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The Administrative Record Staff

STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH

4210 East 11th Avenue
Denver Colorado 80220
Phone (303) 320 8333
July 14 1989

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Mr Ed Goldberg
Acting Rocky Flats Office Manager
U S Department of Energy
P O Box 928
Mail Room - Bldg 115
Golden CO 80402

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Dear Mr Goldberg

I am writing on behalf of the Colorado Department of Health to address several issues relating to proposed discharges to Walnut and Woman Creeks from the Rocky Flats Plant holding ponds. It is our hope that the written protocol regarding sampling and analysis of the ponds and approval of any release can be finalized immediately.

We intend to determine the acceptability of any discharge largely with respect to the temporary water quality classifications and standards adopted by the Water Quality Control Commission on July 11 1989. As you know numerical standards have been adopted for physical and biological inorganic and metals parameters as well as for a list of organic chemicals and radionuclides. A copy of the Commission's standards is enclosed for your information.

Assessment of the water in ponds A-4 B-5 and C-2 to determine compliance with the standards will require extensive analysis of water samples prior to discharge. Specifically the following sets of analyses are necessary:

- 1 Analysis for volatile organic compounds (VOC s) by the EPA 502 2 method
- 2 Analysis for other organic compounds by a base/neutral and acid (BNA) extraction procedure followed by GC-MS analysis (EPA methods 3650 and 624 or 625)
- 3 Analysis for atrazine simazine (triazines) organochlorine pesticides and phenoxyacid herbicides using standard EPA methods
- 4 Analysis for the twelve metals for which the Commission has adopted standards. Analysis should be for total recoverable metals except for iron and manganese for which dissolved standards have been adopted. Initial analysis for chromium may be for total chromium with followup analysis for hexavalent chromium if the total value exceeds 50 ug/l

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- 5 Analyses for pH nitrite nitrate chloride sulfate boron and cyanide each by standard methods The cyanide analysis should be for weak dissociable cyanide
- 6 Radionuclide analysis for gross alpha gross beta and tritium If the results of these analyses indicate the likelihood that other specific radionuclides could be present at levels exceeding the standards adopted by the Commission further specific analyses for plutonium and other radionuclides will be necessary

This set of analyses has been determined to be appropriate to assess water quality prior to the discharge that the Department of Energy hopes to make in approximately one week Once further information is developed in the near future regarding the plant site and ambient water quality in the vicinity it may be appropriate to revise the specific set of analyses required prior to future proposed discharges

Finally the Health Department requests that the Department of Energy assess the use at the Plant site of three specific chemicals which preliminary analyses have indicated may be of potential concern First two pesticides have been detected in EPA and Health Department analyses of ponds A-4 and B-5 atrazine and simazine The Commission has not set specific standards for these chemicals at this time Our best current information regarding drinking water criteria for these pollutants is a proposed maximum contaminant level (MCL) for atrazine equal to 3 ug/l and an EPA health advisory for lifetime exposure to simazine equal to 4 ug/l To date these substances have not been detected in ambient stream samples or drinking water samples taken downstream However any sources of these chemicals should be identified and controlled to avoid potential problems in the future As we discussed at our meeting on July 13 if the pre-discharge sampling that is about to occur indicates levels in the ponds of these (or other) chemicals above the current standards or criteria DOE will need to take the necessary steps to treat the water to acceptable levels contain the water to avoid discharge or provide other appropriate assurance that downstream uses will not be adversely impacted by a discharge

Second as you know analyses to date have identified no parameters of concern above standard detection levels in the streams reservoirs or drinking water supplies below Rocky Flats As part of an exhaustive attempt to assess any potential for contamination of these water supplies, unusually sensitive special analyses of several samples have recently been completed by the Health Department lab These analyses have identified extremely low levels of a chemical--1 1 2 2 tetrachloroethane--in a small percentage of the samples analyzed to date Our preliminary information indicates that this chemical has several potential uses, including as a solvent and in weed killers soil sterilants and insecticides

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These trace levels which are below the quantitation limit of one part per billion appeared in two samples taken since June 10 from ponds A-4 and B-5 five samples from Walnut and Woman Creeks two samples from Standley Lake and five samples from the Broomfield Northglenn and Thornton water supplies Approximately thirty other samples from the drinking water supplies withdrawn from the two reservoirs—including the most recent results—have detected no 1 1 2 2 tetrachloroethane even using the more sensitive analytical technique

The results just described do not indicate any significant health risk The traces detected would not constitute a violation of the Commission's recently adopted standards Furthermore they would be reported as "non-detectable" by most labs Moreover even minor trace levels are not present in the most recent samples It also cannot be determined with any certainty at this time that the trace levels identified originated from the Rocky Flats Plant Analysis to assess other potential sources is in process However out of an abundance of caution and to assure the continued future safety of the drinking water supplies located downstream of Rocky Flats, we are requesting that the Department of Energy thoroughly investigate and immediately eliminate any potential discharges of 1 1 2 2 tetrachloroethane

Should you have any questions regarding these matters please call me at 331-4526 Thank you for your prompt attention to these important matters

Sincerely



Paul D Frohardt
Rocky Flats Program Manager

cc Bill Christopher - Westminster City Manager
Jack Ethridge - Thornton City Manager
James Landeck - Northglenn City Manager
Neal Berlin - Arvada City Manager
George De Ciero - Broomfield City Manager
Tim Holeman Governor's Office
Bob Shankland EPA

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