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SOIL BACKGROUND LEVELS AS CLEAN CLOSURE STANDARDS, USE OF  
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

MAY 27 1988

MEMORANDUM

SUBJECT: Interpretation of the Use of Soil Background Levels as  
Clean Closure Standards

FROM: Sylvia K. Lowrance, Director  
Office of Solid Waste (WH-562)

TO: William Muno, Acting Associate Director  
Waste Management Division, Region V (5HS-13)

The purpose of this memorandum is to provide an interpretation, as requested by you in your May 9, 1988 memorandum, on the use of soil background levels as clean closure standards under RCRA. Please note that we have recently responded to a similar request from Region VII. The attached memorandum from Jeff Denit to David Wagoner dated March 2, 1988 presents our position on when soil background levels should be used as clean closure standards. This interpretation is based on previous discussions on this topic included in the preamble to the March 19, 1987 final regulation (conforming 265.228(a) to 265.228(a)) and in the subsequent notice of clarification to the final regulation (March 28, 1988).

The March 19 preamble states that exposure levels, or clean closure levels, must be based on Agency-recommended exposure levels or factors that have undergone peer review by the Agency. If no Agency-recommended exposure limit exists for a specific hazardous constituent, the clean closure level must be based on either a background level or an exposure level submitted by the owner or operator based on toxicity data of sufficient quality for the Agency to determine the environmental and health effects of the constituent.

In response to the issues raised in your memorandum regarding the Burnham Corporation foundry in Zanesville, Ohio, I want to emphasize two points raised in the March 2 memorandum. First, the

toxicity data for lead and cadmium are still being reviewed by the Office of Research and Development. However, we expect a verification of the cadmium reference dose (RfD = 0.0005 mg/kg/day) by the RFD Workgroup in the near future. As a result, I would continue to recommend that the soil clean closure level for lead

be based on background soil levels and the level of 9 mg/kg be used as the clean closure level for cadmium. Also, the March 2 memorandum states that two approaches can be used to determine background levels for lead; either by taking soil samples at uncontaminated areas of the facility or by using published literature data on lead levels in similar soils. It should be noted that background soil samples should be taken from an area(s) that has not been affected by routine operations of the unit, by accidental or emergency incidents, or by other operations at the facility. Your statement describing the selection of background samples appears to fulfill this requirement.

If you have any questions regarding the above comments and recommendations or require further assistance, please feel free to contact Mark Salee of my staff at (FTS) 382-4755.

Attachment

cc: Regional Division Director  
Jeff Denit, OSW  
Bruce Weddle, PSPD  
Joe Carra, WMD  
Dev Barnes, CAD