

# 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  
Denver, Colorado 80246-1530  
Phone (303) 692-2000  
TDD Line (303) 691-7700  
Located in Glendale, Colorado

Laboratory and Radiation Services Division  
8100 Lowry Blvd  
Denver, Colorado 80230 6928  
(303) 692-3090

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



Colorado Department  
of Public Health  
and Environment

December 10, 2001

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

RE Concrete Recycling RSOP

Dear Mr. Legare

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division) has identified a concern associated with interpretation and implementation of the Concrete Recycling RSOP requiring clarification and possible modification of the RSOP. The issue revolves around the proper identification of what constitutes inert concrete with regard to RCRA hazardous constituents.

The RSOP currently lists, in Table 2.1, the "Free Release Threshold" for "RCRA Waste Contamination" as "no listed RCRA hazardous waste or characteristic hazardous waste is present." This appears to have been interpreted by RFETS personnel as indicating that concrete is inert and therefore free releasable if it is not identified as a hazardous waste or containing a hazardous waste. However, concrete is a solid waste that may be recycled only under certain circumstances as long as it is determined to be an inert material. Therefore, to recycle concrete a determination must be made that it is inert. As stated in the Colorado Solid Waste Regulations, 6CCR1007-2, Section 1.2, an inert material is defined as a material that is non-water-soluble and does not contain other material that will not significantly affect the inert nature of the material. As such, to be considered inert the concrete must not be or contain hazardous waste, nor hazardous constituents above appropriate risk based or groundwater protection levels.

Sampling and analysis for RCRA concerns is only required to demonstrate concrete is inert if historical or process knowledge indicates that the concrete may contain RCRA wastes or constituents. If historical or process knowledge indicates that a facility does not have any RCRA concerns, sampling and analysis for RCRA wastes or constituents is not required to show that the concrete is inert.

The Division has suggested on several occasions that RFETS perform Totals analysis rather than TCLP on concrete due to the lower cost and additional analytical information provided by the Totals analysis. However, RFETS has indicated its intention to continue to perform TCLP.

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SW-A-004428

analysis rather than Totals As such, in an effort to utilize the TCLP results to demonstrate that concrete is inert, the Division provided RFETS personnel with a table identifying the appropriate inorganic analytical levels This table was provided at the November 28 meeting, and was generated utilizing the methodology identified in the Division's Proposed Soil Remediation Objectives Policy Document, Section 6 5 4

The table provided by the Division at the November meeting also provides the current surface water standards, the current ground water action levels, and the appropriate inorganic analytical levels for Totals analysis These levels are open for discussion, and RFETS may suggest site-specific levels However, until these are agreed upon the analytical results must not exceed the levels (TCLP or Totals) identified in the table provided in order for concrete, with potential inorganic RCRA concerns, to be considered inert The current subsurface RSALs for organic hazardous constituents also need to be utilized to determine the inert nature of the concrete, until other appropriate levels are agreed upon

Because of the confusion apparently created by the Free Release Limits Summary provided in Table 2 1, the RSOP may need to be modified to include appropriate levels for hazardous constituents However, the concern with the hazardous constituents appears to be covered in Section 2 1 of the RSOP, where on page 3 it is stated, "if contaminants without an established free release limit are detected, a limit will be established in a decision document or negotiated with the LRA " As previously discussed with RFETS personnel, this could be as simple as utilization of the appropriate RSALs and utilization of the table provided, or generation of specific action levels for concrete rather than a modification of this RSOP

If you have any questions regarding this correspondence please contact Steve at (303) 692-3367 or David Kruchek at (303) 692-3328

Sincerely,



Steven H Gunderson  
RFCA Project Coordinator



Gary Baughman  
Compliance Program Manager

cc Tim Rehder, EPA Frank Gibbs, KH  
Steve Tower, RFFO Dave Shelton, KH  
Fred Gerdeman, RFFO Steve Nesta, KH  
Administrative Records Building 850

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