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**TITLE:** Clarification of the Sulfide Reactivity Characteristics

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**ORIGINATING OFFICE:** Office of Solid Waste

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☐ **DRAFT**

**STATUS:**

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| [ ] | A- Pending OMB approval                          |
| [ ] | B- Pending AA-OSWER approval                     |
| [ ] | C- For review &/or comment                       |
| [ ] | D- In development or circulating<br>headquarters |

**REFERENCE (other documents):**

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**/E   DIRECTIVE   DIRECTIVE   DA**

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Key Words: Reactive Wastes, Ground-Water Monitoring, Test Methods

Regulations: 40 CFR Part 261, Subpart C 265.90(e)

Subject: Clarification of the Sulfide Reactivity Characteristics

Addressee: Terry L. Thoem, Manager, Environmental Conservation,  
Conoco Inc., P. O. Box 2197, Houston, Texas 77252

Originator: John H. Skinner, Director, Office of Solid Waste

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Summary:

The letter discusses test methods for determining whether a waste exhibits the characteristic of reactivity. It also discusses ground-water monitoring for units containing only reactive wastes.

**JUL 16 1985**

Mr. Terry L. Thoen  
Manager, Environmental Conservation  
Conoco Incorporated  
P. O. Box 2197  
Houston, Texas 77252

Dear Mr. Thoen:

I am writing to clarify several aspects of the sulfide reactivity characteristic that you asked about in your letter of June 24, 1985.

At present, there is no approved test method for determining whether a waste exhibits the characteristic of reactivity. I have enclosed a draft of a test method for determining Total Available Sulfide. Work currently being done on the agitation and waste introduction steps may result in significant changes in the subsequent proposed test. However, pending the conclusion of our investigations, we recommend, and will accept, use of this draft procedure. While threshold concentrations have not yet been promulgated by the Agency, we have adopted 500 mg/Kg Total Available Sulfide as an interim action level. We consider any waste that yields sulfide values at or above the action level, using the draft procedure, to be hazardous.

The 500 mg/Kg action threshold was arrived at by considering a scenario in which a truckload of waste is discharged into a pit containing (non-hazardous) acidic waste. As a result of the reaction of the waste with the acid, a rapid, high level release of toxic gas ensues. The objective of the characteristic is to identify those wastes which, if such an activity were to take place, pose a hazard to those persons in the general vicinity of the disposal site. While we have considered dispersion in arriving at the action threshold, the specific dispersion model that will be used in the upcoming proposal is still under development.

Ground water monitoring of all wastewater treatment lagoons containing hazardous wastes, is required including those containing only reactive wastes. The only exemption from ground water monitoring that is defined by the RCRA regulations is in the case of neutralization ponds receiving wastes hazardous only by reason of corrosivity (§265.90(e)).

This monitoring is necessary because the Agency is not aware of any mechanism which can assure that such wastes will not also contain toxic chemicals which pose a hazard to ground water. The fact that a waste is not listed or does not exhibit the characteristic of Extraction Procedure Toxicity does not insure the absence of leachable toxic species in the waste.

If you have further questions concerning the reactivity characteristic please contact David Friedman (202/382-4770) of the Methods Program. For information on the regulatory requirements pertaining to ground water monitoring, contact Robert April (202/475-8860) in the Ground Water Program.

Sincerely yours,

John H. Skinner  
Director  
Office of Solid Waste

bcc: Claussen  
Lehman  
Weddle  
Corson  
Shuster  
Friedman  
April  
Hotline  
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