



8.0 ADDITIONAL IMPACT ANALYSIS

An additional impact analysis is required for major new sources or major modifications at existing major sources pursuant to 40 CFR Part 52.21(o). In addition, Section 7(a) of the Endangered Species Act (ESA) requires review of threatened and endangered species in the area surrounding the proposed projects. Therefore, the additional impact analysis is necessary to evaluate the impacts from the proposed project on:

- Associated growth
- Soils, vegetation, and wildlife
- Visibility impairment
- Threatened and Endangered Species

The proposed project is considered a major modification and will result in emissions of particulate matter (PM₁₀/PM_{2.5}) and carbon monoxide greater than the major source significant level. Consequently, an additional impact analysis addressing the effects of PM and CO in these areas is required.

8.1 ASSOCIATED GROWTH

The purpose of the growth impact analysis is to quantify the impact from growth resulting from the construction and operation of the proposed project and to assess air quality impacts that would result from that growth. Impacts on the ambient air and surrounding community resulting from the installation of new unit #10 and removal of existing unit #3 will be minor. Further, any addition vehicle traffic resulting from the use of alternative fuels, including wood waste and TDF will be insignificant.

HBPW is proposing to construct and install a new CFB boiler and steam turbine in response to increased demand for power in the city of Holland. The proposed project also includes construction of a new administrative building and relocating the substation. Due to abundant supplies of solid fuel, including coal and wood waste, the project is not expected to affect the fuel supply or impact the fuel markets within southeast Michigan or the Midwest.



8.2 SOILS, VEGETATION, AND WILDLIFE

Additional increases in pollutant levels resulting from a specific emission source can have an impact on air quality-related values (AQRVs). However, it is important to evaluate the level of the expected increase. AQRVs can include visibility, odor, flora, fauna, and geographic resources; archeological, historical, and other cultural resources; and soil and water resources.

HBPW has performed a modeling demonstration for PM₁₀/PM_{2.5} and CO emissions resulting from the installation of the new CFB boiler. This ambient impact analysis addressed emissions from the all units at HBPW, including existing pulverized coal boilers units #4 and 5, and compared the model results with both the primary and secondary National Ambient Air Quality Standards. Note that the primary and secondary standards for PM₁₀ and CO have the same NAAQS and that the impacts associated with the proposed project will be minor.

The highest predicted PM₁₀ concentration increases resulting from the proposed project at HBPW are less than the ambient health standards allowed in the NAAQS. Specifically, AERMOD predicted the following net PM₁₀ impacts from the facility as a result of future potential emissions:

- 24-hour concentration of 6.83 $\mu\text{g}/\text{m}^3$ (primary NAAQS is 150 $\mu\text{g}/\text{m}^3$)
- Annual concentration of 0.004 $\mu\text{g}/\text{m}^3$ (primary NAAQS is 50 $\mu\text{g}/\text{m}^3$)

Modeling was also performed for CO emissions. This modeling showed that the impacts from CO as a result of the proposed project are less than the federal significant impact levels of 500 and 2,000 $\mu\text{g}/\text{m}^3$. Therefore, no impact on soils, vegetation, or wildlife can be expected.

Based upon these small concentration increases, no adverse effect on AQRVs is expected within the vicinity of the facility.



8.3 VISIBILITY

No visibility impairment is expected due to the emission of particulate or CO from the facility. HBPW is greater than 300 km from the nearest class I area.

While sulfates and nitrates are a subset of the PM_{2.5} and known to contribute to regional haze problems, emissions of both SO₂ and NO_x are expected to decrease. Therefore, a decrease in emissions of sub-PM₁₀ particles from the proposed project can be expected with no adverse effect on regional haze from the proposed new boiler.

8.4 THREATENED AND ENDANGERED SPECIES

A request for review of threatened and endangered species in the area surrounding the HBPW facility was submitted to the Michigan Department of Natural Resources (MDNR) was submitted by NTH Consultants, Ltd. A review by the MDNR – Wildlife Division determined that “the project should have no impact on rare or unique natural features ...” and a copy of the letter from Ms. Lori Sargent, Endangered Species Specialist, is included in Appendix G.

Additionally, a request for review by the U.S. Fish and Wildlife Service was submitted on September 26, 2006. Subsequently, the U.S. Fish and Wildlife Service reviewed the impacted area for threatened and endangered species and concluded that the proposed project would not impact any such species. A copy of the response is included in Appendix G.