

NATIONAL PARK SERVICE
Briefing Paper

Prepared for: Director
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States: Arizona, Nevada

Title: Project MOHAVE

Issue: Contribution of the Mohave Coal-Fired Power Plant to
Visibility Impairment in the Grand Canyon

Background:

- From 1987 to 1991 a number of special studies were carried out to assess the sources of visibility impairment in Grand Canyon National Park. The coal-fired Navajo Generating Station was shown to contribute significantly to haze in the Grand Canyon, however, it was also shown that other area and point sources also contribute to haze. One potential source is the Mohave Power Project (MPP), a 1580 Megawatt, coal-fired steam electric power plant located approximately 65 miles southwest of Grand Canyon National Park in Laughlin, Nevada. Congress, desirous of additional information concerning the sources of visibility impairment in Grand Canyon, added 2.5 million dollars to the fiscal 1991 appropriation for EPA to conduct "a pollution tracer study at the Mohave Power Plant." Project MOHAVE (Measurement Of Haze And Visual Effects) is the result of this congressional mandate.
- The goal of Project MOHAVE was to determine the contribution of known sources, including the MPP, to haze at Grand Canyon NP and other mandatory Class I areas on the Colorado Plateau. This necessitated the quantitative evaluation of the intensity, spatial extent, frequency, duration, and perceptibility of the MPP contribution. Because knowledge of regional transport and air quality levels is necessary to separate the effect of MPP from other sources, meeting the goal will result in increased knowledge about the impacts from other sources.

Status:

- The field study was carried out during the winter and summer of 1992. It involved the deployment of 40 monitoring systems and the release of unique tracer material from MPP, an area near Page, Arizona, and an area in Southern California. Strict protocols for the restricted custody and analysis of the unique tracer data were agreed to by all participating parties (Southern California Edison Company, National Park Service, Environmental Protection Agency, and Electric Power Research Institute). All non-tracer data were made available to analysts during the summer of 1993. The unique tracer data were made available to Project partners and the many participating sponsors (including the National Park Service) for analysis in the summer of 1996. Preliminary analyses of the data show that there is reason to expect that the MPP is

contributing to visibility impairment at Grand Canyon National Park. Further analyses will likely provide better quantitative estimates of the contribution of the power plant and other sources or source regions to observed impairment. In addition, the scientific and technical knowledge gained will benefit the continued assessment and implementation of the Grand Canyon Visibility Transport Commission recommendations and the Clean Air Act Title IV requirements. In fact, the analyses of these data provide a unique opportunity to advance our understanding of pollution transport and dispersion in the western United States.

- The Project MOHAVE Steering Committee has reached consensus on a data analysis plan (for the complete set of air quality and tracer data) and hopes to complete these analyses by the end of 1997.

Position of Interested Parties:

- EPA and industry stakeholders are continuing to support this study. The owners/operators of the plant would, of course, be pleased with a finding of minimal contribution. The owners/operators have informally suggested that they would close the plant down rather than install control measures. EPA will evaluate the results of the Project MOHAVE study and determine if any regulatory actions are necessary.

NPS Perspective:

- The Service will continue to participate in Project MOHAVE by providing technical support and data analyses to the EPA to identify the contribution to visibility impairment in the Colorado Plateau parks.
- The NPS will continue to evaluate information available to determine if it is appropriate to formally identify this source as contributing to visibility impairment in the Grand Canyon National Park.

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