



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR AND RADIATION
WASHINGTON, D.C. 20460

Climate Protection Partnership Division
U.S. EPA 6202J
Washington, DC 20460

October 28, 2010

Stephen Sands
Kennecott Utah Copper
8362 West 10200 South
Bingham Canyon, Utah 84006

Dear Mr. Sands:

The U.S. Environmental Protection Agency (EPA) Combined Heat and Power (CHP) Partnership is a voluntary program with the goal of reducing the environmental impact of power generation in the U.S. by promoting the use of CHP. The Partnership works closely with energy users, the CHP industry, state and local governments, and other clean energy stakeholders to facilitate the development of new CHP systems and to promote their environmental and economic benefits.

Kennecott Utah Copper (Kennecott) provided the Partnership with design information for a planned 5.6 MW CHP system to be located at Kennecott's molybdenum autoclave process (MAP) facility in Bingham Canyon, Utah. The CHP system will reduce the need for grid-supplied electricity and provide steam to be used in the autoclave process. The Partnership reviewed the information and conducted an evaluation of the system using the Partnership's CHP Emission Calculator; a tool that compares the NO_x, SO₂ and CO₂ emissions from the CHP system to that of an equivalent separate heat and power system. This letter provides the results of our evaluation.

The following factors were considered in the examination of the energy efficiency and emissions reduction potential of the planned natural gas-fired CHP system:

- Expected performance specifications for the CHP system,
- EPA's eGRID 2005 emissions data for fossil fuel-fired generating sources in the facility's eGRID subregion (NWPP),
- Transmission and distribution losses associated with the displaced fossil fuel-fired power generation, and
- Estimated emissions from a displaced natural gas-fired boiler.

Based on this analysis, the combustion turbine-based CHP system is expected to achieve significant emissions reductions. Specifically, we estimate that the CHP system will effectively reduce NO_x emissions by 84%, SO₂ emissions by nearly 99% and annual CO₂ emissions by 39,000 tons compared to equivalent separate heat and power. The carbon emission reductions equal the CO₂ emissions from more than 6,800 passenger vehicles.

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By installing and operating the proposed system, Kennecott will demonstrate exceptional leadership in energy use and management by using CHP - an efficient and reliable approach to generating power and thermal energy from a single fuel source.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary McNeil".

Gary McNeil
U.S. EPA Combined Heat and Power Partnership Program
Climate Protection Partnership Division
1200 Pennsylvania Ave., NW, MC-6202J
Washington, DC 20460

cc: Bob Sidner, ERG