PPC 9472.1986(06)

TIME OF TRAVEL METHOD FOR THE GUIDANCE CRITERIA FOR IDENTIFYING AREAS OF VULNERABLE HYDROGEOLOGY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

8 JULY 86

Mr. Richard J. Gimello
Executive Director
State of New Jersey
Hazardous Waste Facilities
Siting Commission (CN 406)
Trenton, New Jersey 08625

Dear Mr. Gimello:

Thank you for your June 5, 1986, letter regarding the Environmental Protection Agency's (EPA's) activities on location guidance. You raised six major issues that I will address. I understand that you discussed several of these issues with Christopher Daggett, Regional Administrator for Region II, his staff, and Arthur Day of my staff in a meeting on June 20, 1986.

You requested copies of the Phase I and Phase II documents. I have attached the Phase I document entitles The Permit Writers' Guidance Manual for Location of Hazardous Waste land Treatment, Storage, and Disposal Facilities -- Phase I -- Criteria for Location Acceptability and Existing Applicable Regulations. However, the second document entitles Guidance Criteria for Identifying Areas of Vulnerable Hydrogeology is currently under internal Agency review and not available for external distribution. When this review is completed, the document will be issued as an "interim final" guidance to provide the public with the opportunity to comment. We will send you a copy at that time. I have attached a summary of these two documents (Attachment I) to clarify any confusion that exists about the various drafts that were circulated. In addition, I have attached Criteria for Identifying Areas of Vulnerable Hydrogeology -- Appendix D -- Development of Vulnerability Criteria Based on Risk Assessment and Theoretical Modeling and an Executive Summary which provides the detailed rationale for why we selected the "time of travel" (TOT) along a 100-foot flow line (TOT100).

Your major concern centered on EPA's rationale for proposing the TOT. We selected TOT100 for three reasons:

(1) it identifies locations where plume size will be minimized;

(2) it identifies areas that minimize potential for exposure to releases occurring in the absence of monitoring and response; and

(3) it is useful in recognizing three potential exposure pathways.

You also questioned how the TOT method applies to coastal states like New Jersey. EPA is currently developing a strategy to decide how the numerous RCRA regulatory provisions pertaining to ground water should interrelate. One of the questions the strategy will address is how the vulnerable hydrogeology guidance should be used, i.e., how vulnerability under the TOT method should affect a siting decision. The strategy should be completed by this fall and will be publicly available. I want to stress, however, that the vulnerable hydrogeology guidance is not "location guidance" in the sense that it prescribes where facilities may be sited. The document only describes a method by which vulnerability can be assessed; it does not dictate what siting decision should be made based on the results of the assessment.

You asked if the compendium of siting criteria is completed and it so was it used to develop the Guidance Criteria for Identifying Areas of Vulnerable Hydrogeology. We have completed the compendium and produced a report entitled Review of State Siting Criteria for the Location of Hazardous Waste Land Treatment, Storage and Disposal Facilities. I understand my staff provided you with a copy of this report earlier. This report states that there seems to be no consensus among states that use a TOT concept; appropriate values for travel time ranged from 3 years to reach off-site wells to 1000 years to reach an environmental pathway. Also, states emphasized that disposal units should be located in low permeability soil (examples ranged from 10-6 to 10-8 cm/sec). These two points indicated to us that our vulnerability criteria were well within the scope of many state siting criteria.

Finally, you suggested that we conduct a management-level review of the suitability of New Jersey's siting criteria. We are currently reviewing the New Jersey Siting Criteria document you enclosed and will provide you with comments by late July.

Please understand that our vulnerable hydrogeology guidance is just that, guidance. Our next step, in response to RCRA Section 3004(O)(7), is to develop location regulations applicable to new and existing hazardous waste treatment, storage, and disposal facilities. We will keep you informed as these standards are developed, proposed, and finalized over the next two years.

I hope this letter addresses the issues you raised. If you have any further questions, please feel free to contact John Lehman, Director, Waste Management Division, at (202) 382-7919.

Sincerely,

Original Document signed

J. Winston Porter
Assistant Administrator

Enclosures

WH-562/MCMANUS/D.ZEITLIN/sld/7-2-86/Control No.: SWER-09159
382-4651/Due Date: 7-8-86

ATTACHMENT I

I. The Permit Writer's Guidance Manual For Location of Hazardous Waste Land Treatment, Storage and Disposal Facilities

-- Phase I

Published in draft final in February of 1985

Written prior to the Hazardous and Solid Waste Amendments (HSWA)

Describes five criteria for an acceptable location and cites existing applicable regulations under RCRA and other Federal laws

II. Guidance Criteria for Identifying Areas of Vulnerable Hydrogeology

Formerly known as Phase II Guidance

Satisfies the statutory requirement (3004)(0)(7) of RCRA as amended by HSWA that EPA develop Guidance Criteria that defines Vulnerable Hydrogeologies

Assesses site vulnerability by applying the time-of-travel (TOT) of ground water along a 100-foot flow line (TOT100) originating at the base of a hazardous waste unit.