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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

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Mr. Frazer Lockhart  
U.S. Department of Energy  
Rocky Flats Office  
P.O. Box 928  
Golden, Colorado 80402-0928

Dear Mr. Lockhart:

EPA has recently become aware of several problems associated with aquatic toxicity testing for environmental evaluations. If not corrected, these problems will render the toxicity data unusable and interpretations of water quality will be hampered. It is not clear to us whether the problems are isolated incidents or are inherent in every operable unit in which toxicity testing is planned. We expect DOE to evaluate the magnitude of the problem and to make changes where appropriate. The specific problems are as follows:

1. When samples are collected for toxicity testing, simultaneous collection of water chemistry samples is not always accomplished. It will be impossible to determine the cause of any toxicity results without adequate chemical analyses of the water being tested.

2. Flow measurements are not taken when the samples for toxicity testing are collected. Without flow measurements, estimates of contaminant loading can't be determined and the effect of a particular source of contamination on the stream system can not be evaluated.

*no Lab responsibility*

3. Lower detection limits for metal analyses of water samples may be necessary to evaluate potential toxicity indications. This is particularly true for copper, cadmium, and silver analyses. Enclosed please find Table 1, a list of detection limits recommended by EPA for water samples taken concurrently with toxicity testing samples.

4. Total organic carbon (TOC) is not always included in the list of chemical analysis parameters. TOC is an important component in the aquatic environment that binds up select metals. TOC analysis should be conducted on each sample collected for toxicity testing.

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The appropriate modifications to the environmental evaluation program must be made expeditiously to avoid problems in data interpretation. We encourage DOE to contact Bonnie Lavelle of EPA at (303) 294-1067 to discuss the details of how and when the necessary corrections will be made.

Sincerely,

*Martin Hestmark*

Martin Hestmark, Manager  
Rocky Flats Project

Enclosure

cc: Gary Baughman, CDH  
Bruce Thatcher, DOE  
Larry Woods, EG&G  
Bruce Hope, EG&G