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To: Garfield County Board of County Commissioners/Board of Health

From: Morgan Hill, Environmental Health Specialist III

Date: October 16th, 2017

Subject: Conditional Air Sampler at Ursa Resources BMC Operations Quarter 2 Results

MEMORANDUM

As a condition of approval (COA) for the Phase I Special Use Permit to develop natural gas resources within the Battlement Mesa Planned Unit Development, Ursa Resources was required to supply a one-time contribution to Garfield County of \$50,000 for air monitoring. Garfield County Public Health staff, working with our consultants Air Resource Specialists, have been collecting volatile organic compound (VOC) samples adjacent to development operations. The sampler is designed to collect two concurrent samples per month triggered by specified wind speed and direction parameters. One sample is programmed to collect upwind of the well pad and the other downwind, which is meant to collect VOCs emitted from the site. The COA and our agreement with Ursa stipulate regular reporting of monitoring results to the Garfield County Board of County Commissioners.

The sampler has been located at the BMC D pad since March of 2017, and we now have results from its first full quarter of sampling. This corresponds with the 2nd quarter of the calendar year. Results have been validated and compiled by Air Resource Specialists, who have written our quarterly report (attached). Results indicate that there was no significant difference between the upwind and downwind samples, and in fact that canister 1 (downwind) had lower concentrations of VOCs than canister 2 (upwind) for two of the three months included in this report.

Public Health staff have also requested that the Colorado Department of Public Health and Environment's Oil and Gas Health Information and Response Program (OGHIR) conduct a brief Health Risk Evaluation (attached) on the data to determine if there were any health risks to Battlement Mesa citizens based on the concentrations of VOCs collected. They determined that all air concentrations of individual and combined VOCs were below long-term non-cancer health guideline values.

Public Health staff will be evaluating this data at their annual Air Quality Technical Workgroup meeting in October and assessing if changes need to be made to optimize data collection and usefulness.