

6240  
NREAD

17 Apr 1987

Director, Natural Resources and Environmental Affairs Division,  
Marine Corps Base, Camp Lejeune

Staff Judge Advocate, Marine Corps Base, Camp Lejeune  
Assistant Chief of Staff, Training and Operations, Marine Corps Base,  
Camp Lejeune

Via: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune  
*Subj:* MILITARY MUNITION/RCRA

Encl: (1) EPA memo of 8 Apr 1987

1. The enclosure is provided for your review and opinion. Mr. Dave Ellison, EPA, Region IV, Atlanta, Georgia, asked questions about military munition disposal procedures aboard base during his RCRA program inspection of 31 March - 1 April 1987 and indicated the issue would be addressed in his report.

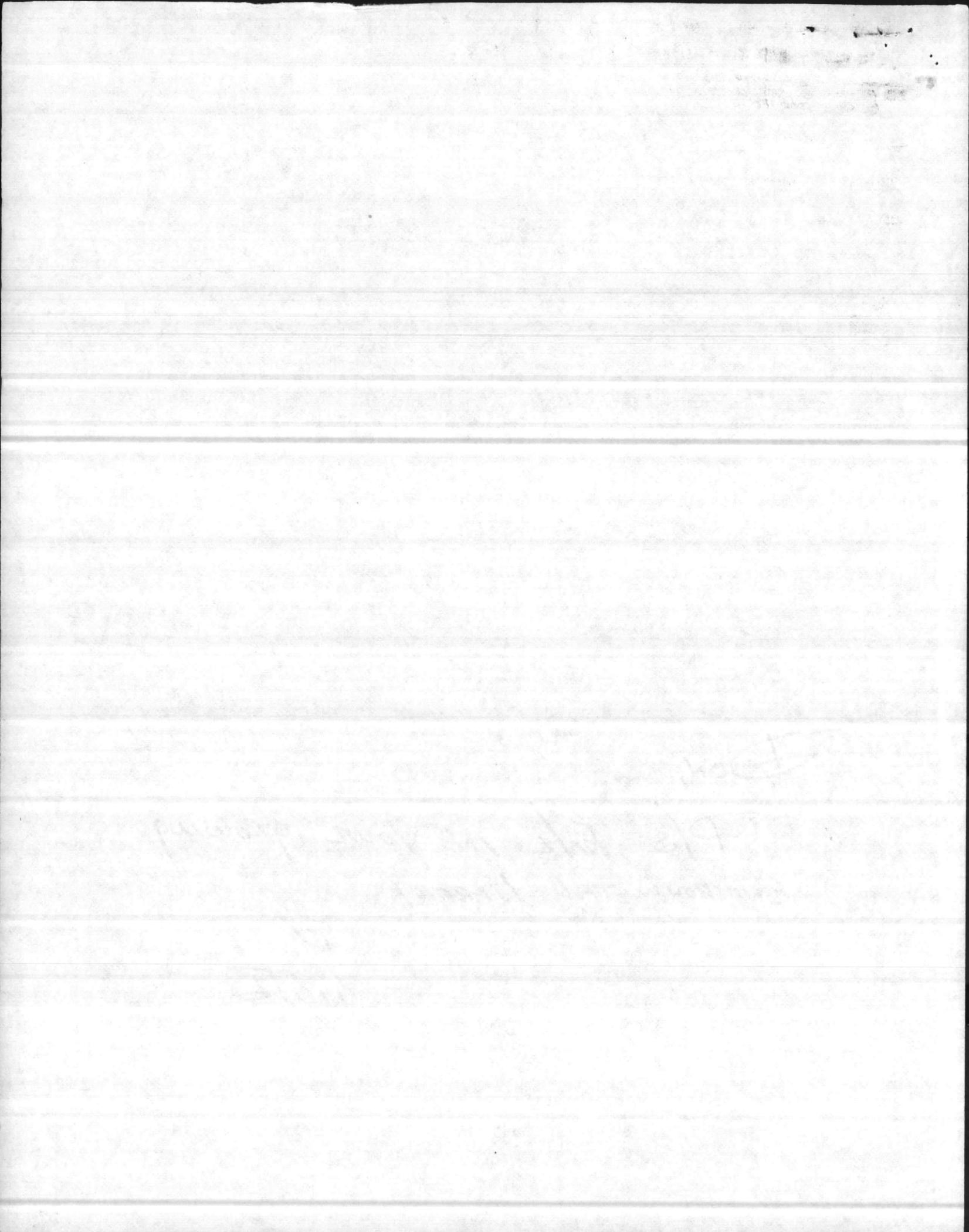
2. If additional information is desired, Mr. Danny Sharpe, Ecologist, is the NREA point of contact.

JULIAN I. WOOTEN

*Don,*

*P/S file in your growing  
ENVIRONMENTAL LIBRARY*

*R/  
HTTB*



**ROUTING AND TRANSMITTAL SLIP**

Date

4/8/87

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Julian Wooten		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
<input checked="" type="checkbox"/> As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

**REMARKS**

Attached is the guidance on open burning and detonation of waste explosives.

Any questions let me know

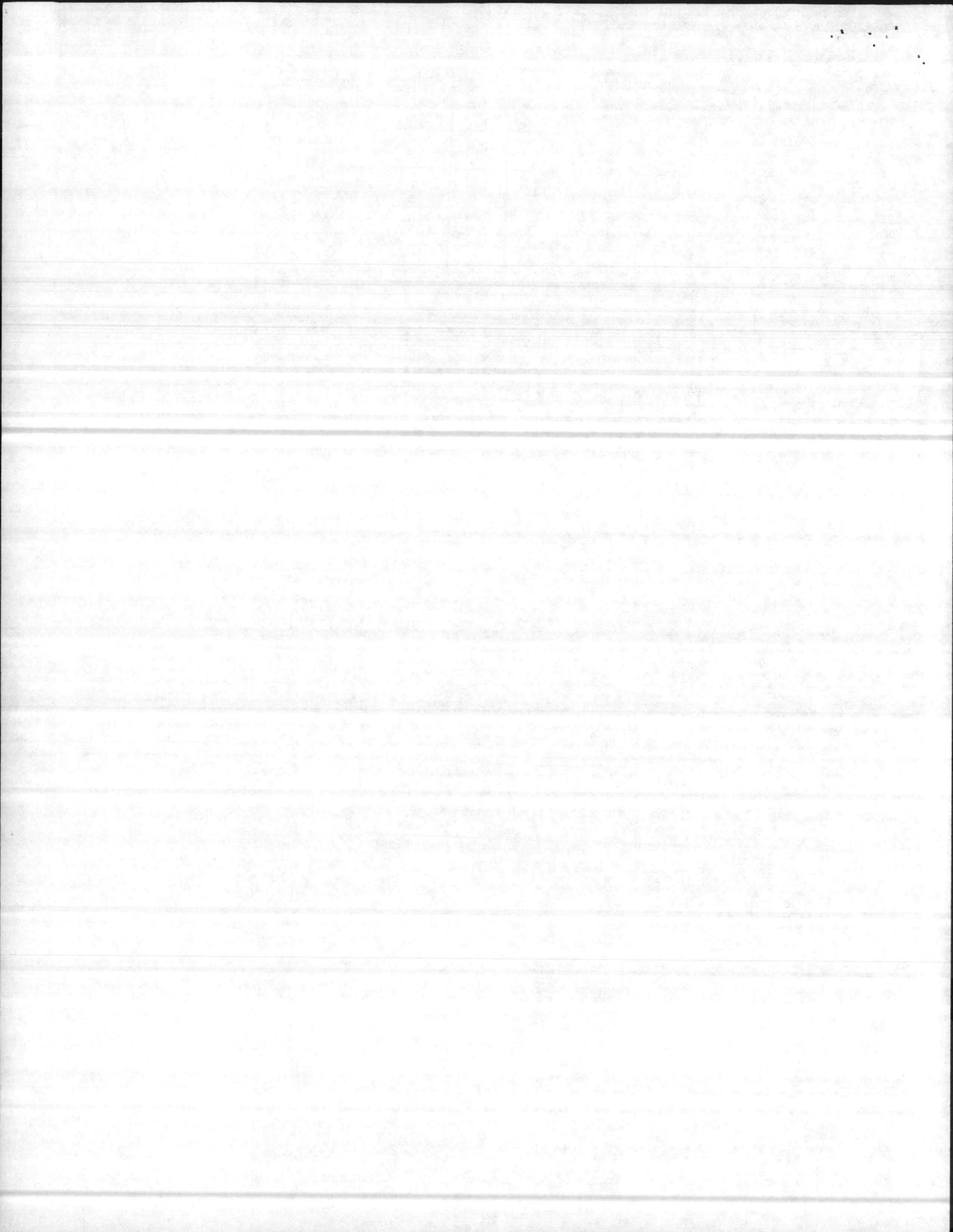
**DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions**

<b>FROM: (Name, org. symbol, Agency/Post)</b>	<b>Room No.—Bldg.</b>
Dave Ellison, USEPA	
	<b>Phone No. FTS-257</b> (404) 347-7603

5041-102

\* U.S.G.P.O.: 1983 -421-529/320

**OPTIONAL FORM 41 (Rev. 7-76)**  
Prescribed by GSA  
FPMR (41 CFR) 101-11.206





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

Wita  
Beth  
Kelli  
Herb  
Caron  
Rich  
Bob

OCT 25 1985

Give me one extra copy  
to send to Fed. Fac. coord.

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: DoD RCRA Incineration Issues  
FROM: Robin Anderson *Robin*  
Permitting Assistance Team (WH-563)  
TO: Addressees

As per the hazardous waste incineration conference call of October 15, 1985, I am sending you copies of HQ correspondence with DoD on RCRA issues that may affect incinerator permits. These letters include: the June 4, 1984 letter which identifies nerve agents as reactive hazardous waste, the November 30, 1984 letter which identifies ball amunition of 0.50 inch (50 caliber) or less as non-reactive waste, and the October 3, 1985 letter which states that munitions are subject to RCRA at the time and place they meet the definition of a hazardous waste according to §261.33. (This does not necessarily include all munitions in the Special Defense Disposal Account.)

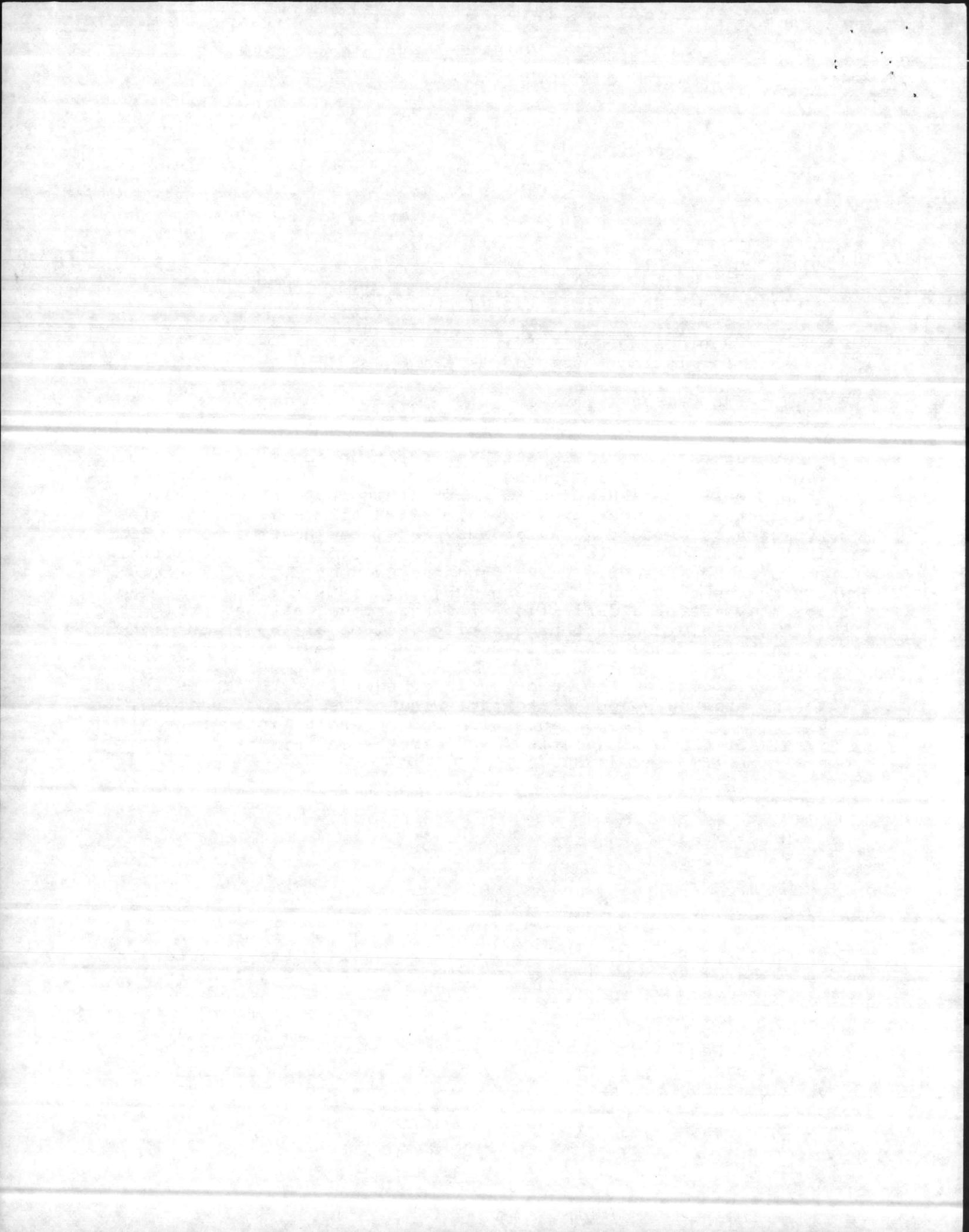
I will continue to keep you informed of future correspondence with DoD and would appreciate reviewing copies from you of any past or future correspondence with DoD regarding incineration issues. If you have questions or comments on this matter please contact me (FTS-382-4498).

Attachments

cc: Bruce Weddle  
Peter Guerrero  
Art Glazer

Addressees:

- |                               |                           |
|-------------------------------|---------------------------|
| Stephen Yee, Region I         | Julia Bussey, Region IX   |
| John Brogard, Region II       | Cathy Massimino, Region X |
| Larry Bernson, Region II      | Larry Johnson, RTP        |
| Gary Gross, Region III        | C.C. Lee, ORD             |
| Betty Willis, Region IV       | Donald A. Oberacker, ORD  |
| Y.J. Kim, Region V            | George L. Huffman, ORD    |
| Henry Onsgard, Region VI      | Norm Kulujian, ORD        |
| Joe Galbraith, Region VII     | Tim Opelt, ORD            |
| Nathaniel Muillo, Region VIII | Bob Mourningham, ORD      |
| Barbara Gross, Region IX      |                           |





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WASHINGTON, D.C. 20460

*Johnson*  
**RECEIVED**

DEC 04 1984

30 NOV 1984

AIR & HAZARDOUS  
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OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

*Copies*  
*John H. Skinner*  
*David Wagoner*  
*...*

MEMORANDUM

**SUBJECT:** Classification of Small Arms Ammunition  
With Respect to Reactivity

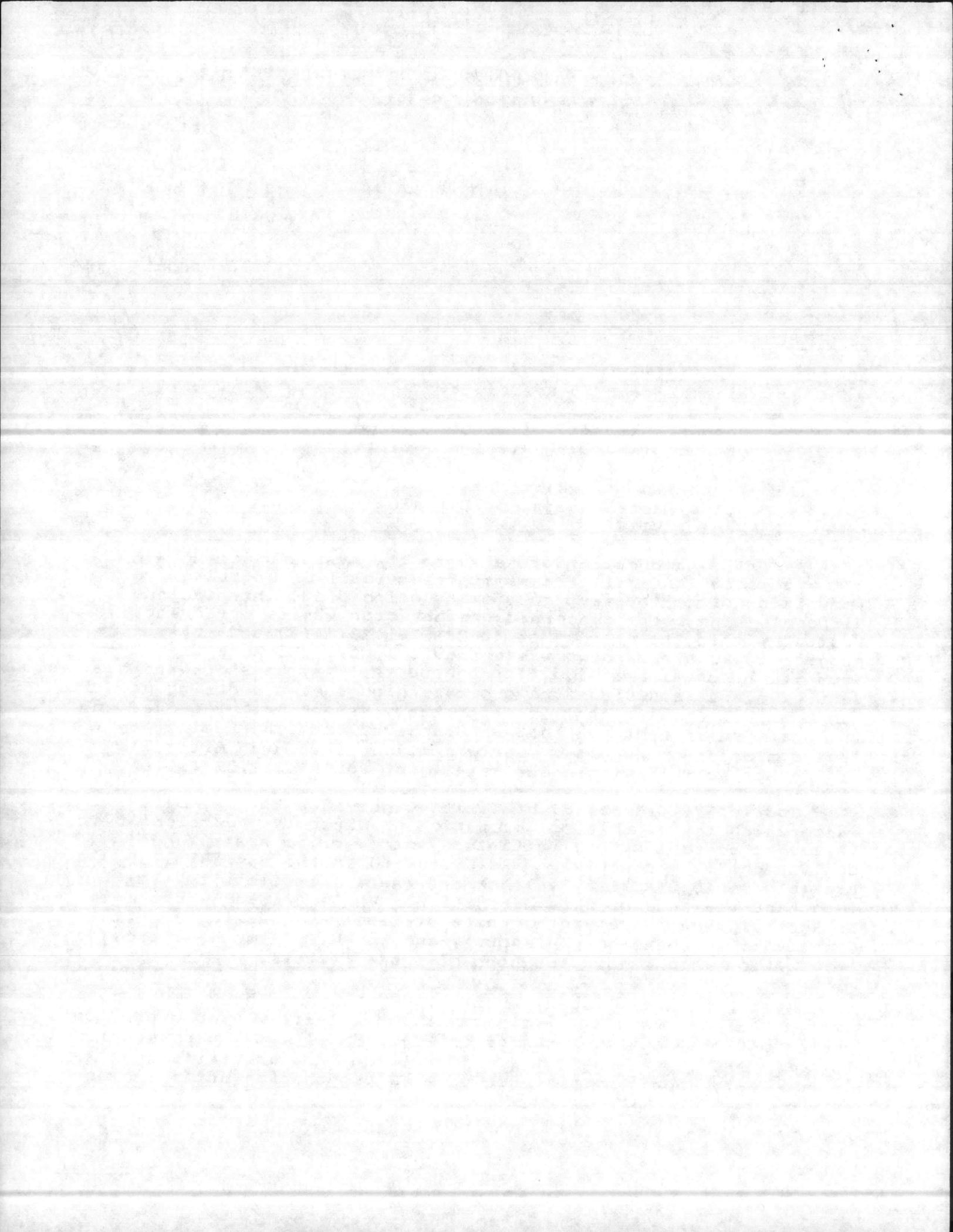
**FROM:** John H. Skinner, Director  
Office of Solid Waste (WH-562)

**TO:** David Wagoner, Director  
Air & Waste Management Division  
Region VIII

Recently, a question arose as to the status under RCRA of off-specification small arms ammunition (ball or sporting ammunition of calibers up to and including 0.50) intended for disposal. The issue concerned whether such wastes are "reactive wastes" within the meaning of 40 CFR 261.23(a)(6) and, therefore, subject to RCRA hazardous waste requirements. Because the ammunition contains an ignition source that may be shock and heat sensitive and is designed to generate high pressure during use, it had been our opinion that it is probably "reactive." However, on the basis of information that was received from the Remington Arms Company and the Army, we now conclude that such materials are not "reactive" within the meaning of 40 CFR 261.23 (a)(6).

Section 261.23 (a)(6) of Title 40 provides that a solid waste which is "capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement" is "reactive." As discussed in the May 19, 1980, preamble to 40 CFR 261.23, shock and thermal instability are important elements of this definition. While presently there is no Agency guidance regarding these criteria, the Remington Arms Company of Independence, Missouri, and the U.S. Army have provided information which addresses both of these factors.

Remington Arms Company submitted details on the effects of heat and impact to small arms ammunition. There was no explosion when a box of ammunition was set afire. Small arms, when subjected to the SAAMI (Sporting Arms and Ammunition Manufacturer's Institute) Impact Test, showed no evidence of mass propagation or explosion.



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE JUN 4 1984

SUBJECT Tooele Army Depot

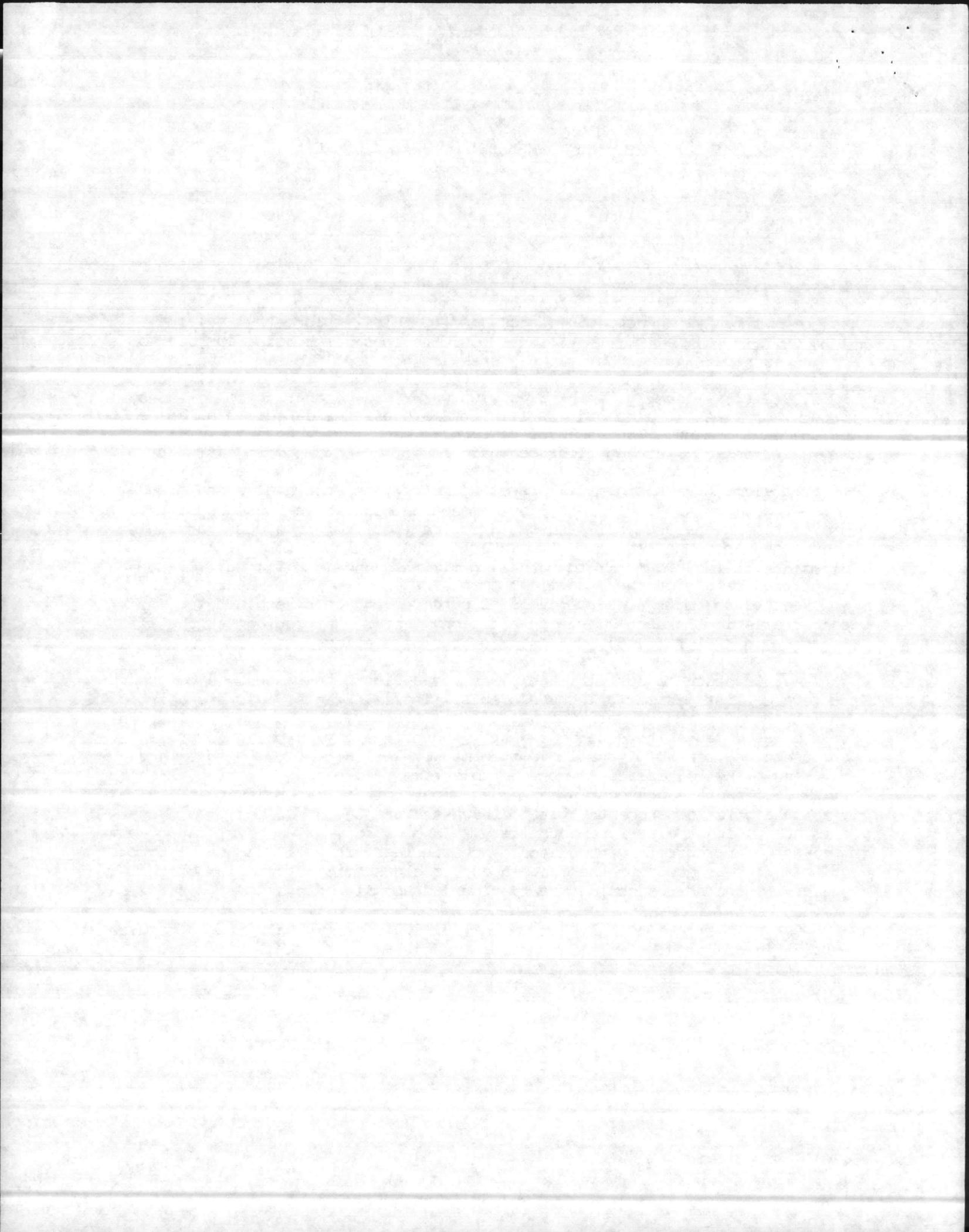
FROM Matthew A. Straus, Acting Chief *Matt*  
Waste Identification Branch, (WH-562B)TO Jon P. Yeagley, Chief  
State Programs Section, (8AW-WM)

We have reviewed your submissions related to the Chemical Agents Munitions Disposal System facility. Our preliminary assessment of the properties of agents GB (isopropyl methyl phosphonofluoridate), VX (Ethyl-S-diisopropyl aminoethyl methyl phosphonothiodate), and HD (Bis-2-chloroethyl sulfide) lead us to conclude that the wastes should be considered hazardous due to their reactive nature. While the wastes are not specifically listed at this time, we believe them to be reactive according to the definition of §261.23(a)(4) -- namely, when mixed with water, they generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment. The gases of concern in each case are as follows: for GB, emissions of hydrogen flouride which has a TLV of 3 ppm in air; for HD, emissions of hydrogen chloride which has a TLV of 5 ppm; and for VX, emissions of diethyl methyl phosphonate, bis-ethyl methyl phosphonic acid and bis-S-(diisopropyl amino ethyl) methyl phosphonodithiolate. In the case of VX, the emitted gases are indicated as toxic decomposition products that would be emitted upon addition of VX to water. (The reference for these anticipated emissions is the Army's field manual on military chemistry.) Sufficient quantities of any of these chemical agents, when mixed with water, would be expected to emit gases at levels of concern and, thus, exhibit the characteristic of reactivity. In addition, mustard gas could meet the criteria in §261.23(a)(5), due to emissions of sulfides.

With respect to our ultimate plans vis-a-vis these wastes, we do expect to develop listings for all three agents. These listings would probably be developed under the criteria of §261.11(a)(2) and result in the designation of the wastes as Acute Hazardous Waste. Unfortunately, other priorities and a general dearth of available information will hinder our efforts and may result in the passage of considerable time before these listings are finalized. We are not overly concerned about this delay, however, since the State's letter suggests that these wastes are being managed in a manner consistent with their extreme toxicity. In addition, as we have stated above, the wastes are currently regulated. Nevertheless, it would be useful to our efforts if your group or the State agency could submit information on the wastes and the corresponding treatment and disposal options under discussion.

Do not hesitate to call Ben Smith (382-4791) of my staff if you require further information.

cc. Julia Bussey (T-2-2) Region IX





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 3 1985

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

Mr. Carl J. Schafer, Jr.  
Director  
Environmental Policy  
Acquisition and Logistics  
Office of the Assistant Secretary of Defense  
Washington, D.C. 20301

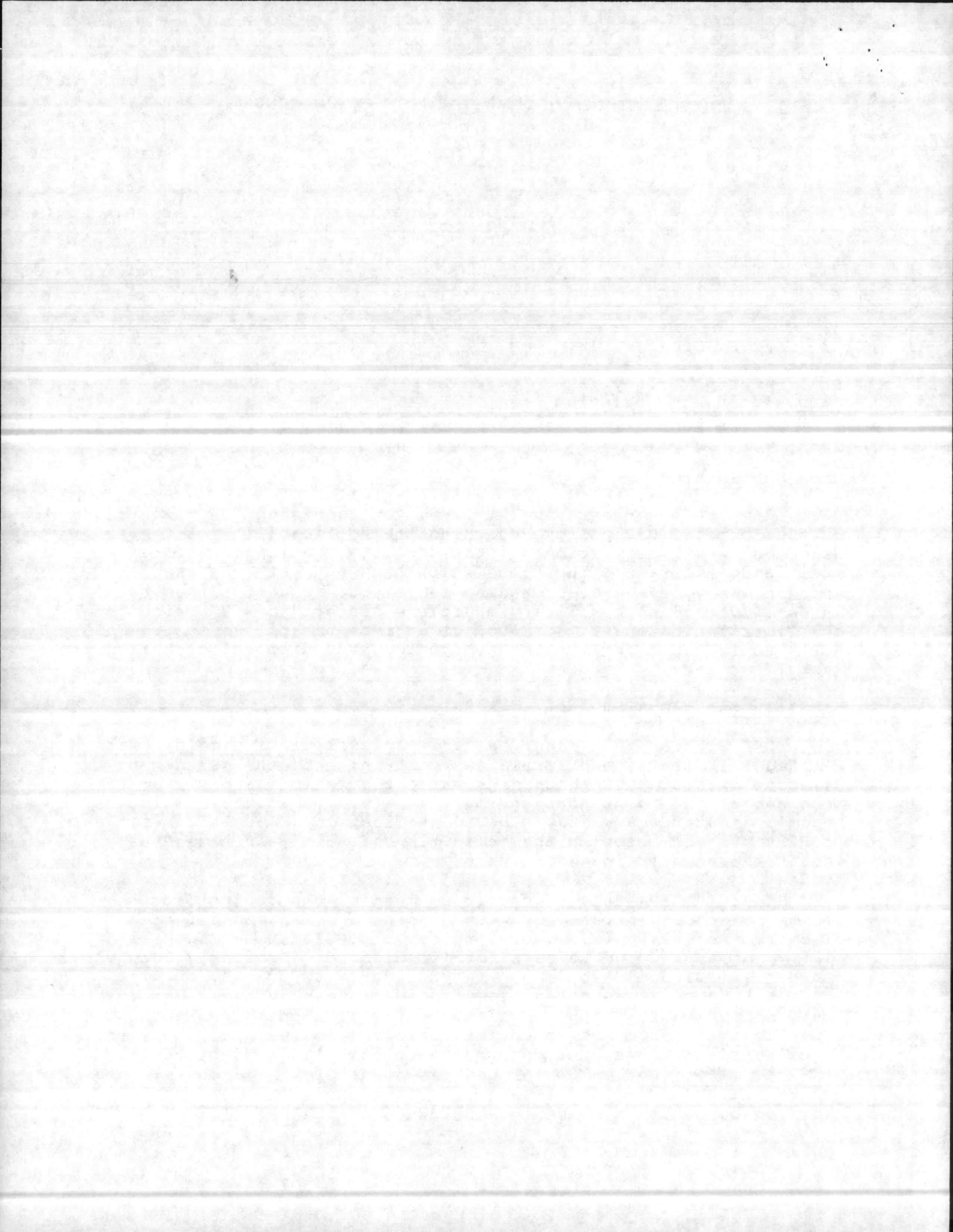
Dear Mr. Schafer:

In your letter of July 25, 1985, you requested EPA concurrence on the proposed DoD policy regarding the applicability of the RCRA hazardous waste regulations to the demilitarization of military munitions. These are munitions which have not yet been used and which now may be recycled or disposed. Your request raises two issues: 1.) are such military munitions subject to RCRA prior to demilitarization and 2.) can DoD directives be applied in lieu of RCRA requirements for treatment, storage, and disposal of hazardous waste?

Military Munitions Subject to RCRA

RCRA Section 6001 requires federal facilities to comply with all Federal, State, and local laws pertaining to the management of hazardous waste. RCRA hazardous waste regulations apply from the time and at the point that the material (e.g., military munitions) becomes a hazardous waste. The identification of munitions subject to RCRA must be based on the definition of solid and hazardous waste as presented in 40 CFR Part 261.

Under 40 CFR §261.33, unused commercial chemical products become hazardous wastes only when discarded or intended for discard. Recycling (i.e., use, reuse, or reclamation) is ordinarily not considered to be a form of discard. Similarly, unused munitions ordinarily would not be considered to be wastes unless and until there is an intent to dispose or destroy them, and they would not be wastes when recycled in lieu of disposal. We thus agree that the mere assignment of munitions to the Special Defense Property Disposal Account does not automatically subject munitions to RCRA. It is not until DoD decides to handle the material in a manner which classifies it as a hazardous waste that its storage and transportation must be in accordance with RCRA rules.



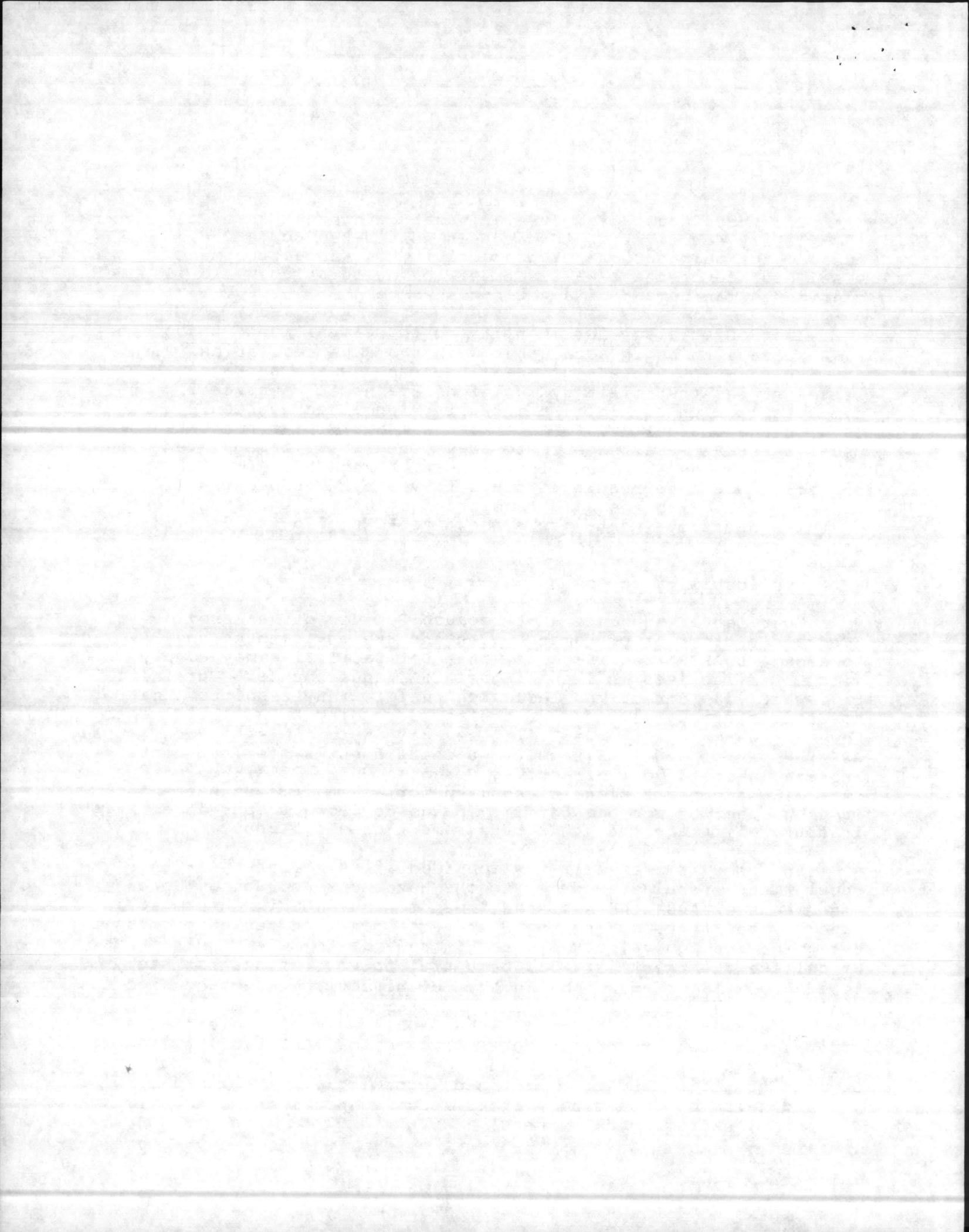
You should be aware, however, that burning of these munitions in military deactivation furnaces is considered to be incineration because the main purpose of the activity is waste treatment. Likewise, storage of these wastes prior to incineration would also be considered management of a hazardous waste.

The DoD strategy for identifying those munitions subject to RCRA appears to be in accordance with the RCRA regulations with the exception of the exclusion of hazardous waste storage. Your letter states that military munitions are never waste until demilitarization occurs. We interpret "demilitarization," as used in the DoD policy, to encompass all activities regulated under the RCRA rules except storage. Once there is an intention to dispose or destroy munitions, their storage as well as transportation would be regulated since they are hazardous waste. Therefore, the storage and transportation of military munitions that are hazardous waste are subject to RCRA prior to demilitarization.

#### RCRA Applicability to DoD

Your letter suggests that because DoD directives provide adequate protection of human health and the environment and "conform" to RCRA requirements, that DoD facilities may comply with DoD directives in lieu of the RCRA requirements. Our initial review of your directives indicates that in many respects, the DoD directives adequately address the corresponding RCRA requirements. However, we have also identified several deficiencies. For example, RCRA Subpart I §264.175 requires a containment system for container storage, whereas your directives do not. Under RCRA Subpart G §264.113, a closure plan is required for all hazardous waste facilities whether or not the facility plans to close. Your directives inaccurately state that this requirement does not apply.

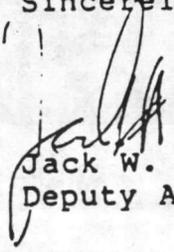
Enclosed is a checklist which identifies all of the RCRA regulations promulgated prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA or the "Amendments"). This checklist is used by the States during the State authorization review process to determine the equivalency of State standards to RCRA requirements. We believe the checklist will be useful to you, as a first step, to identify major omissions in the DoD directives when compared to EPA's "base" (pre-HSWA) program. Unlike State programs, however, the DoD directives must do more than achieve an equivalent level of environmental protection to EPA's program. DoD facilities must meet EPA's standards promulgated under RCRA, and thus the DoD Directives would need to be revised accordingly. We would be glad to help you determine whether specific parts of RCRA apply to DoD (e.g., closure requirements).



We are currently revising the checklist to reflect the Amendments and we should be able to provide a copy of the draft revised checklist in approximately one month. The Amendments will primarily require additions to the checklist; however, a few of the current provisions of the checklist may also need to be revised slightly. Please contact Chaz Miller (382-2220) of the State Programs Branch, Office of Solid Waste, with regard to the use of the checklist and its revisions.

We are confident that the final DOD directives will facilitate the permitting of DOD facilities and should reduce the need for authorized States to impose requirements other than those prescribed in your current directives.

Sincerely yours,



Jack W. McGraw  
Deputy Assistant Administrator

Enclosure

