Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To: Susan H. Janek, P.E., Manager
Permits Section
Municipal Solid Waste Division

Date: January 14, 1998

Thru: Bryan Dixon, Director, Municipal Solid Waste Division

From: RRP Ronald R. Pedde, P.E., Acting Deputy Director
Office of Waste Management

Subject: Disposal of soil containing tetrachloroethylene in permitted municipal solid waste landfills

Soils containing low levels of tetrachloroethylene (CAS 127-18-4 or percholoroethane or "perc") commonly generated during remediation activities at dry-cleaning operations would normally be classified as hazardous waste either by characteristics or by listing in 40 Code of Federal Regulations §261.20 and §261.30, respectively. Soils with hazardous waste classification are not normally authorized for disposal in permitted municipal solid waste (MSW) landfills. In the case of soils containing tetrachloroethylene in low concentrations, EPA's contained-in policy (a summary is attached) can be utilized to determine if the soil does not contain hazardous waste. The TNRCC typically utilizes the Risk Reduction Standard rules (30 Texas Administrative Code 335 Subchapter A and S), in combination with EPA's Land Disposal Restriction regulations (i.e., Universal Treatment Standards (UTS)) to make contained-in policy determinations and land disposal management decisions.

For tetrachloroethylene, the Risk Reduction Standard (RRS) No. 2 value (i.e., 0.5 mg/kg) is lower than the UTS (i.e., 6 mg/kg) and, therefore, will define the contained-in level for soils. Please note that all other constituents of concern in the contaminated soil should also meet the appropriate UTS and RRS No. 2 levels. Please note further, that soils intended for disposal in permitted MSW and industrial solid waste landfills must not exhibit hazardous waste characteristics, all constituents of concern must meet the appropriate UTS and RRS No. 1 or RRS No. 2 levels, and are still subject to TNRCC solid waste classification criteria.

This memorandum is intended for use by all divisions in the office of waste management and it should serve as a consistent method of applying the contained-in policy to contaminated media. Future revision of the contained-in policy is anticipated to reflect changes, if any, upon promulgation of the Texas Risk Reduction Program.

Please consult the Corrective Action Section of the Pollution Cleanup Division (Attention: Richard Clarke at 239-2343) to discuss the application of the Risk Reduction Rules and the contained-in policy to other situations.

RRP/PSL/sr

Attachments

USE OF EPA'S CONTAINED-IN POLICY FOR MANAGEMENT OF CONTAMINATED MEDIA GENERATED DURING REMEDIATION ACTIVITIES: A SUMMARY

I. Options for Management of Environmental Media Containing Hazardous Waste or Constituents

One of the guiding principles that the commissioners' advocated to the staff is to promote regulatory flexibility in achieving environmental cleanup goals. One such innovative approach is by referencing 55 Federal Register (FR), p. 8758, March 8, 1990. It states that *It has been the Agency's longstanding policy that in cases where the origin of the contaminants is unknown, the lead agency may assume that contaminants in media did not originate from listed hazardous wastes.* Additionally, 53 FR, p. 51444, December 21, 1988, states that *if the origin of constituents in media cannot be determined, and the media do not exhibit a hazardous characteristic, then the media would not be subject to subtitle C regulations in the first place.*

Another innovative way of dealing with hazardous waste contaminated soils and groundwater is when the waste had been spilled or is left-in place in the ground before any RCRA regulations became effective. This qualifies contaminated media as pre-RCRA waste; therefore, it is not subject to any hazardous waste regulations while in the ground. This concept comports well with EPA's general view that "waste derived-from an exempt waste is exempt (see EPA's letter from Don Clay to Paul Bohanan, dated April 2, 1991)." Please note, however, that once the waste and/or contaminated media is removed, it becomes a "newly" generated waste and must be handled in accordance with RCRA regulations.

Once media containing listed hazardous waste are actively managed (e.g., excavated/generated), there are only two options available whereby the media contaminated with hazardous waste can be considered to no longer contain the hazardous waste. One is through the delisting procedure as stated in 40 Code of Federal Regulations (CFR) §260.22. Procedural guidance is provided in Superfund Land Disposal Restriction (LDR) Guides Numbered 6A and 6B. These are entitled *Obtaining a Soil and Debris Treatability Variance for Remedial Actions* and *Obtaining a Soil and Debris Treatability Variance for Removal Actions*, respectively. Delisting is not a viable option because of protracted and tedious delisting procedures. Currently, the delisting process with EPA Region VI can take six months, at a minimum. The other option is through the use of EPA's contained-in policy.

II. Summary of the Contained-in Policy

The EPA's contained-in policy specifies that environmental media (i.e., groundwater, soil, and sediment) that contain listed hazardous waste must be managed as if they were hazardous waste until the media no longer contain the listed hazardous waste (i.e., until decontaminated) or until

delisted (a copy of the eight contained-in policy memoranda and the contained-policy codified in the debris rule in 57 FR 37225, 37226 August 28, 1992, is attached). To date, EPA has not issued definitive guidelines as to when or at what levels, environmental media contaminated with listed hazardous waste no longer contain the hazardous waste. Until such guidelines are issued, the EPA has stated that the Regions or authorized States may determine these levels on a case-specific basis. When making a determination as to when an environmental media no longer contains a listed hazardous waste, EPA suggests site-, media-, and contaminant- specific levels. If the concentration of the hazardous constituents in the environmental media fall below these levels, the media may be determined to no longer contain hazardous waste. Such "contained-in determinations" are not self-implementing (i.e., requires Agency approval or oversight) and may be made before or after treatment of the contaminated environmental media and may include consideration of site-specific exposure pathways (e.g., potential for human exposure, soil permeability, and depth to groundwater). The TNRCC currently treats the management of contaminated environmental media in a manner consistent with the "contained-in policy" as developed by the EPA.

It is the interpretation of the TNRCC Corrective Action Section (with the concurrence of EPA Region VI - see attached letter dated January 21, 1994), that a contained-in policy demonstration can be made by documenting to the TNRCC by means of submittal of appropriate laboratory analytical results (e.g., Solid Waste 846 Methods 8260, 8270, and the eight RCRA metals), laboratory and field Quality Control/Quality Assurance, sampling methodology, etc. that the concentrations of hazardous constituents remaining in the environmental media meet the RRS No. 1 and/or No. 2. The TNRCC considers RRS No. 1 (i.e., decontamination to background conditions; background conditions for organics are non-detect or below the Estimated Quantitation Limit (EQL)) to represent the condition that no hazardous waste or constituents are present. For all situations, laboratory data are considered acceptable if EQL values are within the values set forth in the particular EPA SW 846 Method and detection limits are less than the regulatory level. Under RRS No. 2, health-based limits for human exposure to affected media (Media-Specific Concentrations - MSCs) have been precalculated for specific contaminants of concern (see 30 Texas Administrative Code (TAC) §335.568, Appendix II Table) based upon conservative risk levels and standardized exposure factors. If environmental media can be shown to be at protective levels, (i.e., meets RRS No. 1 and/or below RRS No. 2 GWP MSCs or appropriate SPLP requirements as specified in 30 TAC §335.559 or other levels calculated to be protective of other pertinent exposure pathways not precalculated in Appendix II table for RRS No. 2) the TNRCC considers that media to no longer contain a listed hazardous waste.

In the most current EPA correspondence regarding the contained-in policy, EPA stated (see attached September 15, 1995-letter from Michael Shapiro to Mr. Peter Wright) that if contaminated environmental media are determined to no longer contain hazardous waste, the Land Disposal Restriction (LDR) treatment standards must still be complied with prior to land disposal. Additional treatment to meet the Universal Treatment Standards (40 CFR §268.48) of the LDR can be performed after making the contained-in policy determination with a different treatment process, if necessary, so long as applicable standards are met prior to land disposal.

Once environmental media has been determined not to contain a listed hazardous waste, as a result of decontamination/treatment to health risk-based levels of RRS No. 1 or 2 and that media meet the UTS, the disposal of "contained-in" media is no longer subject to LDRs and no longer subject to hazardous waste regulation of RCRA. Because the risk reduction rules are not intended for waste classification, environmental media containing residual hazardous constituents (at less than health-based risk levels) are still subject to applicable state industrial solid waste and municipal hazardous waste regulations. According to 30 TAC Chapter 335 Subchapter R rules (Waste Classification), any person who generates industrial solid waste or municipal hazardous waste shall classify this waste according to the standards set forth in 30 TAC §335.501 - §335.508. Upon completion of waste classification, disposal and further management of the "contained-in" media shall be according to the appropriate waste management practice.

The following table illustrates the relationship between the contained-in policy and land disposal restrictions and the resultant land disposal management decision:

Hazardous constituents in media are:	SCENARIO I	SCENARIO II	SCENARIO III	SCENARIO IV
less than or equal to risk based value	yes	no	yes	non-detect or less than EQL
less than or equal to UTS	yes	yes	no	non-detect or less than EQL
CONTAINED-IN POLICY DECISION:	no longer managed as hazardous waste	managed as hazardous waste	no longer managed as hazardous waste but cannot be land disposed	media, no contamination
LAND DISPOSAL MANAGEMENT DECISION:	may be land disposed to an appropriate landfill	disposal to a hazardous waste landfill or incinerator	disposal to an incinerator, unless further treated to meet UTS. If UTS is met, disposal may be to an appropriate landfill	no regulatory restrictions limiting disposal