson Street
Independence, CA 93526

Attn: Water Commissioners

**Re: Coso Operating Company
CUP 2007-03**

Dear Commissioners:

At the public hearing on January 12, 2009, there were numerous questions posed by the Commissioners with respect to the Coso Water Pumping and Transfer Project ("Project"). In an effort to facilitate the Commissioners' review of the massive Final Environmental Impact Report ("FEIR"), I would like to address the matters discussed and provide references to the FEIR or other evidence presented in connection with the Project.

1. Amount of Allowable Impacts.

- 1.1. The Project will adversely impact water resources, springs, habitat, wildlife, property owners or businesses in the Rose Valley. Pumping rates and duration should be limited to avoid impacts.
- 1.2. A 10% loss of water inflows at Little Lake is a significant environmental impact.
- 1.3. The decline in water levels will jeopardize the ability of future residents and owners in the Rose Valley to conduct agricultural or other business enterprises dependent upon available water.
- 1.4. A condition to the CUP should prohibit any overdrafting of the Rose Valley basin.
- 1.5. Only a small fraction of the annual recharge should be available for pumping.

2. Use of Air-Cooled Systems at Coso.

- 2.1.** The cost and the size of land required to implement an air-cooled system at Coso were mentioned in the FEIR, but rejected as an alternative. (FEIR, page 2-73 and 74.) It should be studied further.
- 2.2.** Mr. Ellis of Coso, during public comments, estimated a cost of approximately \$100,000,000. The actual cost has not been studied, but Fitch and Moody's indicates the capital improvements of up to \$100,000,000 are already planned by Coso.
- 2.3.** The use of an air-cooled system would marginally decrease total energy output, but it would eliminate the need for imported water. (See DiPippo Report at pages 12-15, beginning at FEIR page 306.)
- 2.4.** While the footprint of an air-cooled system would be larger, as mentioned by Mr. Ellis, it would be far less than the 60 acres needed to build the Project (FEIR, page 3-3), and it would eliminate all impacts related to the construction of the 9-mile-long pipeline.
- 2.5.** While the air-cooled system would use some electricity for cooling, it would be offset by the energy saved in not pumping and transporting water from the Rose Valley.
- 2.6.** Use of an air-cooled system would allow for 100% reinjection of fluids, reduce the decline of the reservoir, and extend the useful life of Coso indefinitely.
- 2.7.** The FEIR did not consider how much energy Coso could produce over time by using an air-cooled system, compared to the short-term increase of productions due to water injection.

3. Impacts to Springs.

- 3.1.** The FEIR proposed no monitoring of any of the springs throughout the Rose Valley, such as the Davis Spring. Monitoring of the springs should occur.
- 3.2.** No mitigation was proposed if the water flows from the springs were reduced or eliminated. Pumping must stop if springs are impacted.
- 3.3.** The Hydrology Model predicts a significant drawdown (40'-45') adjacent to the Davis Spring. (See FEIR, Appendix 2, Figure C2-24.) Impacts to springs are thus likely.

4. Monitoring of Wells.

- 4.1.** Only a handful of the wells throughout the Rose Valley are proposed to be monitored, rather than all wells and the springs.
- 4.2.** All privately owned wells should be monitored and trigger levels should be established for all of the wells.

- 4.3. The County should initiate mitigation in the event water levels or flows at any of the wells or springs are reduced, not the well or spring owner.

5. Agricultural Pumping Rates.

- 5.1. Some portion of the water used for irrigation of alfalfa would itself recharge the basin, as confirmed by Mr. Harrington.
- 5.2. Pumping for the irrigation of alfalfa was seasonal, allowing for some recharge during the wetter winter months.
- 5.3. According to Mr. Davis, alfalfa farming at the Hay Ranch ceased and the property was sold because of increasing electricity costs to pump water from a steadily declining water table.
- 5.4. Mr. Zdon questioned whether former pumping at the Hay Ranch for agricultural purposes caused the Rose Spring to go dry, which would be a consistent result based on the Hydrology Model (see FEIR beginning page 2-284, Zdon Memorandum, page 2), but the FEIR dismissed the issue. (FEIR, page 2-297, and 2-33.)
- 5.5. Mr. Gum of BLM asserts to have records showing the Hay Ranch pumping at 4,000 AFY, but none of these records have been provided during the environmental investigations performed by BLM or the County.
- 5.6. There are no studies or reports to confirm the impacts to the Rose Valley basin from whatever pumping occurred at the Hay Ranch for irrigation.

6. Duration of Mitigation.

- 6.1. The predicted impacts from the pumping would continue for as long as 100 to 150 years after all pumping stops. (See FEIR, page 3-35, Figure 3.2-16.)
- 6.2. Coso should be responsible for mitigation of impacts for so long as adverse impacts exist.

7. Recalibration of Hydrology Model.

- 7.1. A pumping rate of 750 AFY for 2 years would be more than adequate to stress the aquifer and recalibrate the Hydrology Model (see Zdon Memorandum, dated January 14, 2009 attached), and Mr. Harrington indicated this would be adequate as well.
- 7.2. Appoint a technical advisory committee or independent water master to recalibrate the Hydrology Model, with input from all stakeholders.

8. Establishing Base Line Levels.

- 8.1. The Hydrology Model was not calibrated using available monitoring data. (See Zdon Memorandum, dated September 2, 2008, FEIR beginning at P. 2-284, Item P8-10.)

- 8.2. The predicted impacts were not based on a calibrated the Hydrology Model. (See Zdon Memorandum, dated September 2, 2008.)
- 8.3. Edison estimates a construction time of 12 months for the power substation. (See FEIR, page 2-545.)
- 8.4. 6 months' pre-pumping monitoring of wells does not provide adequate base line monitoring before pumping begins—a minimum of 12 months should be required.
- 8.5. The base line levels should be set to avoid impacts during drought.

9. Does the Project lead to water mining of the basin?

- 9.1. The approximate 900 AFY of inflow from Haiwee should be subtracted from the water budget, because it is not natural and planned to be recovered by LADWP.
- 9.2. At 4,839 AFY, the Project would exceed all natural recharge during average conditions, almost equal to the total recharge to the basin, and much more during drought.
- 9.3. According to Table 3.2-6 (DEIR at page 3.2-42), the Project would:
 - 9.3.1. Draw down water levels annually; and
 - 9.3.2. Materially reduce the groundwater discharge through Little Lake.
- 9.4. The Project would reduce evaporation and evapotranspiration, leading to the conclusion that the size of Little Lake would be reduced and plants would die. (Table 3.2-6)
- 9.5. At a pumping rate of 1,500 AFY, the Hydrology Model states that pumping would have to stop after 3 years to avoid a loss of more than 10% loss of water inflows at Little Lake. (See Figure 5.4-2, DEIR at p. 5-10.)

10. Adequacy of Monitoring and Triggers.

- 10.1. The monitoring program does not establish mandatory pumping reductions or cessation, even if triggers are reached. Reduction of pumping should be required.
- 10.2. All monitoring data should be available and sent to all property owners of Rose Valley and persons requesting notice.
- 10.3. Due to concerns of global warming, the use of average conditions over the very long proposed duration of the Project is not justified.

11. Economics of the Project.

- 11.1. Despite requests for a full economic analysis of the costs and benefits of the proposed Project, the FEIR did not provide such an analysis.

11.2. The FEIR indicates a total Project cost of between \$6,000,000 to \$7,000,000 (see FEIR, page 2-76), but Mr. Ellis suggested a cost of approximately \$12,000,000.

11.3. There has been no response to the question of the additional revenues Coso expects to generate by virtue of the Project at 4,800 AFY or any lesser pumping rate over any specified duration, compared to the cost of the Project.

11.4. Because of the recent sale of Coso, the County now receives more than double the tax revenues from Coso, and energy production is only declining by approximately 3.6% per year, without any capital improvements to offset the losses. (FEIR at page 2-485.)

12. How is pumping stopped once it is started?

12.1. If Coso is permitted to pursue the Project at any pumping rate or duration, it will obviously have to incur significant capital costs.

12.2. It is common sense that Coso would attempt to avoid pumping reductions or curtailment after having incurred the capital costs if the CUP is issued at a higher rate.

12.3. The only guaranteed way to curtail pumping is to limit the duration of the CUP.

13. Air-Cooled Operations at Mammoth Pacific (Casa Diablo) Geothermal Plant.

13.1. The geothermal plant of Casa Diablo exclusively uses an air-cooled system.

13.2. We contacted Mountain Pacific which verbally advised us that:

13.2.1. A limited water-cooling component to supplement the air-cooled system was used for a time.

13.2.2. Only reclaimed water was used, obtained from a sewage treatment plant approximately 2 miles away.

13.2.3. The ancillary water-cooling system was abandoned about 2 years ago.

14. Is the Project needed?

14.1. Since the proposed Project is limited in duration and the Hydrology Model predicts a rather quick cessation of pumping, Coso will have to pursue other options in the near term.

14.2. If the Project were not approved, Coso would examine and pursue its other alternatives according to Mr. Ellis.

14.3. The policy issue is whether the profits of a private energy company and the tax or royalty payments made by Coso outweigh the predicted harm to the Rose Valley.

If there is any recommendation of approval, the best policy would be to limit the pumping rate and the duration of the CUP to a level that is not likely to impact the Rose Valley. Ample hydrologic data can be developed at a pumping rate of 750 AFY over a period of no more than 2 years. While the alternatives suggest that a somewhat greater rate and/or longer duration could be approved, the alternatives would allow a 10% loss of water inflows to Little Lake, which we contend is significant. If the Hydrology Model is wrong, then the greater pumping could cause excessive damage before it is stopped.

Coso should bear the risk of loss (i.e. expenses to build the pipeline) if the new calibrated Hydrology Model shows that higher pumping is not possible. It is Coso that wants to transport the water off the Rose Valley basin. The CUP should not be issued which would cause the Rose Valley to suffer the loss caused by excessive pumping.

During any allowable pumping, the Hydrology Model can be properly calibrated to more accurately determine what a safe pumping rate may be. At that time, Coso can seek a modification of the CUP. This presents the only safe and sensible approach. As stated by Mr. Ellis, if Coso does not get full approval of the Project, it will explore its alternatives and make the capital investment it needs to produce energy. In the final analysis, importation of water from the Rose Valley Basin is not essential to allow for the profitable production of energy at the Coso Geothermal Plant and the County's receipt of tax revenues.

Very truly yours,

ARNOLD, BLEUEL, LAROCHELLE,
MATHEWS & ZIRBEL, LLP

Gary D. Arnold

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GDA:jw

cc: Little Lake Ranch, Inc. (via e-mail)
Bob Harrington (via e-mail)
Randy Keller (via e-mail)
Inyo County Water Commissioners (via e-mail)