Interactive comment on “Oil and gas impacts on air quality in federal lands in the Bakken region: an overview of the Bakken Air Quality Study and first results” by A. J. Prenni et al.

Anonymous Referee #1

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This well-written manuscript provides an interesting and informative overview of a study to better understand the impacts of oil and gas on the air quality of North Dakota and the Bakken region. Over the past 10 years, the rapid increase in oil and gas extraction from the Bakken formation has meant that North Dakota is now one of the top oil-producing states in the United States. The results presented here demonstrate using VOC and other key measurements, including NOx and elemental carbon (EC), that oil and gas emissions are impacting the air quality of several national park units. These units include Class 1 federal lands, which enjoy the highest level of federal protection for their air quality, and include here the Theodore Roosevelt National Park. The study clearly documents larger effects in those areas near the most extensive oil and gas development, with impacts very likely offsetting air quality improvements gained from decreased power plant emissions since the 1990 Clean Air Act Amendments.

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