

June 2, 2010

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By Electronic Mail Only

Anne S. Walker, General Counsel
Colorado School of Mines
1500 Illinois Street
Golden, CO 80401-1887

RE: CSMRI Site, Golden Colorado

Dear Ms Walker:

I am submitting this letter on behalf of the private and government parties. At our lunch meeting on May 20, 2010, our Group expressed serious reservations about the School of Mines (CSM) proceeding with both the June 3, 2010 meeting with CDPHE and with many aspects of the current Work Plan for the pond area. I have been trying to reach you by phone to inquire about the June 3 meeting with CDPHE, but have been unable to speak with you directly.

We appreciated the direct discussion of respective positions and issues during our lunch meeting. From our side, I stated that we could not be prepared for a technical presentation for the June 3 meeting with CDPHE; we want to be well prepared when we do meet with them. I also added that most of our Group needs to see continued progress on settlement agreement drafting before committing to significant technical investment. Beginning with an excavation program in the pond area this fall is unlikely to be acceptable to our Group. Again, this is a dynamic settlement process, and we will continue to work with CSM to seek approaches which meet our respective needs.

We do not know whether any of our concerns about the CSM Work Plan have been presented to CDPHE. I set out below some recent analysis from a USGS radioactive materials expert and a private consultant. I also highlight some of our Group's previously expressed concerns. You may present these concerns to CDPHE if the June 3 meeting goes forward.

At our lunch meeting, Phil Lowe of the Department of the Interior offered to speak with the USGS radioactive materials expert, Dr. James Otton, who attended the last technical meeting, about environment safety issues for a pond area excavation project. This is Dr. Otton's response:

"The current Stoller plan to excavate sediment from the contaminated floodplain of Clear Creek as part of a uranium-contamination assessment or characterization raises some concerns. Careful drilling of the site on a grid

basis would limit the potential for intrusion of oxygenated water into the floodplain sediment. In contrast, excavation with heavy equipment presents a larger risk for sediment contact with oxygen. Introduction of oxygenated water or air would likely cause partial oxidation of any reduced uranium species (U^{+4}) present to the readily soluble uranium species (U^{+6}). The solubility of the uranium would also increase if bicarbonate were introduced to the ground water. In addition, any loosely held U^{+6} species adsorbed to clays or organic matter could desorb with the changing conditions. This disturbance could create transient elevated uranium concentrations in ground waters that would move down gradient and possibly enter Clear Creek. Uranium in sediment stockpiled on the site prior to removal for permanent disposal would also oxidize and release uranium to ground water as the piles drain or as rain fall or snow melt infiltrated through the piles. Small ponds formed during excavation could be continuing sources of water capable of mobilizing uranium.”

Sandy Riese concurs with Dr. Otton’s comments and adds that the pond area groundwater does contain ~400 ppm bicarbonate, which no doubt is contributing to the solubility of uranium. Sandy also notes:

- *“The previous field work never analyzed U in soils – not by the EPA and not by CSM (U is a COC in ground and surface water for the RIFS).*
- *CSM is trying to achieve closure now as measured and compared against a CDPHE groundwater standard. There is no way to know if the groundwater standard is achievable at this site without doing one or more of the following*
 - a. *Site characterization of U in soil,*
 - b. *Background determination of U in soils (on or near the site),*
 - c. *Screening Level Studies to determine the appropriate cleanup standard for groundwater (appropriate for the determined background values), and,*
 - d. *Performing a risk assessment, and/or technical impracticability determination.*
- *Due to the safety and environmental risks, excavation should be a last resort remedy step.”*

Our Group letter of February 19, 2010 to Anne Walker also addressed the safety issues (selected excerpts of technical representatives’ comments):

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“The Plan addendum calls for the construction of a “slurry wall” at the Site. The Plan does not explain why a slurry wall is necessary to carry out site characterization. Instead, the Plan contains a cursory discussion of how a

slurry wall might affect hydrologic conditions at the Site and, indeed, how it might facilitate a reducing "wetlands" environment. The Plan speculates that creation or expansion of a reducing "wetlands" environment at the Site might help reduce levels of dissolved uranium in groundwater. However, there is no site specific evaluation of the effectiveness of such an approach or even any references in the Plan to other sites where such an approach has been effective. Moreover, the Plan does not call for the collection of data during the "characterization" work that might be useful to assess the potential effectiveness of a reducing environment or, conversely, whether the changes to Site hydrology resulting from implementation of the Plan might actually increase levels of dissolved uranium in groundwater and otherwise make Site conditions worse. For example, it is known that if a reducing environment is established under conditions of a neutral pH and the presence of bicarbonates in groundwater, the bicarbonates will cause uranium to redissolve and may result in increased uranium levels. In sum, the Plan fails to provide any meaningful analysis of the anticipated effects of the slurry wall on Site conditions. If the Plan not only fails to achieve any reduction of uranium levels in groundwater, but also causes an increase in uranium levels, implementation of the Plan could degrade Site conditions and result in the need for additional future remedial actions."

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"It is fully expected that water will be encountered in the excavation(s); however, the Plan provides no information on how CSM intends to handle and/or dispose of the water. The only place where water handling is discussed is in the bid documents, which indicates "movement of groundwater from one area of the site to another is acceptable as long as Clear Creek is protected." The legal basis for this statement is unknown. At the January 26, 2010, meeting, in response to questions regarding water handling, CSM's representatives identified some options, with the most likely being an unlined holding pond in the flood plain area down gradient of the most highly contaminated area. This suggested taking groundwater from the most highly contaminated area and placing in an area of less contamination.

Any diversion of water from beneath the ground to the surface or subsurface, by any means, may constitute a discharge and may be subject to National Permit Discharge Elimination System treatment, monitoring and reporting requirements. Any water above 0.030 mg/l uranium may require treatment. There is no indication that the Plan provides for compliance with permitting requirements for the handling of water generated during implementation of the

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Plan or that the Colorado Water Quality Control Division has reviewed or approved this plan."

"As described above, the Plan does not clearly explain how compliance with other permitting requirements designed for protection of public health and the environment will be accomplished. Furthermore, the Plan contains no clear design, engineering, or construction plans for the proposed slurry wall or any plans for handling water generated during the work. Given the immediate proximity of the excavation and construction work described in the Plan to Clear Creek, a drinking water source and prime recreational area, there appear to be potential risks to the community during implementation of the Plan that have not been adequately assessed or addressed."

I hope you will be able to get back to me soon with potential dates for continuing our settlement agreement drafting.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Kemper Will". The signature is fluid and cursive, with a large initial "J" and a stylized "W".

J. Kemper Will
Counsel for BP America and affiliates

cc: Group Members
Judge Richard Dana, JAG