

Colorado Department of Public Health and Environment
DRAFT HIA Comment Review Meeting
January 7, 2011
1:00pm – 3:00pm
CDPHE Denver office

Attendees:

CDPHE- Mark McMillan, Kate Fay, Dr. Raj Goyal, Rose Waldman, Gordon Pierce, Kent Kuster
Colorado School of Public Health (CSPH) - Dr. Roxana Witter, Dr. John Adgate, Dr. Lisa McKenzie,
Jim Rada, Garfield County Public Health (GCPH)

Meeting Notes:

Dr. Witter began the meeting by pointing out that this extended stakeholder effort is at the direction of the Garfield County Board of County Commissioners (BOCC) to help the HIA team and the stakeholders gain more clarity and understanding of the issues and concerns expressed in the comments on the Draft HIA in order to improve the final product. She also explained that follow-on meetings would be conducted with the BOCC and an open stakeholder meeting would be held following these initial meetings.

Dr. Witter advised the CDPHE staff that a second draft HIA will be prepared by February 28, a second public comment period would be open through March and the final report will be submitted to the BOCC by April 30. BOCC briefing and an open public meeting regarding the final report will be conducted in May.

Dr. Witter then reiterated that the purpose of the meeting was to talk about CDPHE comments on the Draft HIA to help the team make improvements to the final document. CDPHE staff expressed their desire to answer any questions that the HIA team had in an effort to clarify the content of their comments.

Dr. Witter continued with a discussion of planned modifications to the Draft HIA based on overall comments received including:

1. Numerous editorial comments presented by all reviewers. These were not discussed during the meeting but will be incorporated in the next draft.
2. Due to confusion raised by the ranking system used as part of the individual impact assessments, the numerical ratings will be removed and replaced with a qualitative rating. Dr. Goyal expressed her initial concern that the ranking system did not appear to take the Human Health Risk Assessment (HHRA) results into account. Dr. McKenzie indicated that the HHRA was considered in the ranking of health impacts, but that the numeric ranking was not derived from the risk numbers. The HHRA will be considered in the new qualitative ranking of health impacts in the next version of the HIA. In addition, CSPH will clarify how other indicators of health impacts, such as citizen complaints of odors and acute health impacts, are included in the assessments.

3. A variety of changes to the Human Health Risk Assessment (Appendix D) are planned in response to technical comments including:
 - a. Average time of acute exposure will be reduced to 7 days from 365 days based on standard risk assessment protocols
 - b. Subchronic toxicity values will be used instead of chronic toxicity values for the acute exposure scenario. Dr. Goyal suggested that when no acute toxicity value exists, it might be more appropriate not to evaluate the risk than to use subchronic values. She also suggested that when subchronic values are used it might also be more appropriate to really highlight this fact and do not lump subchronic with chronic values. She also suggested to separate acute and subchronic values in calculating Hazard Indexes.
 - c. An elderly person receptor model will be added. Dr Goyal indicated that there is no difference between adult and child risks for inhalation exposures. Dr. Mckenzie suggested that there would need to be some adjustments made in the HHRA text to more clearly reflect the elderly adult exposure scenario.
 - d. The definition of “adjacent to a well pad” as less than ½ mile will be added based on last summer’s odor issues at the Watson Ranch pad and the distance of farthest effected individuals. Ms. Fay reminded the team that the COGCC rules use a distance of ¼ mile and this distance was determined through extensive work during the rulemaking process. Mr. McMillan indicated that at the time of the rule revisions, the ¼ mile distance was based on odor complaints. It was suggested by CDPHE that the language “adjacent to a well pad” be modified to “near-by a well pad” since “adjacent” has specific regulatory meaning.
 - e. More recent air quality data will be incorporated including air quality data from GCPH air monitoring station in Battlement Mesa as baseline information rather than the Silt Daley/Silt Cox data although CDPHE staff indicated that it may be useful to retain some air data from the former sites such as 1,4-dichlorobenzene. Other data to be included will be VOC estimates from Antero’s Watson Ranch air sampling, Antero background air quality data from the Monument Ridge pad, Antero baseline groundwater quality data and Antero noise monitoring data.

Dr. Witter continued with a discussion of a selection of comments submitted by CDPHE.

Risk comparison with other areas - Mr. Pierce indicated that this was one of his comments and was meant to put various risks in context with other areas or exposure potentials. He suggested that other habits or indoor environments often overwhelm impacts from exposure to outdoor air contaminants. Ms. Fay suggested that consideration of the contributions from other sources might add rigor to the HIA. Dr. Witter responded that this HIA is meant to answer questions about potential health impacts from this specific development project and is not designed to identify specific risk levels. The HIA is a less precise tool that attempts to identify risks and serves only as a tool to move the process forward in light of imperfect data. Dr. Adgate emphasized that the HHRA in the HIA will not compare impacts at Battlement Mesa to non-comparable sites or risks that are not qualitatively similar. Rather the HHRA will only try to estimate the incremental risk associated with the Antero Battlement Mesa development process. Dr. Mckenzie shared a discussion that some comparative air emission data is being included in the second draft of the assessment.

Ozone risks not discussed in HIA at length - Dr. Witter explained that while ozone is a potential public health concern in Garfield County, the HIA only addresses ozone briefly. This was done primarily due to the scope of this development project compared to the size of the overall natural gas development in the area surrounding Battlement Mesa and Garfield County. It was stated that a discussion of the potential impacts that are occurring is necessary although the incremental contribution from this development project will be minor in the overall picture. CDPHE staff agreed that the natural gas industry in Garfield County appears to contribute significantly to precursor emissions for the formation of local ozone.

Rules and Regulations applying to oil and gas development - Dr. McKenzie pointed out that all sites that are included in the Battlement Mesa project are within ¼ mile of residences so it is likely that applicable oil and gas regulations will apply. Ms Fay suggested that the HIA team should consider how to address/acknowledge the scientific approach used to develop health-based regulations. Ms Fay also stated that CDPHE ultimate use of the HIA document would affect the development of regulations. Dr. Witter said that the HIA recommendations are focused on the protection of public health and may differ from regulations which may include other considerations. Dr. Adgate asked about the scientific-basis of the currently mandated drilling set backs and COGCC rules and whether they were health risk or technology-based standards. Ms. Fay stated that the COGCC Rules were developed as regulations, not standards, and they were not based on science per se. She suggested that the Statement of Basis and Purpose for the 2009 COGCC Rules gives the strongest basis for the rules. She recommended speaking with COGCC staff regarding the basis of regulations dealing with setbacks. Mr. McMillan stated that regulations are based on practical, balanced approach to providing health protection. Ms. Fay stated that certain CDPHE consultation efforts to look at cumulative effects through comprehensive drilling plans (CDPs) and Geographic Area Plans (GAPs) may be an appropriate time in the future to attach monitoring requirements. Mr. Rada suggested that the HIA team consider a general recommendation that the BOCC support CDPHE during their consultation on the Battlement Mesa CDP by requesting a long-term air monitoring study. This would support the required ongoing air and health studies in the COGCC 2009 rulemaking statement of basis and purpose.

Economic Feasibility – Dr. Witter stated that the focus of the HIA recommendations is on promoting health protection and that other parties will promote economic interests. CDPHE staff questioned whether the BOCC has the authority to require anything beyond the scope of land use.

Antagonistic effects of emissions – CSPH staff indicated that they have not been able to locate any studies that support the idea of antagonistic effects of mixtures of air pollution. Dr. Goyal and Mr. Pierce suggested that the team, at minimum, cite studies that refer to synergistic/additive/cumulative effects.

Dr. Adgate reminded CDPHE staff that the HIA is not an epidemiological or environmental study. In discussing the information sharing process through the remainder of the project, it was decided that it would be important to continue to emphasize to the BOCC and the stakeholders what the HIAs intended to do and what it is not intended to do.

RECAP:

Dr. Goyal stressed the importance of carrying the uncertainty information from the HHRA into the final HIA report.

Dr. Goyal suggested emphasizing data gaps in terms of health effects due to short-term exposures and better justifying the conclusion that short-term (acute) health effects from exposure to contaminants in

air are likely. She suggested an expansion of the reasons for this conclusion is necessary and the risk assessment table in the HIA needs more explanation.

Remaining HIA Steps:

January – Small stakeholder group meetings

January 7, Antero and CDPHE

January 19, Battlement Mesa Citizens/Community representatives

January 31, West Slope COGA

February – Full Stakeholder meeting, update BOCC, meeting dates TBD

February 28 - 2nd draft HIA Release for Public Comment

March BOCC update, Stakeholder update

March 31, public comment period closes,

April 30, Final HIA release

May BOCC Briefing, Public meeting regarding final report