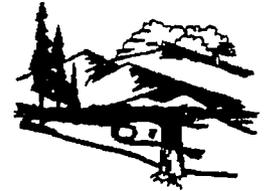


# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Dave Freudenthal, Governor

John Corra, Director

January 10, 2008

Ms. Susan Bassett  
URS Denver Air Quality Team Leader  
8181 East Tufts Avenue  
Denver, Colorado 80237

Re: Near-Field Meteorological Data Processing  
Permit Application AP-5873  
Medicine Bow Fuel & Power IGL Plant

Dear Ms. Bassett:

An initial review of the near-field meteorological data processing for the Medicine Bow Fuel & Power (MBFP) industrial gasification & liquefaction (IGL) facility has revealed an error in the handling of surface observation within AERMET. Data from the Rawlins National Weather Service station in Integrated Surface Hourly Data (ISHD) format was combined with the surface data collected at the Elmo, Wyoming site within AERMET. The time stamp on the ISHD data is in Greenwich Mean Time (GMT) rather than local time. Therefore, the LOCATION line in Stage 1 AERMET processing should include a "7" for the [tadjust] variable so that AERMET can convert the ISHD data to local time. The AERMET processing as submitted to the Division made use of "0" for [tadjust].

In addition, the [elevation] parameter on the LOCATION line should be filled with the elevation of the Rawlins NWS station to allow AERMET to make pressure conversions in the absence of required data within the ISHD files. The [tadjust] and [elevation] parameters are described in the addendum to the AERMET User's Guide titled *User's Guide For The AERMOD Meteorological Preprocessor (AERMET)* [addendum dated December 2006].

Because the error in the [tadjust] parameter will project the observations from Rawlins ahead in time by seven hours, key parameters such as Rawlins cloud cover will be mismatched with the wind observations from the Elmo site. As a result, the AERMET processing and any near-field AERMOD modeling that was driven with the previously submitted AERMET data should be revised. Stage 3 processing was previously done with seasonal surface characteristics for "grassland" from the AERMET User's Guide. The Division would recommend for the revised AERMET processing an average of the values for the "grassland" and "desert shrubland" categories, given the nature of observed roughness elements as shown in Figure 6.2 in the revised permit application. If you have questions, please call me at (307) 777-7816.

Sincerely,

James (Josh) Nall  
Air Quality Meteorologist

cc: Andrew Keyfauver/WDEQ-AQD

