



*Submitted via electronic mail*

October 30, 2020

Daniel Czecholinski  
Director, Air Quality Division  
Arizona Department of Environmental Quality  
1110 W. Washington St.  
Phoenix, AZ 85007

RE: Irvington Generating Station Visibility Modeling Report  
Follow up to TEP's *Irvington Generating Station Four-Factor Analysis Report*

Dear Mr. Czecholinski:

Tucson Electric Power Company (TEP) respectfully submits the attached *Assessing the Visibility Impacts of the Sundt (Irvington) Generating Station*, to the Arizona Department of Environmental Quality (ADEQ). TEP owns and operates the H. Wilson Sundt Generating Station, also known as the Irvington Generating Station (IGS), which is located in Tucson, Arizona.

The attached report details the results of a photochemical grid modeling (CAMx) analysis performed by Ramboll US Corporation. Modeling of a hypothetical nitrogen oxides (NO<sub>x</sub>) emission reduction of 130 tons per year at Sundt Unit 3 yields a predicted visibility improvement of 0.0097 deciviews on the most anthropogenically impaired days at Saguaro Wilderness Area and lesser improvements at other Class I areas. This is the difference between a total contribution of 0.00317 deciviews from Unit 3 to impairment at Saguaro without additional control measures and a predicted total contribution of 0.00220 deciviews with NO<sub>x</sub> controls. Even without additional controls, the visibility impairment attributable to emissions from this unit is negligible. For the same hypothetical NO<sub>x</sub> emission reduction, the total predicted visibility improvement at all 25 Class I Areas evaluated is 0.0016 deciviews.

As noted in Section 4.1 of TEP's *Irvington Generating Station Four-Factor Analysis Report* for IGS Unit 3 ("TEP Report", dated March 2020), the total annual cost of combustion controls at this unit is \$0.36 million. This value is conservative because the capital recovery cost component is based on a 20-year project life, whereas TEP expects to retire the unit permanently by 2032. Even if this NO<sub>x</sub> emission control measure were reasonably cost effective on a \$/ton basis, which it is not, these costs cannot be considered reasonable in relation to the negligible visibility benefits that would result. In

particular, if the annual costs are considered in relation to the predicted visibility improvement of 0.00097 deciviews on the most anthropogenically impaired days at Saguaro Wilderness Area, the cost effectiveness in terms of visibility improvement is \$370 million per deciview. As noted in footnote 49 of the TEP Report, EPA has routinely approved state decisions to reject controls under the Regional Haze rules, even where such controls may reasonably be considered cost effective on a \$/ton basis, where the predicted visibility improvements are negligible, and the cost effectiveness in relation to visibility is similar to that calculated here.

TEP provides this report for ADEQ's use in developing a revised State Implementation Plan for the second planning period under the federal Regional Haze program.

If you have any questions regarding these submittals, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Megan E. Garvey".

Megan E. Garvey  
Director, Environmental Services and Sustainability

cc: Rupesh Patel, Pima County Department of Environmental Quality  
Catherine Schladweiler, TEP