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CONTAMINATED GROUND WATER AND VOLATILES FROM AIR
STRIPPING, TREATMENT OF

November 20, 1986

SUBJECT: RCRA Status for Treatment of Contaminated Ground Water
and Volatiles from Air Stripping

FROM: Bruce Weddle, Director
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TO: Lloyd Guerci
Office of Waste Program Enforcement

This memorandum is in response to the questions you received from Region III concerning treatment of contaminated ground water at RCRA sites. The first part of the memo deals with the general issues raised in the inquiry; the second with specific facts of the Uniform Tube Facility situation. The Characterization and Assessment Division of OSW, the Office of General Counsel, and Ginny Steiner, of your office, were consulted during the preparation of this response.

Issue 1: Is ground water contaminated with hazardous waste or hazardous waste constituents considered hazardous waste, and are air stripping units and holding basin surface impoundments used during treatment of contaminated ground water RCRA units:

Ground water is not a hazardous waste, since it does not fit the criteria for being either an "abandoned" or "discarded" material which would define it as a solid waste (see 40 CFR §261.2). However, when ground water contains hazardous wastes, treatment, storage, or disposal of it must be handled exactly as if the ground water itself were hazardous waste since the contaminants are subject to regulation under Subtitle C. Ground water no longer containing the hazardous waste would no longer be subject to Subtitle C regulation.

The air stripper may fit the definition of a tank (see 40

CFR §260.10). If so, it is subject to the hazardous waste tank standards, including the secondary containment provisions recently promulgated (July 14, 1986, 51 FR 25422-25488). Unless the unit is eligible for the 90-day accumulation exemption available to generators (see 40 CFR §262.34), is a wastewater treatment unit (§260.10), or is otherwise exempt from regulation, it requires a permit or interim status. The holding basin surface impoundment would be subject to standards for storage under Subpart K of Part 265 or Part 264, and the land treatment unit would be subject to Subpart M standards. Note that neither of these units is eligible for the ninety day accumulation exemption, which applies only to tanks or containers.

Units such as the ones described in the Region's inquiry may, in some cases, operate without a permit under the provisions of 40 CFR §270.72 (changes during interim status). This would be the case where the construction and/or operation of such units is necessary to prevent threats to human health and the environment because of an emergency situation (see §270.72(c)(a)), or it is necessary to comply with Federal, state, or local regulations (40 CFR 270.72(c)(2)). In general, units added to comply with a §3008(h) order or an approved closure plan would be considered necessary to comply with Federal regulations and therefore could be constructed and operated as change in interim status, without triggering a RCRA permit requirement. However, in any case, the cost of the unit should not exceed the limit established in §270.72(e). At this time, we are considering proposing an exemption to the fifty percent of reconstruction cost limitation established in §270.72(e) for actions taken to comply with corrective action orders at interim status facilities.

Issue 2: Are the volatile organic contaminants released to the atmosphere via air stripping considered hazardous waste under RCRA? Should a risk analysis be made to consider the trade-off between removal of a hazardous constituent from ground water and its release to air?

Volatile organics released to the air are not hazardous waste because they are not solid wastes. (They do not fit the definition established in §1004(27) of RCRA as "contained gaseous materials.") Nevertheless, releases of hazardous constituents to the air from hazardous waste management or solid waste management units at facilities with interim status are subject to corrective

action under the authority of §3008(h).

No policy has been set concerning tradeoffs of releases of hazardous constituents from one medium to another. The statute requires that contamination of either or both the ground water and the air resulting from waste management at the facility be addressed to protect human health and the environment. Future proposals under §3004(n) will address air emissions for TSDFs. Use of a carbon unit on top of the air stripper would significantly reduce or eliminate the release to air.

Issues Specific to the Uniform Tube Facility:

Turning to the facts of the specific case, several issues came up during our discussions which need to be brought to the attention of the Region.

1. If the organics spill which occurred in 1977 was from a leaking underground storage tank containing a regulated substance (as defined in §9001(2)), and if that spill is subject to corrective action under §9003, RCRA §3008(h) is not applicable.
2. Spray irrigation of land with waste materials which have been treated through air stripping and/or stored in the holding basin impoundment constitutes land disposal. Land disposal of the wastes described will be restricted under the land disposal restrictions regulation in the future. How soon disposal at this facility will be affected depends on whether the spill is of spent solvents (F001-F005) or of a discarded commercial chemical product. Restrictions will be imposed for F001-F005 this November; other solvent disposal will come later.
3. How will the corrective action order address the chromium release? As the clean up progresses, the Region should follow development of land disposal restriction regulations for the California list, since chromium is included on that list.
4. The Superfund program has had several experiences with successfully applying carbon units to the top of air strippers to eliminate air releases of VOCs. If you are concerned about these releases, you may want to contact Nancy Willis at FTS 475-6707 for further information.