



**COLORADO**  
DEPARTMENT  
OF HEALTH

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April 15, 1992

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

**RE: Hazardous Waste Determinations for Investigation Derived Material**

Dear Mr. Lockhart,

At an April 13, 1992 meeting regarding hazardous waste determinations for the gray drums filled with drill cuttings, the State informed DOE and EG&G that material in drums that has been determined analytically to contain amounts of listed hazardous waste and/or hazardous constituents that exceed either a  $1 \times 10^{-6}$  carcinogenic risk or an Rfd hazard quotient of 1.0 present an unacceptable risk to human health and the environment and must be managed as a hazardous waste.

We further stated that risk is calculated by assuming direct exposure to the most sensitive receptor - a resident, on-site (at the source), child - from all exposure pathways (ingestion, inhalation, and dermal contact). The total risk from any given drum is the sum of the risks from each chemical constituent considered in each pathway for soil.

We recommended that EG&G and DOE calculate the appropriate health based soil thresholds using the risk calculation methodology outlined above. This threshold should be calculated for each contaminant (considered as the sole contaminant) and, if the threshold is met or exceeded, the drill cuttings would constitute a hazardous waste based on the "contained in" policy. After these thresholds have been calculated, the risk from soil contaminated with multiple constituents could be calculated by summing the prorated (concentration dependent) risk from each constituent.

In an effort to streamline drum management, EG&G asked whether or

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not drums whose analytical results show only non-detects could be disposed as non-hazardous waste, even if the health based threshold was lower than the analytical detection limit. The Division does not expect the thresholds to be significantly lower than the detection limits except in occasional instances. Therefore, we will consider this issue after we have reviewed the threshold values, the threshold calculation methodology, the analytical method employed, and the analytical method detection limit. In the interim, drums containing material that yielded only non-detect's can be left at the drill site even if the original "process knowledge" determination expected hazardous waste. We do not, however, recommend that the drum contents be removed until our review of the requested information is complete.

In conclusion, the Division would like to remind DOE that certain information regarding the gray drums (accumulation dates, process-knowledge hazardous waste determinations, sampling dates, and sampling analysis status) was to be submitted to the Division by March 10, 1992 (CDH letter to Frazer Lockhart, February 10, 1992). The Division has not yet received this information. In addition, as was outlined in the above referenced letter, drums must be classified as hazardous or non-hazardous waste within 90 days of accumulation. Therefore, the Division hereby notifies DOE that, since we are not aware that any drums have been classified, all drums filled longer than 90 days that are still being stored at drilling locations are assumed to be in violation of the Colorado Hazardous Waste Act and its implementing regulations. DOE must submit the requested information immediately. The status of this information is being discussed with our Monitoring and Enforcement Unit.

If you have any questions regarding these matters, please call me at 331-4847 or Joe Schieffelin of my staff at 331-4421.

Sincerely,



Gary W. Baughman  
Unit Leader, Hazardous Facilities Unit  
Hazardous Materials and Waste Management Division

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