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May 29, 2009

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Ms. Martha Rudolph
Environmental Programs Director
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80246-1530

WATER QUALITY CONTROL DIVISION

Re: Produced water disposal concerns in Garfield County

Dear Ms. Rudolph:

A number of weeks ago as the oil and gas industry in Garfield County began to slow, local citizens and county staff began to recognize issues developing with accumulation and disposal of produced water from oil and gas operations. The laudable efforts of some of our operators to recycle produced water into drilling and fracturing operations may be having an unintended consequence of depriving the operators of adequate storage under current circumstances.

As early as March, we received a handful of calls reporting that some contract water haulers were illegally dumping produced water into creeks and rivers as well as unlined or other unapproved pits. Others have reported a noticeable increase in the incidence of staining on local roads from what could be drains left open on water hauling trucks. Some energy companies are resorting to maintaining large batteries of frac tanks on well pads to provide additional storage capacity beyond the original tankage on these sites. Others have resorted to installing evaporation (misting) systems in reserve pits to enhance evaporation. Just two weeks ago, through a report made to the air division concerning an ongoing smoke and steam plume, a division representative advised us that another company is utilizing a sizable flare, utilizing unprocessed source gas, to "burn" their excess produced water along with the associated hydrocarbons and fracturing chemicals.

Garfield County is concerned about the fate of produced water and its constituents. More specifically, we are concerned about additional environmental risks associated with storage of large quantities of this waste product, incidental spills and leaks, intentional releases, and air emissions from those storage and disposal sites. While each company is expected to operate in compliance with applicable rules, we know that sometimes when there is not a good, practical answer to a problem like this, contractors and operators may dispose of wastes in illicit ways. Garfield County has not been apprised of all operators' plans to deal with increased volumes of produced water during the drilling deceleration. We have learned that several companies have applied for injection well permits and others have increased use of

some existing injection wells. However, such permits can take months for approval while the flow of produced water continues.

It is not our intent to be alarmist or suggest that we have an emergency situation developing. We wonder though, whether your Environmental Divisions are aware of the extent to which this waste product is being produced and whether it is being properly managed. We ask that CDPHE quickly take steps to assess this situation and take appropriate actions in conjunction with the COGCC to ensure proper management of this waste product along with protection of public health and the environment.

Thank you for considering this matter and for any follow up your staff may be willing to offer. Please feel free to contact me at 625-5200 ext. 8113 with any questions.

Sincerely,

James A. Rada, REHS
Environmental Health Manager

CC: Garfield County Board of County Commissioners
Mr. David Neslin, Director, Colorado Oil and Gas Conservation Commission
Mr. Jim Martin, Executive Director, CDPHE
Mr. Steve Gunderson, Director, Water Quality Control Division
Mr. Paul Tourangeau, Director, Air Pollution Control Division
Mr. Gary Baughman, Director, Hazardous Materials and Waste Management Division
Ms. Judy Jordan, Oil and Gas Liaison, Garfield County