

Board of County Commissioners Briefing Paper

Battlement Concerned Citizens (BCC) Petition Request for a Health Impact Assessment of Oil and Gas Development and Production Operations within the Battlement Mesa Planned Unit Development

Overview

On Monday, October 12, the Battlement Concerned Citizens (BCC), a committee of the Grand Valley Citizens Alliance, presented a petition to the BOCC with some 400 signatures of residents from the Battlement Mesa community. The statement on the petition reads as follows:

Battlement Concerned Citizens: Support Responsible Energy Development

And Safe Communities

We, the undersigned, hereby petition the Board of County Commissioners of Garfield County, Colorado, the Colorado Department of Public Health and Environment (CDPHE), and the Colorado Oil & Gas Conservation Commission (COGCC) to defer any permitting decision related to natural gas exploration and/or production within the Planned Unit Development (PUD) of Battlement Mesa until a thorough study of public health, safety and welfare concerns associated with urban natural gas development has been completed.

Jim Rada met briefly with Mr. David Neslin, Executive Director of COGCC on October 14, 2009 and briefed him on the BMCC request. Mr. Neslin indicated at that time that he would need to discuss the petition request with his staff. Mr. Rada made initial contact with Ms. Kate Fay, Energy Coordinator at CDPHE, on October 15th and shared the written petition request.

Battlement Concerned Citizens Formal Request

Three representatives of BCC, Mary Meisner, and Jim Rada met on November 6, 2009 to discuss specific concerns and requests of the BCC. Mr. Dave Devanney of BCC provided a follow-up letter on November 9, 2009, detailing the BCC concerns and requests.

The BCC letter makes the following specific requests:

*On behalf of Battlement Mesa citizens, BCC members have requested the county and state to conduct a "Health Impact Assessment" (HIA) before a Special Use Permit (SUP) is approved to **any** company drilling within the Battlement Mesa PUD.*

We feel these subjects should be addressed in a Battlement HIA:

- *The baseline health study should be specific to Battlement Mesa and it's population*
- *Conduct baseline monitoring of air and water quality within the Battlement PUD before any drilling operations continue*
- *Conduct a comprehensive and continuous air, water, and soil quality monitoring system at all well sites during all phases of operation*
- *Establish a medical monitoring system to identify any changes in baseline data or trends and/or anomalies in medical practices*

- *Require full disclosure of materials used in drilling and fracturing processes to health officials and scientists conducting these studies*
- *Test whether a buffer zone of not less than one thousand feet between any well operation and any residence, business, or public building will protect health standards*

What is a Health Impact Assessment (HIA) –

(This section is taken from <http://www.healthimpactproject.org/hia> - a collaboration of the Robert Wood Johnson Foundation and the PEW Charitable Trusts)

Health impact assessments (HIAs) bring together relevant public input, available data and a range of qualitative and quantitative methods to anticipate the potential health consequences of a proposed policy, program, or project. They are a structured yet flexible process for developing practical recommendations that decision makers can use to advance well-informed public policies, programs and projects that avoid unintended health consequences and unexpected costs.

Health Impact Assessments:

- Acknowledge the trade-offs and potential costs and benefits of various choices, and outline opportunities to maximize health gains, minimize adverse effects and improve health for everyone in the affected community;
- View health from a broad perspective, taking into account a wide range of environmental factors, such as housing conditions, roadway safety, and social and economic variables;
- Consider whether there are subgroups within an affected population that may be more vulnerable to a given impact;
- Promote civic engagement by engaging community members and other stakeholder groups who will be affected by a decision; and
- Present an impartial, science-based appraisal of the risks, benefits, trade-offs and alternatives involved in the decision.

HIAs can vary in complexity and depth of analysis. Not every proposal requires a full HIA, and the level of analysis should be tailored to the decision process at hand. A “rapid” HIA can be accomplished within a few weeks, whereas a more thorough HIA that includes the collection of significant new data might take several months. The timing of the HIA also affects its value: if the assessment is available earlier in the process, it may often be easier for a planner or decision maker to integrate the information.

With some variation, HIA follows a well-defined series of stages:

1. **Screening:** Determines whether the HIA is likely to succeed and add value. Questions include: How important to health is the decision? Will the HIA provide new and important information or insight on previously unrecognized health issues? Is it feasible in terms of available resources (data, time, money, stakeholder interest)?
2. **Scoping:** Creates an outline for the HIA by asking questions such as: What health effects should the HIA address? What concerns have stakeholders expressed about the pending decision? Who will be affected by the policy or project, and how?
3. **Assessment: Involves two steps:** (1) describing the baseline health of people and groups affected by the decision; and (2) performing an impact assessment that predicts the potential health effects of the decision.

- The first step attempts to explain not only the important causes of illness but also the conditions that influence health – such as the local economy, air quality, availability of parks and recreation facilities or access to healthy food choices.
- The second step, the impact assessment, can involve literature review and qualitative/descriptive analysis or quantitative modeling to identify the important health risks and benefits of a given project, as well as the distribution of risks and benefits among vulnerable subgroups within the population (such as children, the elderly, people with chronic illnesses, racial and ethnic groups or persons with low incomes).

The impact assessment should be conducted in an impartial, scientific way that identifies both the risks and the benefits associated with a decision. Assessment of economic costs and benefits, when possible, may help decision makers weigh the relative importance of identified health issues against other considerations.

4. **Recommendations, Implementation and Advocacy:** The HIA should point the way to a decision that protects and promotes health. The strategies and actions required to facilitate the adoption of an HIA’s recommendations into the final decision will vary. In some cases, simply highlighting the potential risks, benefits, and costs of alternatives can allow decision makers to make an informed choice that supports health. In many cases, the practitioner will need to develop specific recommendations or a health management plan offering concrete steps that decision makers can take to promote health benefits and avoid, minimize or mitigate adverse consequences.

Simply providing recommendations, however, may not be enough to compel decision makers to adopt or implement them. The HIA should be conducted with an eye toward what methods—policy levers, legal and/or regulatory avenues, communications and advocacy, etc.—will most likely succeed. In some cases, for example, it may be possible to implement the recommendations of an HIA through new or existing laws, policies, or regulations, without extensive advocacy efforts. In other cases, media outreach and efforts to engage and educate decision makers, build consensus among stakeholders and involve the community may contribute to an effective plan for advocacy and implementation.

5. **Reporting:** The HIA practitioner disseminates the findings to decision makers, affected communities and other stakeholders, and solicits their feedback. This stage may result in a revised report that addresses public responses to the draft.
6. **Monitoring and Evaluation:** The HIA should identify indicators to track the outcomes of any implemented recommendations. This monitoring information serves as the basis of evaluating the impact of the HIA and helps shape future policy and management decisions. Evaluation should focus both on the process (In what ways did the HIA affect decision making?) and on intermediate outcomes (For example, what health-oriented changes resulted? Did the HIA affect any specific groups differently than it did the broader population?) While some cases may appear to warrant a longer-term evaluation of downstream health outcomes, these evaluations are rare and often present practical and methodological challenges.

What Process Is Currently Underway

Antero Resources has been participating in several public meetings with the Battlement Mesa Oil and Gas Committee (a subcommittee of the Battlement Mesa Services Association) to gather public input and share preliminary studies and concepts in preparation of developing both their Garfield County

Major Impact Review submittal and their COGCC Comprehensive Drilling Plan. Citizens presented a large number of concerns at these meetings. Antero Resources has begun to develop a series of mitigation strategies to address many of the concerns. Several Garfield County Staff have attended various public meetings and provided input.

Antero Resources is conducting initial air modeling studies for the proposed development area. Garfield County Public Health (GCPH) gave Antero Resources air quality and meteorological data for the Parachute area and provided substantial feedback on this modeling effort. GCPH Staff initiated discussions with CDPHE regarding evaluation of this modeling effort relative to its appropriateness and completeness. GCPH believes this evaluation is critical to assessing air quality impacts to the Battlement Mesa Community.

Antero Resources has begun baseline water quality monitoring of water wells outside of the PUD within a ½ mile radius of their initial drilling operations outside of the PUD. Public health officials should evaluate water quality data as part of the overall impact analysis. Likewise, public health officials, in conjunction with Battlement Mesa Consolidated Metro District should assess potential risks to the public water supply system and develop risk mitigation strategies as part of the overall impact analysis.

CDPHE has begun initial discussions internally and with COGCC regarding the scoping of a public health literature review as required in the Statement of Basis and Purpose for the newly adopted COGCC Oil and Gas Rules, a section of which reads:

The evidence in the record reflects questions and concerns about public health effects of oil and gas operations. The Commission believes that it would be beneficial to develop additional information regarding the relationship between oil and gas development and public health, particularly where such industrial development occurs in close proximity to residential developments. The Commission therefore is instructing staff, in collaboration with the CDPHE, to initiate a public health literature review to determine the status or current information and knowledge about this issue, identify data gaps, and guide the definition and scope of future targeted public health studies; and to report back and offer recommendations to the Commission during in the last quarter of 2009.

GCPH has initiated discussions with the Colorado School of Public Health and CDPHE regarding the design of a baseline health study specific to Battlement Mesa and its population.

Response to BCC Request

GCPH intends on providing a written response to the BCC. Relative to the specific requests outlined above, GCPH offers the following initial responses:

1. Some elements of a health impact assessment (HIA) are, in essence, already underway, including air quality impact modeling, water quality monitoring (both private wells and public supplies), identification of citizen concerns, and development of potential mitigation strategies. Additional impact analysis will be required as part of both the County's Major Impact Review (*Special Use Permit*) process and the COGCC Comprehensive Drilling Plan process. As these processes progress, opportunities for public input and multi-agency consultation will identify information gaps and inform the development of conditions of approval to minimize or eliminate adverse impacts.
2. Baseline health status of the Battlement Mesa community is not specifically known at this time and will not be easily determined. Along with this effort, a method for ongoing monitoring to identify changes in the community's health status would need to be developed and

implemented as part of a long-term study. GCPH will consult with CDPHE and other experts in the field to determine the feasibility and cost of such a study.

3. Air quality monitoring is planned to continue indefinitely in the Parachute area. GCPH believes this monitoring adequately represents baseline conditions in the Battlement Mesa community. Additional continuous air quality monitoring in Battlement Mesa will not likely identify significant air quality differences from the existing station. Therefore, GCPH recommends that any additional monitoring be coordinated between Antero Resources, GCPH and CDPHE to target specific exposure potentials of susceptible populations during high emission activities and to validate air quality dispersion modeling done prior to development activity in the PUD.
4. At this time, Antero Resources indicates that they plan to continue baseline monitoring of water wells near their activities. The Battlement Mesa Consolidated Metro District is responsible for ongoing monitoring and reporting of water quality data to their customers. GCPH intends to work with both entities and the CDPHE to evaluate monitoring plans for appropriateness and completeness and to develop a mechanism for routine reporting to the community.
5. Soil monitoring is usually a function of the COGCC Rules both in terms of spill clean up and mitigation activities.
6. Full disclosure of materials used in drill and fracturing is a function of the COGCC rules. Use of this information in sanctioned studies would likely be subject to the confidentiality provisions of the COGCC Rules.
7. The testing of a 1000-foot buffer zone for health protection will require a study done by qualified individuals. Answers to this question may come from the initial dispersion modeling conducted by Antero Resources. Evaluation of this modeling work for appropriateness and completeness is critical to this question.