

Table 7. Summary of Project Emissions Increase

	CO	NO _x	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO ₂ e
Project Increase (tpy)	265.1	161.7	24.4	24.4	24.4	18.4	10.8	415,781
PSD SER (tpy)	100	40	25	15	10	40	40	75,000

7.4.1. Air Quality Impacts/Mitigation

Alternative A (No Build): Alternative A would not result in air quality impacts.

Alternative B (Build): In summary, installation and operation of the SCCT would result in an increase in emissions of CO, NO_x, PM₁₀, PM_{2.5} and greenhouse gases as CO₂e, however, the SCCT would not pose a risk to the health and welfare of human populations, wildlife, soils or vegetation in the area. Analyses discussed below and in the Air Permit Application have demonstrated that the SCCT would have an insignificant impact on the NAAQS, and potential hazardous air pollutants emitted from the SCCT would be below North Dakota Department of Health levels of concern.

The SCCT would result in an increase in emissions of CO, NO_x, PM₁₀, PM_{2.5} and greenhouse gases as CO₂e that exceeds the corresponding SER thresholds for a major modification to an existing major stationary source. Specifically, the CO threshold of 100 tpy, the NO_x threshold of 40 tpy, the PM₁₀ threshold of 15 tpy, and the PM_{2.5} threshold of 10 tpy, and the carbon dioxide equivalent (CO₂e) measurement threshold for GHGs of 75,000 tpy triggers the provisions of a major modification under the Prevention of Significant Deterioration (PSD) rules. As such, a BACT analysis was conducted for CO, NO_x, PM₁₀, PM_{2.5}, and GHGs for the SCCT Project and emissions limits were proposed for these pollutants. Emission increases of all other criteria pollutants (i.e., SO₂) do not exceed their respective SERs for this project.

Also, NAAQS analyses were considered for significant emissions of CO, NO_x, PM₁₀, and PM_{2.5}. Since there is no NAAQS established for CO₂e, no NAAQS review was required for CO₂e.

NAAQS Analysis

It was determined that the pollutant emissions requiring NAAQS analysis for the SCCT were limited to NO₂ emissions for the 1-hr NO₂ NAAQS, as discussed in the Air Permit Application. The other significant pollutant emissions of NO₂ (for the annual standard), CO, PM₁₀ and PM_{2.5} were determined through initial calculations or modeling to contribute insignificantly to ambient concentrations. Since the NO₂ emissions for the 1-hr NAAQS from the SCCT were shown through preliminary modeling to be potentially significant, cumulative modeling was conducted which included modeling emissions from nearby sources per the requirements of the *Clean Air Act*. Cumulative modeling showed that combined impacts of the SCCT with other sources in the area would result in a 1-hr NO₂ ambient concentration of 109 ug/m³, occurring on higher terrain to the southwest of the SCCT. This concentration was the highest predicted per the modeling protocol and is well below the 1-hr NO₂ NAAQS of 188 ug/m³.

State Air Toxics Analysis

An analysis was required for potential emissions of hazardous air pollutants (HAP) from the SCCT and existing Heskett Station coal-fired units. The facility-wide potential to emit for HAP was calculated to be less than the 25 tons per year for all combined HAP and less than 10 tons per year for any individual HAP. Thus, Heskett Station would remain an area source of HAP emissions with the addition of the SCCT.