

5. SUMMARY OF CD-C AIR QUALITY IMPACT ANALYSIS

5.0 Summary of CD-C Air Quality Impact Analysis

In this Section, we summarize the results of the CD-C Air Quality Impact Analysis.

5.1 SUMMARY OF NEAR-FIELD MODELING RESULTS

Production activities associated with any of the CD-C Project alternatives over the life of the project would not make a significant contribution to modeled exceedances of the NAAQS or WAAQS, and would not exceed the PSD Class II Increments.

Well field development activities including well pad construction and well drilling could result in elevated 1-hour NO₂ concentration impacts and 24-hour PM_{2.5} concentration impacts that are above the level of the NAAQS at areas immediately adjacent to these activities.

5.2 SUMMARY OF FAR-FIELD MODELING RESULTS

The CD-C Proposed Action makes no significant contribution to modeled exceedances of the NAAQS for ozone or any other criteria pollutant in the 2022 future year. The PSD increments were not exceeded at any Class I or sensitive Class II area within the 4 km domain.

For all pollutants except ozone, the CD-C modeling results show attainment throughout the 4 km domain except in the immediate vicinity of point sources unrelated to CD-C. Modeled exceedances of the CO, PM₁₀ and PM_{2.5} standards are the result of impacts from a 2005 fire in Lincoln County, and the lone SO₂ exceedance is highly localized and due to emissions from a Fremont County source. An ozone exceedance occurs at Boulder, Wyoming, where CD-C has no significant contribution to ozone concentrations.

Examination of the spatial scale and magnitude of the CD-C Project contribution to criteria pollutant concentrations within the 4 km grid shows that exceedances of the ambient air quality standards in the 2022 future year modeling are not related to emissions from the CD-C Project.

The MATS-estimated maximum impact of the CD-C Proposed Action on the 2022 DVF is less than or equal to 0.8 ppb for both meteorological years. The two year approximation to a 2022 design value obtained using absolute model concentrations shows the CD-C Proposed Action maximum ozone impact to be 1.6 ppb. For both the absolute modeled concentration and MATS results, the largest ozone impacts due to the CD-C Proposed Action emissions were in the vicinity of the Project Area. In Sublette County, where the only modeled exceedances of the 75 ppb NAAQS occurred, ozone impacts due to the CD-C Proposed Action were less than or equal to 0.04 ppb. The highest CD-C ozone contributions to ozone at Southwest Wyoming monitors occurred on days when modeled regional 8-hour ozone was low (<60 ppb).

The visibility analysis showed 1-5 days with CD-C Proposed Action visibility impacts greater than 0.5 dv at Class I and sensitive Class II areas over the course of the 2 year simulation of the future year emissions scenario. There was 1 day with CD-C Proposed Action visibility impact >1.0 dv during this period. The largest visibility impacts occurred at the Savage Run, Dinosaur and Mount Zirkel areas. No other Class I or sensitive Class II area had any day with visibility impacts >0.5 dv due to the CD-C Proposed Action emissions.

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There were no nitrogen or sulfur deposition impacts from CD-C Project exceeding BLM critical load values at any Class I/sensitive Class II area; however, the DAT for nitrogen was exceeded at several Class I areas near/downwind of CD-C Project Area.

There were no ANC changes exceeding the 10% threshold or sensitive lake impacts where $\Delta\text{ANC} < 1 \mu\text{eq/L}$ due to emissions from the CD-C Proposed Action.