The U.S. Environmental Protection Agency’s (EPA) 1-hr National Ambient Air Quality Standard for sulfur dioxide (SO₂ NAAQS), established in June 2010, is somewhat unique in that air dispersion modeling and/or traditional monitoring data could be used to show compliance. While intended to provide states with additional flexibility, due to the inherently conservative nature of EPA’s preferred regulatory model, AERMOD, affected facilities and states were both challenged to complete the analysis needed for area designation and develop plans showing a path forward to attainment. In the first five years of the SO₂ NAAQS, only 29 nonattainment areas have been determined, leaving the majority of the United States undesignated.

In April 2014, EPA proposed the SO₂ Data Requirements Rule (DRR), which described the process to be used by the remaining undesignated areas to determine attainment or nonattainment with the SO₂ NAAQS. Following the March 2015 filing of a consent decree, the final DRR was issued, establishing thresholds and timelines for analysis to meet the designation deadlines agreed upon in the consent decree.

The following two articles focus on the status of area designations for the 1-hr SO₂ NAAQS, what to expect from the final DRR, and what to expect moving forward. The first article details the recent actions related to the 2010 SO₂ NAAQS, and how these new actions push the schedule for area designations in the coming years. The DRR took a bit of the uncertainty out of the process, and established which areas would be more closely reviewed, as the article by Scott Janoe and Zach Craft discusses. In addition to areas with monitored data showing SO₂ levels above the NAAQS, consistent with the consent decree, areas containing coal-fired power plants, areas with industrial sources emitting more than 2,000 tons per year, and areas determined to have clusters of smaller sources of SO₂ emissions have to follow specific steps and timelines as part of the SO₂ designation process.

The second article picks up with a discussion on the impacts of the DRR on facilities and the larger air quality community. The article, by Richard Hamel, notes that while the DRR took some of the uncertainty away and established a timeline for designation, the amount of analysis needed by states and affected facilities is significant given the relatively short timeframe. While providing some clarity, there are still questions that remain for those entities conducting the current and subsequent rounds of SO₂ designation analysis. This article combines the progress made so far on the SO₂ DRR and the additional clarifications that will be needed when considered alongside recent proposed updates to EPA’s analysis guidance.

Many thanks to the authors for contributing to this issue by sharing their experiences and perspectives on the challenges and opportunities states and facilities face when complying with the SO₂ NAAQS. em