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To Federal Regulations”  
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My name is Paul Orme and I am an Arizona Attorney representing three irrigation districts which receive irrigation water through the Central Arizona Project. Combined these three districts total over 200,000 irrigable acres in Pinal County, Arizona and utilize approximately 60% of the agricultural water delivered annually through the CAP.

These remarks concern the Navajo Generating Station (NGS), located near Page, Arizona, and the emissions control options being considered for improving visibility in that area which includes the Grand Canyon National Park. The Environmental Protection Agency (EPA) is in the process of determining the Best Available Retrofit Technology (BART) to reduce nitrogen oxide (NO<sub>x</sub>) emissions at NGS. Litigation has also been filed by a coalition of environmental groups on these same visibility standards, which may or may not be partially driving this process.

EPA’s ultimate BART decision will significantly impact the people and economies in and around Page, including the Hopi and Navajo Reservations. Their stories deserve to be heard and are being told by others. My focus will be the impact in the farm communities in Central Arizona.

NGS is the source of power needed to deliver the major share of Arizona’s entitlement of Colorado River water over 300 miles via the Central Arizona Project (CAP) aqueduct from Lake Havasu to Tucson. Twenty four percent of the output of the plant is held by the United States Bureau of Reclamation.

The majority of water delivered through the CAP aqueduct is used by farmers. In a typical year, non-Indian agriculture uses nearly 50% of the total water delivered through the CAP. Agriculture water for Indian use adds another 200,000 acre feet to the total. Vital to agriculture’s future in Arizona is access to a low cost and reliable supply of water. Some of the emission control options being considered by the EPA at the Navajo plant could render CAP water an uneconomical water resource option for agriculture. And for those farmers unable to access water resources other than CAP water, these regulatory requirements would put agriculture’s viability as a business in jeopardy. Family farmers, irrigation districts, associated farming and

agricultural businesses, and the local economies of several farming communities in Central Arizona face significant impact and economic hardship should the cost of emission controls at NGS render CAP water unaffordable for agricultural use.

Currently two emission control options are being considered: 1) low NO<sub>x</sub> burners; and 2) selective catalytic reduction (SCR) with bag houses to collect particulates, options with a significant difference in associated costs, but with air visibility results imperceptible to the human eye. If the EPA selects the more costly option for BART, it is possible the existing owners of the plant will decide to shut it down, requiring CAP to find an alternative source of power resulting in water costs entirely beyond the capability of agriculture to pay. For a variety of reasons, a decision to shut down NGS would be the worst possible result for Arizona and the CAP.

CAP estimates that the impact to energy charges within the water rates to install the low NO<sub>x</sub> burners at NGS are in the range of \$0.50 per acre-foot. This is a manageable increase in exchange for a significant reduction on NO<sub>x</sub> emissions. Conversely, the SCR treatment is estimated to have an impact of over \$16.00 per acre-foot. An increase of \$16.00 per acre-foot will have a significant cascading negative impact on agriculture, the economy and environment of Central Arizona. Farmers will turn to increasing the use of non-renewable groundwater supplies and some will discontinue farming. Local businesses that support agriculture will suffer, aquifer levels will decline with related degradation of the water quality, and increased unemployment can be expected due to agriculture-related job losses during one of the worst recessions experience by our country.

The introduction of CAP water as a renewable water supply to Central Arizona has benefited the agricultural economy and the State of Arizona – by assisting the agricultural user in meeting regulatory objectives to reduce groundwater use, ensuring long term availability of groundwater resources as a resource for future drought conditions, and through a reliable water supply helping to sustain economic growth and vitality of the agricultural communities that depend upon agriculture for their livelihoods.

For example, one of my clients is the Maricopa-Stanfield Irrigation & Drainage District (MSIDD) located in Pinal County Arizona. That District pumped between 300,000 – 400,000 acre-feet of groundwater per year before the introduction of CAP water in the late 1980's. During calendar year 2010, MSIDD pumped a total of 81,000 acre-feet while providing irrigation water services to over 70,000 acres. CAP water during the same year constituted 70% of total water deliveries, or approximately 200,000 acre feet. Should water costs increase by \$16 per acre foot as predicted through the installation of the SCR technology and bag houses, irrigation districts such as MSIDD will resume groundwater pumping as a less costly option for the farmers served by this District. The 200,000 acre-feet of CAP water that was used by the District in 2010 will be partially replaced with less expensive groundwater.

To add further perspective, since 1987 MSIDD has delivered 3.8 million acre feet of renewable CAP water, essentially preserving a like amount of groundwater in District aquifers for drought purposes. Where historically during the 1970's and 1980's there was significant overdraft of the aquifer within MSIDD boundaries and regularly occurring subsidence, today the aquifers in

Central Arizona have stabilized or rebounded underlying those agricultural lands that have had access to CAP water. Should the CAP water become uneconomic to use due to NGS emission controls, aquifer overdraft and possible subsidence will return. The irony of the situation is that two epic and very successful Federal and State policies that were implemented in Central Arizona in the 1980's, the CAP Enabling Act and the Arizona Groundwater Management Act, originated to reduce groundwater overdraft and large scale pumping in Central Arizona. Now, if the EPA requires SCRs and bag houses on NGS, large scale groundwater pumping in central Arizona will return.

If the EPA restrictions are fully implemented, MSIDD estimates agricultural lands will shrink by 35-50% reaching upwards of 35,000 acres. With anticipated urban growth in the area over the next 50 years, water supply and water quality problems may be further exacerbated due to over-pumping in the near term.

For a typical farmer in Central Arizona, the cost of purchasing and delivering water is the single highest operating expense, comprising over 20% of the total expense to operate a farm. In order for the farmer to remain competitive, it is essential that all operational costs are managed closely. Cost increases not related to the agricultural market are difficult for the farmer to pass on to the consumer. With increased water costs, farmers will be forced to absorb those costs directly without the ability to pass on those cost increases. A \$16 per acre-foot increase in water costs equates to a cost increase of over \$50 per acre based on a farm using 4.5 acre feet per acre of water per year, and assuming 70% of the water is from the CAP. For a 1,000 acre farm, the total cost increase would be over \$50,000. Crops typically grown in this region are of the variety that competes on the world market. There is very little room to pass on any cost increases due to the nature of this highly competitive market. Furthermore, the \$16 per acre-foot will have the same impact on all the farmers in the CAP including the Native Americans sector.

The impacts to an irrigation district such as MSIDD are also substantial. MSIDD estimates that almost 75% of its entire budget is devoted to water costs, both CAP and groundwater. Of those costs, 95% is energy. Should EPA require the SCR control option be employed, MSIDD would be facing a budget increase of over \$3.0 million. It is this cost increase that is passed along to farmers. Should NGS be shuttered, CAP estimates that replacement energy costs would add \$30 - \$115 an acre foot to the price of water, or a 60 – 200% cost increase for MSIDD, and all CAP agricultural water users.

Arizona and western U.S. water policies are extremely complicated and interwoven throughout all water use sectors. In 2004, the Arizona Water Settlements Act was signed into law. This comprehensive act had several components associated with it in ensuring further certainty and reliability as it came to water resource management and planning in Arizona. One such component resolved a long standing dispute on determining the extent of the water rights associated with the Gila River Indian Community (GRIC). Substantial time and effort was spent by the federal government, Gila River Indian tribes, cities, and irrigation districts in negotiating a workable solution for all parties. The agricultural sector provided the largest allocation of water to settle the GRIC water claims. With the relinquishment of the long term CAP water allocations, the agricultural sector was to receive in turn an adequate and affordable supply of

CAP water through the year 2030. The Tribes received assurance of affordable CAP water in lieu of free Winters Rights water. Under the SCR emission control options proposed by the EPA, the principles associated with the assurance of affordable CAP water for agricultural use will be violated. Consequently, an uneconomical CAP water source will have far reaching impacts not only to the individual Indian and non-Indian farmers, but may also have the potential to undermine the water settlement agreement. It will certainly give potential parties to future water settlements pause, if one agency of the Federal government (EPA) can undo benefits agreed to by another agency (DOI) before the ink is barely dry on the settlement agreement.

Unplanned or unforeseen adverse economic impacts due to catastrophic natural events are well understood risks that farmers accept as a cost of doing business. Farmers, where possible, protect the business by insuring for such occurrences. Adverse economic impacts that are purposefully planned without consideration on a broader scale on how those actions impact others are careless and irresponsible. Farmers going out of business, irrigation district and farming related job loss, and local communities economies harmed as a result of the questionable emission control options currently being considered at NGS are major economic implications for Central Arizona. Pinal County's economy will be hit particularly hard, with some of the nation's most productive farmland going fallow. The EPA's emission control options will have real impacts directly on many people's livelihoods not only on the Hopi and Navajo Reservations in Northern Arizona and in the Town of Page, but also on the farm and tribal communities of Central Arizona.

We urge the House Water and Power subcommittee to recognize the damaging economic, social and environmental impacts these actions from the EPA may have on the agriculture industry in Central Arizona.

Thank you for the opportunity to provide the Subcommittee with this testimony.