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STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory and Radiation Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver CO 80230-6928
TDD Line (303) 691-7700 (303) 692-3090
Located in Glendale, Colorado

<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

December 20, 2000

Mr. Joseph A. Legare
Assistant Manager
for Environment and Infrastructure
United States Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, CO 80403-8200

Mr. Tim Rehder
Rocky Flats Project Manager
United States Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2466

Re: Exceedences of Surface Water Pu Standards at SW027 (June 26-29, 2000) and
GS08 (September 14, 2000)

Dear Sirs:

Since we have not yet responded in writing to your letter of September 12, 2000, relating to the exceedence of Pu standards at SW027, we are addressing that incident along with the more recent exceedence at GS08 in this letter.

In general, we understand that the exceedence at GS08 appears to be fairly small in magnitude, and the Am results associated with the sample causing the Pu exceedence are uncharacteristically low.

Still, we believe that all standard reporting and source investigation procedures should be followed. All standard protocol should also be followed in relation to the SW027 exceedence.



ADMIN RECORD

SW-A-004217

However, we would like to suggest some refinement of the analyses that are routinely employed in source investigations associated with standards exceedences at POEs and POCs.

The source investigations that have been done so far have not identified any specific point sources or localized "hot spots", leading to the conclusion that exceedences are likely caused by dispersed legacy soil contamination. While specific transport mechanisms are still being investigated in detail through the various Actinide Migration Evaluation studies, there has already been some speculation that high intensity storm events are associated with the episodic standards excursions seen at the POEs and POCs. Still, the source investigations that have been done in relation to POE/POC exceedences have not examined this possible relationship in detail.

From a review of the Source Investigation Reports on the RFETS' Environmental Data Dynamic Information Exchange (EDDIE) website and your most recent correspondence, a summary of POE/POC exceedences is provided below:

GS10	April 13, 1997 – April 24, 1997 May 25, 1997 – June 20, 1997 August 2, 1997 – September 3, 1997 September 22, 1997 – October 21, 1997
GS03	June 12, 1997 - July 2, 1997
SW093	August 2, 1997 – August 3, 1997
SW027	May 5, 1998 – August 6, 1998
GS10	March 30, 1999 – July 1999
SW093	July 25, 1999 – August 3, 1999
GS10	April 14, 2000 – June 24, 2000
SW027	June 26, 2000 – June 29, 2000
GS08	September 14, 2000

While our respective agencies should meet and discuss in more detail the types of storm intensity analyses that should be performed, we would propose to begin the process by reviewing a summary of the following information:

- 1) A summary of all individual sample results at POEs or POCs which exceed the Am or Pu standards of 0.15 pCi/l;
- 2) For each of the samples identified in step 1), the time period over which the sample was collected;

- 3) Provide the Station ID(s) for the gauge(s) that would measure precipitation falling in the drainages that are tributary to each of the POE/POCs where samples with results above 0.15 pCi/l have been identified in step 1).
- 4) For each of the samples identified in step 1), and for the time period during which the sample was collected, retrieve the following precipitation data for the gauges tributary to the POE or POC, where available:
 - a. Maximum instantaneous intensity
 - b. Maximum 15 minute intensity
 - c. Maximum hourly intensity
 - d. Maximum 6-hour intensity
 - e. Maximum 24-hour intensity
- 5) As another step in the analysis, we should also retrieve all individual sample results obtained at POEs or POCs for all instances when precipitation intensity equaled or exceeded those rates identified in step 4).

From an examination of the above data, we may or may not find a relationship between precipitation intensity above a certain threshold and exceedences. We do think the possibility of such a relationship should be explored and that the Site already has data that can be used for such an analysis.

With respect to another topic, we would also like to remind you that, as proposed in your letter of June 29, 2000 (related to exceedences at GS10), we were going to begin working on a watershed rehabilitation "pilot" project in the GS27 sub-drainage.

To facilitate both the analysis of precipitation data and the development of watershed improvements, perhaps we should establish a regularly meeting group to focus on POE/POC exceedences, perhaps on a quarterly basis. Please let me know your thoughts on this. If your technical staff wishes to discuss these ideas further, please have them contact Rich Horstmann of my office at 303-692-3377.

Sincerely,



Steven H. Gunderson
RFCA Project Coordinator

cc Dave Shelton, Kaiser-Hill
Bob Nininger, Kaiser-Hill
Administrative Record, Bldg 850