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Attorneys for Sierra Club-Grand Canyon Chapter

**BEFORE THE ARIZONA CORPORATION COMMISSION**

7 GARY PIERCE, CHAIRMAN  
8 BOB STUMP  
9 SANDRA D. KENNEDY  
10 PAUL NEWMAN  
11 BRENDA BURNS

12 IN THE MATTER OF THE APPLICATION OF  
13 MOHAVE ELECTRIC COOPERATIVE, INC.  
14 FOR APPROVAL OF A WASTE-TO-ENERGY  
15 FACILITY AS A PILOT PROGRAM UNDER  
16 THE RENEWABLE ENERGY RULES OR, IN  
17 THE ALTERNATIVE, FOR A LIMITED  
18 WAIVER.

Docket No. E-01750A-10-0453

**NOTICE OF FILING WITNESS  
SUMMARIES OF SIERRA CLUB -  
GRAND CANYON CHAPTER**

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Sierra Club - Grand Canyon Chapter ("Sierra Club"), through its undersigned counsel,  
hereby provides notice it has this day filed written summaries for the testimony of Sandy Bahr,  
Dr. Jeffrey Morris and Doris Cellarius in the above-captioned matter.

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Arizona Corporation Commission

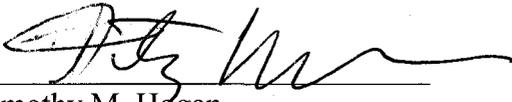
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1 RESPECTFULLY SUBMITTED this 23<sup>rd</sup> day of November, 2011.

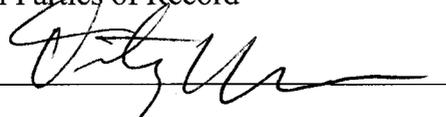
2 ARIZONA CENTER FOR LAW IN  
3 THE PUBLIC INTEREST

4 By   
5 Timothy M. Hogan  
6 202 E. McDowell Rd., Suite 153  
7 Phoenix, Arizona 85004  
8 Attorneys for Sierra Club – Grand Canyon  
9 Chapter

10 ORIGINAL and 13 COPIES of  
11 the foregoing filed this 23<sup>rd</sup> day  
12 of November, 2011, with:

13 Docketing Supervisor  
14 Docket Control  
15 Arizona Corporation Commission  
16 1200 W. Washington  
17 Phoenix, AZ 85007

18 COPIES of the foregoing  
19 Electronically mailed this  
20 23<sup>rd</sup> day of November, 2011, to:

21 All Parties of Record  
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## **Summary of Testimony Sandy Bahr**

The Sierra Club recommends that the Arizona Corporation Commission reject Mohave Electric Cooperative's (MEC's) application to have the energy produced by a proposed Waste-to-Energy (WTE) facility developed and operated by Reclamation Power Group, LLC (RPG) be recognized as a pilot program pursuant to A.A.C. R14-2-1802(D) or that it be granted a waiver to the Renewable Energy Standard and Tariff (REST) Rules, pursuant to A.A.C. R14-2-1816(A) to recognize the energy produced at the WTE facility as an Eligible Renewable Energy Resource per A.A.C. R14-2-1802.

The Sierra Club objects to this project being recognized as a pilot program or being granted a waiver under the REST for several reasons. First, this proposed WTE facility does not represent a new technology; it is basically an incinerator in which the heat from burning municipal solid waste (MSW) is used to generate heat to boil water and generate steam to turn a turbine. This type of electricity generation – combustion of MSW – was considered and rejected during the development of the REST (see Staff memo dated January 15, 2005). Second, to be considered for a pilot project or for a waiver, the fuel must be a renewable energy resource (A.A.C R14-2-1802) and MSW is not. Third, we strongly question the assumptions used by Staff and referenced in the order regarding the biogenic and nonbiogenic content of the MSW in the Phoenix Metropolitan area. Fourth, MEC has not shown “just cause” for a waiver.

Finally, we object to granting the applicant a waiver or recognition as a pilot program, because waste incinerators can pose significant risks to our environment and to public health. While there are still some important data gaps relative to the proposed RPG facility, it is clear that the negative environmental impacts are significant. Rather than approving a WTE facility under the guise of renewable energy, our communities should focus on furthering recycling and reducing the amount of waste produced, and the Commission should encourage the applicant to pursue clean eligible renewable energy resources such as solar and wind.

## **Summary of Testimony Doris Cellarius**

Ms. Cellarius' testimony supported the concerns of others who believe that this Waste-to-Energy Pilot Program is not appropriate for renewable energy credits. It is very disappointing that Mohave Power is not investing in wind and solar. It would very likely discourage recycling. Due to the difficulty of determining what kind of burner is actually being proposed, much of my testimony was based on the hazards from traditional mass burn technologies. These concerns should not be dismissed because no matter what kind of technology is used, similar problems can occur.

Ms. Cellarius' testimony included:

Fine particulate emissions, a great health threat because if inhaled they can enter the blood stream. They also cause respiratory problems, a huge problem in this nonattainment area.

Failures of management and equipment, which have often occurred with these highly technical facilities.

Hazards of mercury and dioxins which are very hard to totally control, especially because equipment can fail.

The toxicity and leachability of incinerator ash, which is where persistent, bioaccumulative pollutants such as mercury and dioxins concentrate. Mohave has not explained how it will deal with storage and disposal of ash.

The benefits of composting green waste rather than burning it. Compost-based soil amendments are needed in this region for replenishing our poor soils.

## **Summary of Testimony**

### **Dr. Jeffrey Morris**

Dr. Morris' testimony demonstrated, using peer-reviewed scientific research data, that energy produced from combusting municipal solid waste (MSW) at a WTE facility is not carbon neutral, is not renewable, and emits more carbon to the atmosphere per unit of energy generated than natural gas or coal. Specifically, with respect to the question of whether municipal solid waste combustion represents a renewable energy resource, his testimony discussed both the fossil and biogenic carbon already sequestered and stored in the products and packaging materials in Phoenix MSW and estimated that:

- 34% of this stored carbon is fossil in origin and will be released to the atmosphere if MSW is burned. Energy from burning this fossil carbon is clearly not renewable.
- 38% of stored carbon is biogenic carbon that will remain sequestered for the long-term and not released to the atmosphere if biogenic materials are landfilled instead of burned. Given the fact that forestry products and tree prunings account for most of the energy value in this portion of stored carbon, it is not a renewable energy resource within the 20 to 40 years available for acting to prevent drastic changes in our climate. That is, when MSW containing this biogenic carbon is burned, enough additional new tree growth to re-sequester this carbon will not occur rapidly or even within even a 50 or 100 year time frame.
- 28% of stored carbon is biogenic carbon that would be released to the atmosphere very gradually over a period of time longer than 100 years if Phoenix MSW is landfilled, but released instantaneously if MSW is burned. Some of this carbon is also from forestry products that will not be rapidly replaced by additional new tree growth.

Dr. Morris' testimony noted that there is no causal connection between the choice on how to manage current and future MSW disposal quantities and the amount of additional carbon being sequestered from the atmosphere via new plant and tree growth. His testimony also demonstrated the lower energy content of MSW compared with natural gas or coal, and the higher carbon emissions per kilowatt hour generated from burning MSW as compared to burning natural gas or coal.

These facts reinforce the conclusion that MSW is not a renewable energy resource. Burning a more energy efficient fossil fuel such as natural gas to generate electricity, while retaining storage of the carbon already sequestered in MSW, releases less carbon to the atmosphere than burning MSW to generate that electricity and thereby releasing MSW's sequestered carbon.