

Logistics Management Institute

Enforcement Actions Under the  
Resource Conservation and  
Recovery Act

CE211R5

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# Enforcement Actions Under the Resource Conservation and Recovery Act

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## Enforcement Actions Under the Resource Conservation and Recovery Act

# Executive Summary

Despite its efforts to achieve compliance with environmental regulatory standards (an effort that now consumes more than \$500 million annually), the Army continues to receive enforcement actions (EAs) that include notices of violation, notices of deficiency, consent orders and decrees, and similar citations. Although the rate of receipt of EAs is actually low (less than one per installation per year) by comparison with either industry or with other Federal agencies, the large number of Army installations means that the total number of EAs received is in the hundreds. This detracts from the Army's image as a conscientious adherent to environmental laws. In some cases, receipt of violations may indicate the persistent presence of systemic problems. In the past 2 years, the Army has been investigating its EAs to determine whether some problems are more prevalent than others and what can be done to resolve them.

In earlier reports, the Logistics Management Institute reported on many of the Army's regulation-driven compliance programs.<sup>1</sup> One of the major activities not addressed in those reports was compliance with the Federal Resource Conservation and Recovery Act (RCRA). This report addresses EAs issued to the Army pursuant to RCRA and similar state laws and their implementing regulations.

The RCRA is similar to the other regulatory programs in that the root causes of EAs are in procedural and oversight failures. Thus, action taken to address the systemic problems in any of the environmental program areas should relieve compliance problems in all areas.

The systemic problems occur in four general areas: maintaining knowledgeable staff; spreading awareness of requirements to operators and supervisors who are not part of the environmental staff; improving oversight of environmentally sensitive operations conducted by both government and contractor personnel; and, once people have the appropriate knowledge, holding them responsible for applying that knowledge.

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<sup>1</sup>LMI Report CE211R4, *Taking Action to Eliminate Environmental Enforcement Actions: The Federal Clean Air Act*, Douglas M. Brown, Jim Evenden, and Marianne Woloschuk, June 1994.

We recommend that the Army take the following actions:

- ◆ Ensure that job descriptions and performance standards clearly establish responsibility for the operation, supervision, and staff oversight of each environmentally sensitive facility; ensure that responsible individuals are held strictly accountable for proper performance.
- ◆ Redirect the focus of current RCRA training to spend less time on general statutory obligations and more time (and hands-on experience) on practical applications and procedural issues.
- ◆ Require appropriate demonstrations of capability (to include recognized independent certification) for all personnel engaged in environmentally sensitive activities. This would ensure that supervisors and professional staff attain appropriate competencies before being assigned responsibility for critical activities for which they may not have been trained.
- ◆ Provide for continuing professional development of environmental professionals. This includes both funding for appropriate workshop attendance as well as making time for personnel to attend workshops. It does not imply centralized training.
- ◆ Hold installation and unit commanders and other executive decision-makers accountable for the effective execution of environmental programs and provide appropriate environmental awareness training for those personnel.
  - ▶ Develop an adequate baseline data base and appropriate indicators for executive-level reporting that allows Army leaders to assess the condition of the Army's environmental compliance programs and manage any needed corrective action programs. The inventory of EA findings developed in response to our earlier reports needs to be supplemented with "reason" coding, and needs to be integrated with other environmental condition reports such as the Environmental Compliance Assessment System, the Army Compliance Tracking System, and the Installation Status Report.

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# Enforcement Actions Under the Resource Conservation and Recovery Act

## INTRODUCTION

The Army has always attempted to conduct its operations in accordance with national priorities, both with regard to national security and other objectives. The Army has been addressing the issue of environmental protection and the performance of environmental tasks with the same degree of care and professionalism that it applies to its other responsibilities. Despite its efforts to achieve compliance with regulatory standards (an effort that now consumes more than \$500 million annually), the Army continues to receive enforcement actions (EAs) that include notices of violation, notices of deficiency, consent orders and decrees, and similar citations. Although the rate of receipt of EAs is actually low (less than one per installation per year) by comparison with either industry or with other Federal agencies, the large number of Army installations means that the total number of EAs received is in the hundreds. This detracts from the Army's image as a conscientious adherent to environmental laws. In some cases, receipt of violations may indicate the persistent presence of systemic problems. In the past 2 years, the Army has been investigating its EAs to determine whether some problems are more prevalent than others and what can be done to resolve them.

In earlier reports, the Logistics Management Institute (LMI) reported on many of the Army's regulation-driven compliance programs.<sup>1</sup> One of the major activities not addressed in those reports was compliance with the Federal Resource Conservation and Recovery Act (RCRA). This report addresses EAs issued to the Army pursuant to RCRA and similar laws and their implementing regulations.

## REGULATORY OVERVIEW

Title II, *Solid Waste Disposal*, of RCRA contains several subtitles that define major functional compliance areas. Subtitle C (RCRA-C) deals with the handling of hazardous wastes, including infectious or medical wastes. Subtitle D (RCRA-D) deals with the handling of nonhazardous "municipal" or "sanitary" wastes. Subtitle I (RCRA-I) addresses the standards for the construction, operation, and maintenance of underground storage tanks (USTs) that contain

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<sup>1</sup>LMI Report CE211R4, *Taking Action to Eliminate Environmental Enforcement Actions: The Federal Clean Air Act*, Douglas M. Brown, Jim Evenden, and Marianne Woloschuk, June 1994.

hazardous substances or petroleum products (with the exception of those containing hazardous waste).

A small part of the law of major interest to the Army is Subpart X of RCRA-C. Subpart X addresses "miscellaneous" activities including the open burning and open detonation (OB/OD) of munitions and explosive wastes. Although the law also references procedures for addressing remediation of contaminated sites (i.e., RCRA corrective action), the majority of such activities are carried out under the Army's restoration program rather than under its compliance program. Therefore, those issues are not addressed in this report.

The RCRA-C provisions for the management of a hazardous waste program require storage of waste for no more than 90 days without a permit; address requirements for storage structures, mandate proper identification and characterization of wastes prior to removal for disposal; require documentation that tracks hazardous waste from generation through disposal (to include preparation and management of transportation manifests); require effective maintenance and security of treatment, storage, or disposal (TSD) facilities; and require completion of a current contingency plan. Given a properly constructed facility and a permit, both of which are complex and costly undertakings, the ongoing operating requirements are relatively easy to understand and implement. They do, however, require constant attention to compliance procedures.

The most prevalent facilities regulated under RCRA-D are conventional landfills, commonly referred to as municipal solid waste landfills. Operations at those landfills tend to be regulated in a more performance-oriented manner than the heavily documented hazardous waste operations. The emphasis tends to be on the elimination of "nuisance" effects (especially odor and litter) and on effective drainage, which prevents the formation of leachate as a result of excessive water passing through landfills. In addition, vigilance is required to ensure that unauthorized hazardous materials are not deposited in these less protected facilities. The landfills are also subject to strict location requirements and corrective action, to methane gas and groundwater monitoring, and to closure/post closure regulation.

Underground storage tanks regulated under Subtitle I contain petrochemical products and hazardous substances that also may be regulated under the Clean Water Act. The Army seldom maintains other hazardous materials in sufficient quantities to require such storage. However, the construction and upgrading of tanks, the operation of auxiliary protective equipment, and the actions required in the event of a spill or leak from such tanks are addressed in RCRA-I. Because the construction regulations have required a constant increase in the safety features and structural integrity of the tanks, with all tanks required to receive any needed retrofits and replacements prior to 1998, the Army has been involved in a major effort to replace its UST inventory. The necessary first step to proper upgrading is to take an accurate inventory and complete a registration process for the tanks.

Subpart X provides very little guidance. In the past, the Army has operated its OB/OD facilities under general conditions established in RCRA permits issued to the installation. Recent legal action has forced the Environmental Protection Agency (EPA) to initiate a more rigorous permitting process that has caused enormous expense for the Army; EPA has also become more aggressive in challenging the need for OB/OD. There are no records evidencing receipt of any EAs by the Army under Subpart X (other than notices of deficiency addressing inadequacies in permit applications).

## THE ARMY'S ENFORCEMENT RECORD

Before addressing enforcement actions, it is important to emphasize that these actions generally represent isolated failures among the many successes. Almost every Army installation, including the small Reserve and National Guard facilities, handles hazardous materials and wastes to some degree. Given the Army's constant turnover in personnel, especially among the uniformed personnel who frequently handle hazardous materials (unlike the facilities subject to other regulatory programs that are generally completely under the control of Army civilian employees), it is perhaps surprising that the total number of EAs is as low as it is. Nevertheless, when multiplied by hundreds of Army installations, even isolated incidents can lead to significant numbers of violations and environmental contamination. Aside from the adverse consequences of damage to the environment itself, the cost of restoration from many small pollution incidents can be large. Thus, the Army desires to reduce its regulatory noncompliance to the absolute minimum.

The largest number of all the Army's EAs are received pursuant to RCRA, perhaps the most sweeping of the environmental regulations. While other regulatory programs (notably air and water) attempt to protect the environment by placing conservative limitations on effluent quality, RCRA attempts to avert potential pollution primarily through procedural regulations. Thus, procedure is important to RCRA enforcement. While actual cases of spills and illegal disposal are rare events, any procedural deficiency is considered a violation that must be dealt with to preclude future pollution. While this emphasis may appear to make RCRA violations unimportant, our review of DoD installation records reveals numerous examples where a chain of minor administrative or procedural lapses resulted in serious contamination incidents.<sup>2</sup>

Our prior reports addressing the causes of EAs issued to the Army for violations of environmental regulations have concluded that administrative and procedural errors, rather than systemic capital funding problems, are the causes of most (i.e., 60 percent to 65 percent) Army EAs. The same phenomenon is seen in

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<sup>2</sup>LMI Report CE211R2, *An Achievable Compliance Goal: Eliminating Notices of Violation Issued to the Army Under the Toxic Substances Control Act*, Douglas M. Brown, October 1993.

LMI Report CE211R3, *Planning and Management Failures Cause Clean Water Act Violations*, Douglas M. Brown and Robert J. Baxter, September 1993.

the RCRA program — magnified by RCRA's almost total emphasis on procedural enforcement as the key method for protecting the environment.

Separate RCRA EAs often include numerous violation "findings." Table 1 shows both the number of EAs and the number of findings. Because findings within an EA address the multiple violations noted during a regulatory inspection, the specific problems noted, as well as the causes for those problems, vary within the EA; therefore, it is often impossible to provide a single statement of why an EA was issued.

**Table 1.**  
*Enforcement Actions Received by the Army Under the Resource Conservation and Recovery Act, 1989 through 1993*

Category	Installations	Enforcement actions	Findings
Total EAs reported	1,032	1,028	3,248
Total RCRA EAs	226	472	1,996
RCRA Subtitle C	134	313	1,650
RCRA Subtitle D	28	49	144
RCRA Subtitle I	64	110	202

Table 2 shows RCRA findings broken out by problem category using the Army Compliance Tracking System coding format. Administrative deficiencies — personnel issues, operations errors, and general management failures — account for more than 80 percent of all RCRA violations. The specific distribution varies with each RCRA subtitle, reflecting, in part, the different emphasis placed on documentation and operational issues in the subtitles. Because of the overwhelming focus on Codes 40 and 70 (i.e., operations and general management), those findings are further detailed in Table 3.

## ROOT CAUSES

When issued, the text of an EA includes a reason for the receipt of the EA as determined by the regulator. While the specific violation can be, and often is, corrected on the spot or shortly thereafter with little trouble, true compliance with the law requires that all similar, undetected, and future instances of the infraction be eliminated as well. In order to correct the continuing occurrence of the infraction, it is necessary to identify the "real problem" that caused the condition. We designate these real problems as the "root causes" of EAs.

The root causes can rarely be determined from an EA itself. Instead, we had to contact the installation staffs directly to identify the real cause of the problem. Because of the large number of EAs (472) issued under RCRA during the past five years, we could not call all of the 226 installations that received an EA to

obtain an explanation of the associated circumstances. Instead, we identified the types of EAs most frequently issued and conducted interviews with staff members from installations that together received a representative proportion both of the EAs themselves and of the types of EA findings defined by the reason codes.<sup>3</sup> The appendix describes the circumstances surrounding each EA and the root causes for the violations.

**Table 2.**  
*Summary Categorization of Enforcement Actions Received by the Army*

Code	Problem category	All RCRA		RCRA-C		RCRA-D		RCRA-I	
		No.	%	No.	%	No.	%	No.	%
10	Emissions and exceedances	2	0.1	2	0.1	N/A	N/A	N/A	N/A
20	Technical work	71	3.6	31	1.9	27	18.8	13	6.4
30	Personnel issues	58	3.1	57	3.4	1	0.7		
40	Operations	1,153	57.9	1,021	61.9	66	45.9	66	32.8
50	Spills, leaks, and discharges	114	5.9	49	3.0	14	9.7	51	25.3
60	Facilities problems	68	3.5	47	2.8	8	5.6	13	6.5
70	General management	499	25	419	25.4	25	17.4	55	27.2
80	Legal agreements	31	1.7	24	1.4	3	2.1	4	2.0
Total		1,996		1,650		144		202	

**Notes:** Totals may differ from 100 percent due to rounding; No. = number; N/A = not applicable.

The root causes of EAs identified in this report are drawn from the case studies (detailed in the appendix) of the circumstances surrounding each EA. We identified the following nine general root causes:

- ◆ Contractor problem (Code C)
- ◆ Facility design or construction problem (Code D)
- ◆ Lack of sufficient resources/funding (Code F)
- ◆ Lack of knowledge of installation activities or inadequate self-inspections (Code I)
- ◆ Limited environmental knowledge (Code K)
- ◆ Lack of management attention/poor supervision (Code M)

<sup>3</sup>In addition, we were constrained by a desire not to conduct repetitive interviews with many of the installations that had been so generous with their time during the earlier EA studies.

**Table 3.**  
*Detailed Categorization of Enforcement Actions Received*

Code	Problem category	All RCRA		RCRA-C		RCRA-D		RCRA-I	
		No.	%	No.	%	No.	%	No.	%
40	<b>Operations</b>								
41	Unpermitted, unauthorized, or unregistered activity or equipment	73	3.7	53	3.2	11	7.6	9	4.5
42	Operating records, files, or data submissions incomplete or late	205	10.3	169	10.2	8	5.6	28	13.9
43	Labeling or placard deficiencies	152	7.6	143	8.7	3	2.1	6	3.0
44	Storage and accumulations issues (time, volume)	150	7.5	143	8.7	7	4.9		
45	General O&M failures	239	12.0	199	12.1	28	19.4	12	5.9
46	Faulty or missing equipment	21	1.1	13	0.8	2	1.4	6	3.0
47	Manifest or transporter problems and LDR certification errors	110	5.5	105	6.4	5	3.5		
48	Nonlisted or restricted wastes	133	6.7	131	7.9	1	0.7	1	0.5
49	Inspections and engineering certifications	70	3.5	65	3.9	1	0.7	4	2.0
<b>Total</b>		<b>1,153</b>	<b>57.9</b>	<b>1,021</b>	<b>61.9</b>	<b>66</b>	<b>45.9</b>	<b>66</b>	<b>32.8</b>
70	<b>General Management</b>								
71	Reports	12	0.6	8	0.5	3	2.1	1	0.5
72	Security and safety	175	8.8	168	10.2	7	4.9		
73	Forms, documents, plans, manuals, and procedures inadequate or incomplete (but not operating records covered under Code 42)	272	13.6	236	14.3	13	9.0	23	11.4
74	Fees not paid	38	1.9	5	0.3	2	1.4	31	15.3
75	Failure to respond to regulatory notice	2	0.1	2	0.1				
<b>Total</b>		<b>499</b>	<b>25.0</b>	<b>419</b>	<b>25.4</b>	<b>25</b>	<b>17.4</b>	<b>55</b>	<b>27.2</b>

**Note:** No. = number; O&M = operations and maintenance; LDR = Land Disposal Restrictions.

- ◆ Regulator error/confusion (Code R)
- ◆ Lack of a technical solution (Code T)
- ◆ Miscellaneous causes (Code Misc.).

Each root cause (with its code) is discussed in the following subsections. These causes are the underlying reasons for the condition (symptom) that is itself written up in an EA. Thus, failure to submit a report is a symptom; lack of knowledge that the report was required may be the cause.

The root causes of RCRA EAs are generally the same as those identified for other compliance programs. However, equipment failure/obsolescence does not appear to be a problem causing RCRA violation. This may be the result of RCRA's emphasis on preventive procedures instead of pollution-control monitoring activities.

### Contractor Problem (Code C)

Violations involving contractors include cases where the contractors failed to perform tasks required by, or in the manner specified by, a regulation. Contractor personnel might violate regulations intentionally as a way to reduce personal effort or to cut costs, or they might do so inadvertently because they are unaware of regulatory directives. Sometimes, poor contract management prevents contractors from performing effectively or prevents corrective action from being taken when inadequate contractor performance occurs. Because installation anecdotes seldom concede poor contract oversight or inappropriate directives given to contractors as a cause, we have included all cases of contractor-related EAs in a single category.

### Facility Design or Construction Problem (Code D)

Some violations are specific to the facility in which operations are being conducted in that it is unable to meet required standards. This may be the result of a preexisting lack of regulatory knowledge on the part of the facility construction design/building staff, or it may be that regulatory standards have become more stringent since the facility was built. This root cause is assigned to violations where procedural errors (although they may compound a violation) are not the sole cause of the violation. The resolution of problems of this nature generally requires capital investment.

Landfills are particularly susceptible to this cause in that they require daily "restructuring" through the application of daily cover that is impervious to wind or water-related erosion and through "contouring," which prevents the pooling of water. Whether such occurrences are the result of the difficulty of meeting the standard under all conditions or of supervisory failure to apply the standard under achievable conditions is often a matter of conjecture. While all facilities

require adequate security (e.g., fencing), this is considered to be a minor construction issue easily addressed with local funding, and it is generally more indicative of a management failure than a structural issue.

## Lack of Sufficient Resources/Funding (Code F)

Waste management activities often require large and expensive capital facilities and adequate staffing. When the facilities become too outdated to be managed effectively or (as is more frequently the case under RCRA) when new regulations require technical standards beyond those built into the existing facility, an installation must make large investments to construct new facilities or to upgrade existing ones. On the other hand, in those cases where the failure to upgrade a facility occurs because decision-makers place a low priority on the funding of such projects, the underlying cause is classified as a management failure.

Regulators frequently renew or issue new permits only on the condition that installations make changes to their facilities; failure to implement those changes results in EAs. Finally, inadequately staffed environmental offices do not have the resources to keep up with the requirements of the many programs that are initiated by Federal, state, and local regulatory bodies; this in turn generates a lack of knowledge that may result in inadequately specified facility designs — although the permitting process generally serves to avoid these circumstances

## Lack of Knowledge of Installation Activities or Inadequate Self-Inspections (Code I)

Sometimes, EAs are issued as a result of unauthorized activities that, once identified to the environmental staff, are immediately recognized as non-compliant. However, until noted by the regulator, the staff was unaware that this activity was going on or that the facility in question even existed. This can occur even where the staff members are fully aware of all of the provisions of associated regulations. Sometimes it is caused by actions at the troop level where the environmental staff is not consulted; it may also occur as a result of inadequate time on the ground (as opposed to in the office).

## Limited Environmental Knowledge (Code K)

The primary reasons for lack of knowledge within the environmental staff are limited experience coupled with inadequate initial or refresher training. Personnel assigned environmental compliance responsibilities must have the requisite level of environmental knowledge. Candidates for training include not only an installation's environmental professionals but also an installation's shop workers and contractors (when applicable) because poorly trained individuals

who operate systems capable of causing pollution sometimes perform in a manner that results in violations.

### Lack of Management Attention/Poor Supervision (Code M)

Individuals may create situations that lead to violations because they lack knowledge of operational fundamentals or regulatory considerations, make occasional judgmental errors, or demonstrate a lack of interest in their work. Whenever lack of knowledge or interest becomes pervasive, an individual's supervisor should correct the problem. Recurring violations are prime examples of supervisory failures. These may extend from having inadequate systems of quality control or feedback to failing to take the actions required to support the needs of the RCRA program, particularly in planning or budgetary actions. Violations may manifest themselves in technical ways that result from inadequate or delayed funding for corrective actions that upper management may know are necessary. This class of violations can also result when installation managers put minimal priority on regulatory pressures until an EA is issued. Finally, lack of communication and coordination between different levels of management and among different types of managers may cause EAs.

### Regulator Error/Confusion (Code R)

Occasionally, regulators issue EAs mistakenly. On other occasions, the installation may receive an EA because it took actions on the basis of a regulator's inappropriate advice or failure to provide timely advice. In this category, we also address the more frequent cases in which an EA was issued when the regulator disagreed with the installation's interpretation of the intent or specific requirements of a regulation. Cases where installations chose not to execute clear regulatory guidance, however, are supervisory failures. Regulatory demands for fees that are, in effect, taxes from which the Federal government is exempt, are considered in this category as long as a legal determination that the installation must pay the fee has not been made; subsequent failure to pay the fees is considered a management failure.

### Lack of a Technical Solution (Code T)

Sometimes violations occur and recur because there is no technical solution to a specific problem. In such cases, installation environmental personnel know that taking a certain action or continuing operations will result in an EA, but they are not in a position to terminate the operation that is creating the problem. This reason differs from the "design or construction" cause in that there is no known cure for the problem. An example is unauthorized storage of certain types of mercury, for which there is no acceptable treatment technology or disposal facility, yet no authorized means of storage exists.

## Miscellaneous Causes (Code Misc.)

In addition to the main causes, we found miscellaneous instances of unique or unknown causes of EAs for which there are no obvious solutions. One such cause is simple human error, which will occur from time to time even though the personnel have the required training and proper supervisory controls are in place. Another "reason" cited by installation personnel is that, because of the length of time that has passed since the EA was issued and due to rapid staff turnover at an installation's environmental office, no information exists concerning the circumstances surrounding the receipt of the EA.

## ANALYSIS OF ROOT CAUSES OF ENFORCEMENT ACTIONS

Some of the causes of EAs occur more frequently than others. The differences are even more pronounced when we consider the specific findings within the EAs. The nine installations that we interviewed received a total of 33 EAs. Table 4 lists the causes and the number of installations at which each cause was cited. (The total number adds up to more than nine because some EAs had multiple causes.) Because the minor or unique contributing causes are less widespread, they tend to cause a single EA at a single installation. The major causes that the Army must address recur at installations from one citation to the next. All installations received EAs in part because of knowledge or management oversight deficiencies.

**Table 4.**  
*Installations Reporting Root Causes*  
*(maximum of nine)*

RCRA subtitle	Root cause code <sup>a</sup>									Total installations with EAs (by subtitle)
	C	D	F	I	K	M	R	T	Misc.	
Subtitle C	4	0	2	5	6	6	1	1	1	6
Subtitle D	1	3	0	2	6	5	2	0	1	6
Subtitle I	0	0	1	1	2	3	2	0	1	4
Total installations reporting this cause	5	3	2	6	9	9	4	1	5	9

<sup>a</sup> C = contractor problem; D = facility design or construction problem; F = lack of sufficient resources/funding; I = lack of knowledge of installation activities or inadequate self-inspections; K = limited environmental knowledge; M = lack of management attention/poor supervision; R = regulator error/confusion; T = lack of a technical solution; Misc. = miscellaneous causes.

Table 5 displays the root causes of EAs at the EA level, showing the number of EAs in which a root cause was cited in any of the findings. In two-thirds of the EAs, lack of knowledge or management deficiencies were a root cause, which far exceed any other root causes.

**Table 5.**  
*Enforcement Actions Attributed to Root Causes*  
(maximum of 33)

RCRA subtitle	Root cause code <sup>a</sup>									Total EAs received (by subtitle)
	C	D	F	I	K	M	R	T	Misc.	
Subtitle C	4	0	2	5	13	12	3	1	3	17
Subtitle D	1	3	0	3	7	7	2	0	1	9
Subtitle I	0	0	2	1	2	5	2	0	1	7
Total EAs reporting this cause	5	3	4	9	22	24	7	1	5	33

<sup>a</sup>C = contractor problem; D = facility design or construction problem; F = lack of sufficient resources/funding; I = lack of knowledge of installation activities or inadequate self-inspections; K = limited environmental knowledge; M = lack of management attention/poor supervision; R = regulator error/confusion; T = lack of a technical solution; Misc. = miscellaneous causes.

Table 6 portrays the occurrence of root causes among the 89 findings. Because of the added detail available, the occurrence of Code K and Code M causes drops to approximately 60 percent of the total, accounting for the occurrence of several findings with very specific root causes. Nonetheless, these are the predominant causes of violations that result in EAs. Combined with Code C and Code I, procedural errors continue to be the major reason for violations.

**Table 6.**  
*Root Causes of Individual Findings*  
(maximum of 89)

RCRA subtitle	Root cause code <sup>a</sup>									Total findings received (by subtitle)
	C	D	F	I	K	M	R	T	Misc.	
Subtitle C	5	0	0	6	40	28	4	0	3	57
Subtitle D	5	4	0	3	8	10	3	0	1	20
Subtitle I	0	0	3	0	7	9	2	1	2	12
Total findings reporting this cause	10	4	3	9	55	47	9	1	6	89

<sup>a</sup>C = contractor problem; D = facility design or construction problem; F = lack of sufficient resources/funding; I = lack of knowledge of installation activities or inadequate self-inspections; K = limited environmental knowledge; M = lack of management attention/poor supervision; R = regulator error/confusion; T = lack of a technical solution; Misc. = miscellaneous causes.

In the following subsections, we discuss the four primary root causes, as well as EAs with multiple causes.

## Lack of Environmental Knowledge

Lack of environmental knowledge, inexperience, and insufficient training at the installation level comprise the dominant underlying cause of EAs. Aside from errors of omission by environmental staff members, compliance with RCRA depends on supporting contractors, soldiers, and civilians across the installation who must know how to deal with various air pollution sources. The interviewees indicated that most EAs were resolved quickly after regulators pointed out the violations.

The validity of the many EAs related to lack of knowledge (found in the Army's citation data base and in the Defense Environmental Status Report) have been verified by the case studies. Lack of environmental knowledge was the reason most frequently cited for EAs; all the installations sampled reported lack of knowledge as a cause of EA receipt.

A distinction exists between one-time resolution of a specific type of EA and the permanent elimination of that type of violation. The majority of personnel interviewed were universally of the opinion that environmental staff members are overburdened and, at times, fail to keep track of minor regulatory changes because they are too busy dealing with compliance issues in other regulatory programs. Furthermore, because of the continuing rotation of soldiers from one installation to another, as well as among assignments at a single installation, lessons at the operator and unit levels must often be relearned. As a result, "resolved" EAs can and do recur for the same compliance failure.

## Lack of Management Attention/Poor Supervision

The second leading cause of EAs is lack of management attention: all the installations reported incidents that we interpreted as a lack of management attention or supervision as an underlying cause of EAs. In general, lack of management attention and poor supervision problems were quickly resolved when installations received an EA. In many cases, supervision problems can be resolved with the adoption of quality control checks (once managers and supervisors become aware that something must be checked). However, where EAs resulted from a lack of communication, coordination, and cooperation among managers, the problem seemed more entrenched, and interviewees expressed their frustration in searching for solutions.

## Contractor Problem

Lack of management supervision and oversight is closely related to problems involving contractor operations, the third most frequent cause of EAs. At

some facilities, responsibility for daily operations belongs not to the environmental staff of the Army installation but to a private entity or to another governmental or military body. However, the installation's environmental office staff must play a regulatory oversight role. For instance, contractors frequently have significant regulatory compliance roles, especially in landfill management under RCRA-D, and they must be aware of their responsibilities. Nonetheless, environmental staff members cannot afford to wait until an EA is issued before taking a closer look at the contractor's operations. Assuming that a contractor knows about, and will comply with, all applicable regulations has often proven to be a serious mistake.

## Lack of Sufficient Resources/Funding

This cause of EAs is infrequently seen in the RCRA program, apparently because waste management issues, and especially hazardous waste management issues, are an item of concern throughout the Army leadership. Failure to obtain the funding necessary for facilities or needed maintenance that are deficient to the point of being subject to EAs reflects, in the end, a lack of management attention to the environmental program. If a project is not requested in the budget, then this failure is on the part of the environmental staff at the installation; if it is requested but not approved, it is a failure of that staff to justify the need effectively, combined with a failure of the chain of command to exercise effective concern for the requirements.

## Multiple Underlying Causes of Enforcement Actions

Under RCRA, most EAs have multiple underlying causes. In our sample, the number of EAs with multiple causes was 22 of 39, or 56 percent. In almost all of these cases, inadequate knowledge or inadequate inspections were combined with management failures and sometimes with other factors as well.

Causes of EAs tend to overlap and feed on each other, escalating the problems that lead to more EAs. For example, a performance problem may arise when the operator-level personnel do not have the requisite knowledge (or perhaps inclination) to perform a task correctly. Supervisors often do not possess the technical knowledge needed to provide adequate oversight; where the installation RCRA program manager does not have the technical knowledge to recognize a deficiency or adequate knowledge of the installation to be aware that the activity is even going on, it will continue unabated. More experienced managers may be overworked and may not have the time to provide additional oversight or to ensure that comprehensive audit procedures are in place at lower levels. The operator thus continues to perform inadequately and the problem remains unknown until the installation receives an EA.

Furthermore, the causes and effects of the different reasons for EAs are not always clear, posing a chicken-or-egg problem in determining the cause that forms the basis for the others. For instance, when an installation does not

allocate sufficient funding to train its personnel, or provides inadequate training, then the personnel lack the environmental knowledge necessary to perform their jobs in accordance with regulations. As a result, the installation receives an EA. The same situation may be viewed in another manner: the personnel do not have the knowledge to realize that they require training, and then they fail to obtain the necessary funding. No matter how the situation is characterized, the result is the same: the receipt of an EA.

Because of the interrelationships among the causes underlying EAs, managers must take a coordinated approach to implementing solutions. Solutions requiring investments in training of lower level staff and managers, combined with the strain on Army budgets that can be expected in the next few years, are going to place managers in a difficult position. Avoiding major EAs will require action to be taken when minor violations first start indicating future problems; yet, funding for what appear to be problem-free situations at the time (or deferrable problems) will take place at the expense of other activities. Review of the case studies supports the assessments derived from the EA data base: the primary problems are variations on the theme of lack of staff knowledge and supervisory failures.

Various solutions can be developed to address the problems identified so far. By targeting a specific problem with a coordinated solution, the systemic inadequacies can be addressed to eliminate further EAs. This study does not address specific solutions to avoid specific violations; however, in the last section of this report we do provide some specific programmatic recommendations that address the major and most consistent deficiencies. Implementation of those recommendations should improve the overall environmental program and result in the elimination of a significant portion of the EAs, including those in programs other than RCRA.

## ADMINISTRATIVE ENFORCEMENT ACTIONS

Few of the violations in the sample directly caused pollution. They can be classified as administrative EAs. These EAs are largely caused by environmental staff members' failure to know the procedural regulatory requirements. The fact that an EA is procedural or "administrative" in nature does not mean that it should be taken lightly.

In general, administrative EAs are incidental in nature (in that regulatory requirements simply are overlooked). Those violations do not pose a serious threat to human health. However, those violations create an unfavorable image of the Army by implying that installation-level environmental professionals do not have adequate concern for the health risks associated with violations of environmental regulations, especially ones that deal with hazardous wastes; they create the appearance of impropriety. More importantly, administrative EAs potentially can lead to actual pollution incidents that may have a serious impact on human health if they persist. To avoid administrative EAs, the most practical

solution has been to hire fully qualified environmental professionals in adequate numbers to monitor compliance.

Administrative EAs are relatively easy to resolve once the environmental staff and the operators learn about the deficiencies. Lack of knowledge may result from inexperienced or overburdened staff members who must deal with increasingly complex regulatory requirements. Even the most experienced environmental staff members can be caught off guard because the regulations are constantly changing and are difficult to understand. All installations cited take corrective measures soon after deficiencies are identified. Again, we must emphasize that a one-time "resolution" of a specific violation is not the same as fixing the systemic problem that will cause the violation to recur.

Regulatory requirements are constantly changing; it is very difficult to avoid receiving administrative EAs unless someone constantly keeps track of all applicable requirements for each installation and develops appropriate corrective actions. The implementation of the Environmental Compliance Assessment System (ECAS) auditing process<sup>4</sup> will help to identify deficiencies before regulatory inspections find them; but, because those audits are infrequent, installations must develop their own internal audit capabilities. To eliminate EAs stemming from a lack of regulatory knowledge, the Army must develop an extensive research capability to perform analyses of all environmental regulations (Federal, state, and local) to stay current on both the text and meaning of all regulatory requirements that apply to Army installations. Installation environmental staff must stay on top of regulatory changes and identify and implement appropriate corrective action. Some continuing training efforts need to be organized to inform the installation-level environmental staff members about regulatory changes and how to take the appropriate proactive or corrective actions.

## GENERAL CONCLUSIONS

Occasionally, violations are received as a result of a dispute with regulators over the interpretation or applicability of regulatory provisions. A few EAs were received because adequate facilities were not available; a few were received because contractors willfully neglected regulatory requirements. Our research so far has shown that these few anecdotes often dominate the discussion of the EA problem. The evidence provided by the EAs themselves, and the staff recollection of the events surrounding them, is far more convincing. For RCRA, even more so than other regulatory programs, the vast bulk of EAs result from a small number of root causes, generally tracking back to administrative and procedural errors that themselves stem from inadequate regulatory knowledge and inadequate supervision.

The RCRA differs from other regulatory programs in that we found few examples of failure to fund solutions where a problem was known to exist, few examples of inadequate facilities, and no examples of violations because of

<sup>4</sup>The ECAS provides centrally funded facility audits conducted by teams of functional experts. It is an installation assistance visit rather than an external inspection.

inadequate facility or equipment maintenance. We also encountered no claims that the installation simply had inadequate numbers of personnel to perform the assigned tasks, perhaps because hazardous waste has long been recognized as the primary environmental program. However, several of the contract failures (especially under RCRA-D) were the result of delegating all responsibility to a contractor, which to some degree implies a staff shortage.

The RCRA is similar to the other regulatory programs in that the root causes were in procedural and oversight failures. Thus, action taken to address the systemic problems in any of the environmental program areas should relieve compliance problems in all areas.

Resolving EAs has been relatively simple for most of the installations: The impact on the Army's mission has been minimal to date. However, case studies reveal some systemic weaknesses within the Army's compliance programs. The major cause for EAs is that the Army does not have adequate environmental regulatory knowledge at the operating or supervisory levels to ensure that all Army-owned treatment facilities are in compliance with the law.

The systemic problems occur in four general areas: maintaining knowledgeable staff; spreading awareness of requirements to operators and supervisors who are not part of the environmental staff; improving oversight of environmentally sensitive operations conducted by both government and contractor personnel; and, once people have the appropriate knowledge, holding them responsible for applying it.

Until the Army addresses its systemic problems, the installations will be forced to react to regulatory pressure in a piecemeal fashion, resolving EAs by the most expedient, though not necessarily the best, methods available.

## RECOMMENDATIONS

The Army should take the following actions:

- ◆ Ensure that job descriptions and performance standards clearly establish responsibility for the operation, supervision, and staff oversight of each environmentally sensitive facility; ensure that responsible individuals are held strictly accountable for proper performance.
- ◆ Redirect the focus of current RCRA training to spend less time on general statutory obligations and more time (and hands-on experience) on practical applications and procedural issues.
- ◆ Require appropriate demonstrations of capability (to include recognized independent certification) for all personnel engaged in environmentally sensitive activities. This would ensure that supervisors and professional staff

attain appropriate competencies before being assigned responsibility for critical activities for which they may not have been trained.

- ◆ Provide for continuing professional development of environmental professionals. This includes both funding for appropriate workshop attendance as well as making time for personnel to attend workshops. It does not imply centralized training.
- ◆ Hold installation and unit commanders and other executive decision-makers accountable for the effective execution of environmental programs and provide appropriate environmental awareness training for those personnel.
- ◆ Develop an adequate baseline data base and appropriate indicators for executive-level reporting that allows Army leaders to assess the condition of the Army's environmental compliance programs and manage any needed corrective action programs. The inventory of EA findings developed in response to our earlier reports needs to be supplemented with "reason" coding, and needs to be integrated with other environmental condition reports such as the ECAS, the Army Compliance Tracking System, and the Installation Status Report.

# Appendix

## Installation Case Studies

### INSTALLATION A

#### RCRA-C

#### EA #1

DESCRIPTION (FINDING #1) — FAILURE TO MAKE A HAZARDOUS WASTE (HW) DETERMINATION AT BOATWRIGHT, AND PAINT SHOP

*Narrative* — Drums in satellite accumulation areas containing hazardous waste were not labeled as required by state regulations. Labels were not being applied at the time of initial use of a container to hold hazardous waste. The inspector interpreted this as failure to make a hazardous waste determination.

*Reason for violation* — Personnel in these areas were not properly instructed about labeling requirements.

*Root causes* — Lack of environmental knowledge, management or supervisory failure.

DESCRIPTION (FINDING #2) — TIME OF INSPECTION MUST BE ADDED TO LOG, PAINT SHOP

*Narrative* — Personnel in the Print shop were not recording the times at which inspections of the drum accumulation area were conducted.

*Reason for violation* — Shop personnel were not properly instructed in inspection log requirements; lack of oversight by Environmental Office.

*Root causes* — Lack of environmental knowledge, management, or supervisory failure.

DESCRIPTION (FINDING #3) — TRAINING NEEDED ABOUT LABELING, DATES, SATELLITE ACCUMULATION IN BOATWRIGHT / PAINT SHOP.

*Narrative* — The state inspector determined that because the inspection log was incomplete and HW container labeling was inadequate personnel in these shops were not receiving proper training.

*Reason for violation* — Adequate training for personnel handling hazardous wastes was not provided.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #4) — SAFETY-KLEEN MANIFESTS WERE NOT COMPLETED ACCURATELY

*Narrative* — Manifests accompanying waste chemicals transported off site by Safety-Kleen were incomplete. The generator has the responsibility to ensure that all appropriate sections of the manifest are complete and accurate.

*Reason for violation* — Installation personnel were not properly trained regarding manifesting requirements.

*Root causes* — Lack of environmental knowledge, contractor or oversight failure.

DESCRIPTION (FINDING #5) — EXCEEDED 90-DAY STORAGE OF HW

*Narrative* — Drums of hazardous waste were stored in satellite accumulation areas for more than 90 days. These drums should have been taken to the Part B permitted site on the installation prior to 90-day satellite storage.

*Reason for violation* — Personnel working in the satellite accumulation areas were not aware of the 90-day criteria. Training, again, seems to be inadequate.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #6) — NO LABELS OR DATES ON HW DRUMS, CONTRACTOR SITE

*Narrative* — The on-site contractor was generating hazardous waste and storing it in containers without required labels and accumulation dates. Installation personnel are responsible for contractor compliance with HW regulations.

*Reason for violation* — Inadequate oversight by installation environmental office personnel.

*Root causes* — Lack of environmental knowledge, contractor or oversight failure, management or supervisory failure.

DESCRIPTION (FINDING #7) — ACCESS TO COMMUNICATION DEVICES NOT ADDRESSED  
IN PAINT SHOP

*Narrative* — No means of emergency communication was available in an area in which hazardous wastes are generated. Personnel in the shop were not aware of the requirement.

*Reason for violation* — Failure to comply with state HW requirements; the environmental office should have been aware of this requirement and installed and maintained emergency communication equipment for this operation.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #8) — LACKS STANDARDS ON SATELLITE ACCUMULATION,  
BOATWRIGHT SHOP

*Narrative* — A state inspector felt that existing standard operating procedures (SOPs) about handling, collection, and storage of hazardous waste in this area were inadequate. The SOP needed improvement in order to better manage wastes for this operation.

*Reason for violation* — Inadequate written procedures for the management of HW.

*Root causes* — Miscellaneous (i.e., inadequate procedures manual).

EA #2

DESCRIPTION — FAILURE TO SUBMIT HW ASSESSMENT RETURN

*Narrative* — When this assessment was received, a question arose as to whether this was equivalent to a tax and therefore not necessary for the installation to submit payment. The issue was forwarded to legal staff for interpretation. While awaiting a response, the state issued a notice of violation (NOV) for non-payment.

*Reason for violation* — Fees not paid.

*Root causes* — Miscellaneous (i.e., fee dispute).

### EA #3

#### DESCRIPTION — FAILURE TO SUBMIT HW ASSESSMENT RETURN

*Narrative* — A second NOV was issued for failure to pay the HW assessment fee referenced in the NOV of 30 January 1991. It was ultimately determined that this was a legitimate fee to be paid by the installation.

*Reason for violation* — Failure to pay fee in a timely manner.

*Root causes* — Management or supervisory failure (recurring deficiency).

### EA #4

#### DESCRIPTION — DISPOSAL OF BATTERIES IN A LANDFILL WITHOUT A PERMIT

*Narrative* — Lead-acid batteries were found in the installation's sanitary landfill during a RCRA inspection. There is a battery shop on-site for the collection of batteries for recycling or disposal. The source of the batteries in the landfill cell was not known.

*Reason for violation* — Improper disposal of waste materials.

*Root causes* — Lack of environmental knowledge.

### EA #5

#### DESCRIPTION — NO CERTIFICATION OF CLOSURE 84 TO 91 DAYS AFTER CLOSURE PLAN APPROVED FOR PESTICIDE RINSE TANK

*Narrative* — An underground storage tank for pesticide rinseate was removed by installation personnel. A closure plan for this tank had been developed yet was never sent to the state for approval. The closure plan was sent to the state by the environmental office after removal.

*Reason for violation* — Failure to submit documentation for approval by state environmental agency.

*Root causes* — Management or supervisory failure.

## EA #6

### DESCRIPTION — STORAGE OF UNPERMITTED HW IN FACILITY

*Narrative* — HW other than those waste streams listed in the Part B permit were stored in the permitted storage area. A modification request had been sent to the state to allow for storage of these additional waste streams. The request had not yet been approved yet the facility was found to be storing unauthorized waste streams.

*Reason for violation* — Storage not in conformance with permit requirements.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

## EA #7

### DESCRIPTION — UNAUTHORIZED DISPOSAL OF 22 DRUMS OF OIL, LUBE IN WILDLIFE AREA

*Narrative* — A state inspector was on railroad tracks to investigate allegations of improper disposal of wastes by railroad personnel. Drums were seen in a remote wooded area of the installation. These drums were found to be empty petroleum product containers. The drums' contents were checked; when no waste residue was found they were crushed and sent to a municipal landfill. However, the state considers the disposal of these containers to be in violation of state HW regulations.

*Reason for violation* — Unauthorized disposal of waste containers.

*Root causes* — Lack of environmental knowledge, inadequate inspections.

## RCRA-I

## EA #8

### DESCRIPTION — FAILURE TO PAY UNDERGROUND STORAGE TANK (UST) REGISTRATION FEES

*Date of issue* — 18 February 1992.

*Narrative* — The installation has not submitted payment to the state for registration of USTs on site. The fees are considered to be taxes by the legal staff and therefore not subject to payment. This issue remains unresolved.

*Reason for violation* — Failure to submit payment for fees pending resolution of tax issue.

*Root causes* — Miscellaneous (i.e., fee dispute).

# INSTALLATION B

## RCRA-C

### EA #1

DESCRIPTION (FINDING #1) — FAILURE TO DOCUMENT CORRECTIVE ACTION FOR  
MANIFEST DISCREPANCIES

*Date of issue* — 17 April 1989.

*Narrative* — Where changes were made on a manifest there was no notation and signature as required in the discrepancy section of the manifest.

*Reason for violation* — Failure to document manifest discrepancies as required by regulation.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #2) — FAILURE TO SUBMIT QUARTERLY SUMMARY REPORT  
WITH ORIGINAL MANIFEST

*Narrative* — The state regulatory agency issued an EA for neither submitting a quarterly summary report nor manifest copies for state records. The installation had complied with this requirement and sent the state a copy of a certified mail receipt.

*Reason for violation* — Failure of state regulatory agency to maintain files. The EA should not have been issued.

*Root causes* — Regulator error.

DESCRIPTION (FINDING #3) — FAILURE TO MAINTAIN HW CONTAINERS CLOSED AT DRY  
CLEANING SHOP

*Narrative* — This operation is run by a contractor. Contractor personnel had added waste to an open top drum and had not secured the drum lid with the locking device provided.

*Reason for violation* — Employee failure to comply with standard procedures.

*Root causes* — Contractor or oversight failure, lack of environmental knowledge.

DESCRIPTION (FINDING #4) — FAILURE TO MARK ACCUMULATION POINT WITH RESTRICTED ACCESS SIGN

*Narrative* — An HW satellite accumulation area that is located within a fence surrounding the maintenance area did not have signs restricting access. The area, although fenced in can be accessed by installation personnel other than those within the shop who use the accumulation site. A restricted access sign is required by state regulations.

*Reason for violation* — Failure to post the HW area as a restricted-access area. The fence around the shop was considered an adequate means to restrict access; however, this did not meet the posting requirements for such areas.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #5) — TRAINING RECORDS FAILED TO INCLUDE FULL JOB DESCRIPTIONS FOR HW POSITIONS

*Narrative* — Records related to the training of HW personnel did not contain job descriptions of personnel required to manage HW.

*Reason for violation* — The Environmental Office failed to include the descriptions required by state regulations in training records they maintain.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #6) — FAILURE TO PROPERLY MAINTAIN WASTE OIL

*Narrative* — A contractor removes waste oil from installation motor pools and in some instances waste oil is brought to an on-site oil/water separator. This device was subject to overflow during periods of rainfall causing oil-water mixtures to be discharged to adjacent grounds. The separator was also not maintained effectively, so that oil was discharged from the outlet of the unit.

*Reason for violation* — Failure to properly maintain a solid waste management device to prevent discharge of waste into adjacent areas. Inadequate contractor oversight was a contributing factor in this instance.

*Root causes* — Management or supervisory failure, inadequate inspections.

DESCRIPTION (FINDING #7) — OPERATING A RESOURCE RECOVERY FACILITY WITHOUT A PERMIT

*Narrative* — The installation was recovering silver from photo processing operations. This activity requires a permit pursuant to state regulations.

*Reason for violation* — The Environmental Office was not aware of the regulatory requirement.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #8) — CLOSURE PLAN FAILED TO ADDRESS MILESTONES

*Narrative* — The closure plan for the interim status container storage area failed to address required milestones such as the last date on which the facility would accept wastes, removal of all stored wastes, etc.

*Reason for violation* — Failure to provide required documentation as mandated in state regulations.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #9) — FAILURE TO MAKE HW DETERMINATION FOR WATER FROM SPRAY BOOTH

*Narrative* — In two water-wash paint spray booths, wash water discharged into the installation's sanitary waste-water treatment plant was not tested to determine if it was a regulated waste.

*Reason for violation* — Failure to comply with state regulatory requirements related to hazardous waste stream identification.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #10) — FAILURE TO DETERMINE IF WELDING FLUX IS HAZARDOUS

*Narrative* — Brazing and welding rod remnants were disposed of without a determination being made about their being classified as hazardous. (These items can contain heavy metals such as cadmium.)

*Reason for violation* — Failure to conduct a hazardous waste determination on waste materials that could be listed as characteristic HW.

*Root causes* — Lack of environmental knowledge.

## EA #2

### DESCRIPTION (FINDING #1) — DISPOSAL OF WASTE OIL INTO THE ENVIRONMENT

*Narrative* — This was a repeat violation concerning improper management of the oil/water separator operated by a contractor removing waste oils from the motor pool.

*Reason for violation* — Failure to correct an existing violation in a timely manner. Poor oversight of contractor activities is a contributing factor.

*Root causes* — Management or supervisory failure.

### DESCRIPTION (FINDING #2) — INTERIM STORAGE AREAS NOT INSPECTED

*Narrative* — The battery shop was listed as an interim storage area on the Part A permit. However, this site was never used as a HW storage area although listed on the permit application. Since it appeared on the application it should have been inspected on a weekly basis as required for interim status storage facilities or removed from the Part A permit application.

*Reason for violation* — Failure to comply with interim status requirements as well as poor management of documents/records by the environmental office.

*Root causes* — Lack of environmental knowledge, management or supervisory failure.

### DESCRIPTION (FINDING #3) — INTERIM STORAGE AREAS WITHOUT AN OPERATING RECORD

*Narrative* — The battery shop referenced in the previous finding should have had an operating record associated with the use of this building as long as it appeared on the Part A application.

*Reason for violation* — Failure to comply with interim status requirements as well as poor management of documents/records by the environmental office.

*Root causes* — Management or supervisory failure, lack of environmental knowledge.

## RCRA-D

### EA #3

#### DESCRIPTION — FAILURE TO PROVIDE A FINANCIAL ASSURANCE INSTRUMENT

*Narrative* — The installation was cited for not providing a bond, trust, or other financial instrument to ensure coverage of costs associated with closure or post-closure of the sanitary landfill. This issue is being contested by the installation legal staff; it does not interpret the regulations as requiring such financial assurance for RCRA-D facilities.

*Reason for violation* — Alleged violation of financial assurance requirements of RCRA.

*Root causes* — Regulator error or legal dispute.

### EA #4

#### DESCRIPTION — NO PERMIT FOR SECOND STAGE WASTE TIRE SITE

*Narrative* — The DRMO was storing used tires it planned to sell. The storage inventory at the time of the inspection was more than 500 tires. The state regulations require a permit for sites with over 500 tires because this is considered a storage site as opposed to a collection site. In addition the used tires with less than a specified amount of tread cannot be sold for reuse and, as such, require disposal. Neither the DRMO or the environmental office were aware of these requirements.

*Reason for violation* — Failure to be acknowledge and comply with state solid waste regulations.

*Root causes* — Lack of environmental knowledge.

# INSTALLATION C

## RCRA-I

### EA #1

DESCRIPTION (26 FINDINGS) — FAILURE TO PAY REGISTRATION FEE FOR A UST

*Narrative* — The state regulatory agency filed an EA for failure to pay a registration fee for 26 USTs. The installation legal staff contends that Federal installations are not required to pay this fee per criteria in state regulations. The MACOM sent a letter to the regulatory agency questioning the validity of the NOV.

*Reason for violation* — Failure to pay a tank registration fee. This is being contested given the issue of the status of Federal facilities relative to fees of this nature.

*Root causes* — Miscellaneous (fee dispute).

### EA #2

DESCRIPTION — FAILURE TO REGISTER UST

*Narrative* — During a RCRA inspection, a UST for which registration was required was found to be unregistered.

*Reason for violation* — Failure to submit registration documentation as required by state regulations.

*Root causes* — Management or supervisory failure.

### EA #3

DESCRIPTION (FINDING #1) — FAILURE TO REGISTER A UST

*Narrative* — A UST requiring registration was found to be unregistered.

*Reason for violation* — Failure to submit registration documentation as required by state regulations.

*Root causes* — Management or supervisory failure.

DESCRIPTION (FINDING #2) — INITIAL ABATEMENT REPORT NOT SUBMITTED TO STATE  
WITHIN 20 DAYS OF SPILL

*Narrative* — All releases from USTs require a written notification to the state within 20 days of the incident. The report was not sent to the state by the environmental office within the required time.

*Reason for violation* — Failure to submit documentation as required.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #3) — INITIAL SITE CHARACTERIZATION REPORT NOT SUBMITTED  
TO STATE WITHIN 45 DAYS OF SPILL

*Narrative* — Releases from USTs require a site characterization report within 45 days of the incident. This report was not sent to the state within that time period. The site characterization requires soil and water sampling and analysis, which typically is contracted out on a bid basis. This process involves the generation of a work order and funding documentation and the participation of the installation's contract office in selecting a contractor to perform the required sampling and analysis and to generate a report. Given this existing system, the time period mandated by the state for such a study can rarely be met. A more responsive means to perform these types of mandated studies must be developed.

*Reason for violation* — Failure to submit documentation as required. A contributing factor is the failure of the existing system to provide for services required in a timely manner.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure, lack of a technical solution, or lack of resources or funding.

## RCRA-C

### EA #4

DESCRIPTION (FINDING #1) — FAILURE TO LABEL, MARK ACCUMULATION DATE, CLOSE  
CONTAINERS, AND SHIP WITHIN 90 DAYS

*Narrative* — Drums in a satellite accumulation area were not managed according to state HW regulations and were not transferred to the interim status storage area within 90 days.

*Reason for violation* — Failure to comply with regulatory requirements at a satellite accumulation area. Personnel in this area were aware of the requirements. Additional oversight by environmental office personnel is necessary.

*Root causes* — Management or supervisory failure.

DESCRIPTION (FINDING #2) — FAILURE TO MAKE HW DETERMINATION

*Narrative* — Personnel in a waste generating shop were not certain about which wastes were hazardous. Waste antifreeze was generated in this area and handled as a hazardous waste, yet it is not regulated as such by state HW criteria.

*Reason for violation* — Personnel not properly trained in the identification and management of hazardous wastes.

*Root causes* — Lack of environmental knowledge, management or supervisory failure, or inadequate inspections.

DESCRIPTION (FINDING #3) — UNPERMITTED DISPOSAL ACTIVITIES

*Narrative* — Stains on soil adjacent to a waste generating shop were indicative of improper disposal of waste materials in the judgment of a state inspector.

*Reason for violation* — Failure to dispose of hazardous waste in compliance with state regulations. Lack of oversight by shop management personnel as well as the environmental office was a contributing factor. The presence of evidence such as tainted soils should have been identified in inspections performed by installation personnel.

*Root causes* — Lack of environmental knowledge, management or supervisory failure, or inadequate inspections.

DESCRIPTION (FINDING #4) — FAILURE TO PROVIDE WASTE FACILITY LOCATION MAPS SHOWING GENERATION/ACCUMULATION/STORAGE SITES

*Narrative* — Installation environmental personnel had not developed a site map highlighting the location of areas where HW was generated, accumulated, or stored. State regulations require such a document for generators of HW.

*Reason for violation* — Installation personnel were not aware of the requirement to provide such plans/documents.

*Root causes* — Lack of environmental knowledge.

## EA #5

### DESCRIPTION (FINDING #1) — FAILURE TO KEEP CONTAINERS CLOSED WHEN NOT IN USE

*Narrative* — A drum containing hazardous waste was seen during an inspection to have a funnel in the top where a bung should be in place because waste is not being added to the container at that time.

*Reason for violation* — Improper management of waste containers. Waste accumulation site personnel need additional training and oversight by supervisors in waste generation areas or from environmental office staff.

*Root causes* — Lack of environmental knowledge.

### DESCRIPTION (FINDING #2) — FAILURE TO MAKE A WASTE DETERMINATION ON PAINT SOLIDS AT PAINT BOOTH

*Narrative* — Waste paint solids had not been tested to determine if they exhibited any hazardous waste characteristics and were being disposed of as non-hazardous waste.

*Reason for violation* — Paint spray booth operations were not identified as ones in which hazardous wastes may be generated. The Environmental Office staff failed to recognize this operation as one that required testing to determine if waste paint solids were to be managed as a hazardous waste.

*Root causes* — Lack of environmental knowledge, inadequate inspections.

### DESCRIPTION (FINDING #3) — DISPOSAL OF PAINT AT OTHER THAN A PERMITTED FACILITY

*Narrative* — During an inspection, evidence of disposal of waste paint onto the grounds adjacent to paint spray operations was noted.

*Reason for violation* — Failure to properly classify waste material and train operations personnel in the proper management of waste materials.

*Root causes* — Lack of environmental knowledge, management or supervisory failure, or inadequate inspections.

## RCRA-D

### EA #6

DESCRIPTION (FINDING #1) — FAILURE TO PLACE 6 INCHES OF COMPACTED SOIL ON EXPOSED WASTE AT END OF DAY

*Narrative* — A sanitary landfill cell had not been provided with required cover at the end of the work day. A contractor operates the landfill and their operations are managed by personnel in the contract management office. The Environmental Office staff had brought this problem to the attention of the contract management office. The contractor was also aware of the regulatory requirement.

*Reason for violation* — Inadequate oversight of contractor operations and failure of contractor to comply with state solid waste regulations.

*Root causes* — Contractor or oversight failure, management or supervisory failure, or inadequate inspections.

DESCRIPTION (FINDING #2) — FAILURE TO PLACE 12 INCHES OF COMPACTED SOIL ON EXPOSED WASTE WITHIN 30 DAYS

*Narrative* — State solid waste regulations require the application of a compacted cover on closed cells in a demolition debris landfill. This requirement was not met by the contractor operating the landfill.

*Reason for violation* — Inadequate oversight of contractor operations and failure by contractor to comply with solid waste regulations.

*Root causes* — Contractor or oversight failure, or management or supervisory failure.

DESCRIPTION (FINDING #3) — FAILURE TO PREVENT POOLING OF WATER ON SANITARY AND DEMOLITIONS LANDFILLS

*Narrative* — Ponding of water was a common occurrence on the demolition debris and sanitary waste landfills. These contractor-operated sites were not adequately graded to prevent such an event.

*Reason for violation* — The contractor was not in compliance with solid waste regulations; inadequate oversight of contractor operations.

*Root causes* — Contractor or oversight failure, lack of environmental knowledge.

DESCRIPTION (FINDING #4) — LEACHATE SEEPING FROM LANDFILL IN VARIOUS LOCATIONS

*Narrative* — Leachate was seen to be seeping from the sanitary landfill in various locations other than the leachate collection system pit.

*Reason for violation* — Lack of prompt response by contractor/installation personnel to recognize and develop a corrective action plan. Improper design or installation of the leachate collection system is the most likely cause of leachate seepage.

*Root causes* — Contractor or oversight failure, management or supervisory failure, or inadequate inspections.

EA #7

DESCRIPTION (FINDING #1) — DISPOSAL OF CONSTRUCTION AND DEMOLITION MATERIAL AT UNPERMITTED LOCATION

*Narrative* — A pile of brush and construction debris was found at a site other than the demolition landfill. This site was also found to contain household trash/rubbish.

*Reason for violation* — Inadequate management of solid waste operations on the installation resulting in the use of unpermitted disposal sites. This site should have been identified and corrective action taken prior to its being identified during a site inspection for RCRA compliance.

*Root causes* — Inadequate inspections.

DESCRIPTION (FINDING #2) — PONDING WATER ON TOP OF LANDFILL

*Narrative* — This is a repeat of a previous violation in which the contractor responsible for landfill operations was not grading the site to prevent the accumulation of water from rainfall on closed landfill cells.

*Reason for violation* — The contractor was not in compliance with state solid waste regulations; lack of oversight of contractor operations to ensure compliance with contract terms and applicable state solid waste regulations.

*Root causes* — Contractor or oversight failure, or management or supervisory failure.

# INSTALLATION D

## RCRA-I

### EA #1

#### DESCRIPTION — FAILURE TO SUBMIT CONTAMINATION REPORT FOR UST

*Narrative* — The state requires site characterization reports as a result of leaks/spills from USTs within 60 days of knowledge of such an event. This report was not submitted within this time frame primarily due to the contracting structure in existence for the installation. A contracting mechanism needs to be developed to allow for timely response to such incidents given the mandates of state regulations addressing UST leaks or spills.

*Reason for violation* — Failure to respond to state reporting requirements within time period stipulated in regulations. The lack of a contracting mechanism to allow for a response to these requirements in a timely manner is a contributing factor.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure, lack of resources or funding.

### EA #2

#### DESCRIPTION — FAILURE TO SUBMIT UST CONTAMINATION REPORT FOR UST

*Narrative* — This is a repeat violation as a result of failure to submit a site characterization report within 60 days of a leak/spill from a UST. A report had not yet been submitted. This underscores the need to develop a more responsive contracting mechanism for such requirements.

*Reason for violation* — Failure to respond to state reporting requirements within the time period stipulated in regulations. Lack of effective contracting mechanism for such events is a contributing factor.

*Root causes* — Management or supervisory failure, lack of resources or funding.

## RCRA-C

### EA #3

#### DESCRIPTION (FINDING #1) — FAILURE TO MAINTAIN JOB TITLES FOR HW POSITIONS

*Narrative* — Job titles for personnel involved with HW operations were not recorded as required by state regulations. Environmental staff had no individual dedicated to RCRA issues at the time of the violation; RCRA compliance was assigned to an individual with multiple responsibilities.

*Reason for violation* — Failure to maintain updated records required by state regulations. Staffing issue may be a contributing factor.

*Root causes* — Lack of environmental knowledge, lack of resources or funding.

#### DESCRIPTION (FINDING #2) — FAILURE TO IDENTIFY TRAINING LEVEL FOR PERSONNEL

*Narrative* — The installation training records for personnel working with hazardous wastes did not provide criteria to determine the scope of training required for these employees.

*Reason for violation* — The environmental office did not maintain and update records required by state regulations. The staffing issue referred to in a previous finding may have been a contributing factor.

*Root causes* — Lack of environmental knowledge.

#### DESCRIPTION (FINDING #3) — FAILURE TO MAINTAIN COMPLETED TRAINING RECORDS

*Narrative* — Training records for HW workers did not contain information required by state regulations.

*Reason for violation* — Training records for HW employees were not properly maintained by the environmental staff.

*Root causes* — Lack of environmental knowledge.

#### DESCRIPTION (FINDING #4) — MANIFEST LACKED NOTIFICATION

*Narrative* — One manifest for hazardous waste did not have an attached Land Disposal Restriction (LDR) notification form.

*Reason for violation* — Inadequate management of manifest documents.

*Root causes* — Miscellaneous (only one of many forms had an error: one-time mistake).

DESCRIPTION (FINDING #5) — CONTAINERS EXCEEDED 90-DAY STORAGE LIMIT

*Narrative* — A storage facility for hazardous wastes operated by a contractor was found to have containers in storage for more than 90 days. This facility was not in interim status or operating with a Part B permit; therefore, it was required to transport waste containers off-site within 90 days of initial storage. A tracking system for drums coming into this storage area did not exist and can be seen as a contributing factor to this NOV.

*Reason for violation* — Poor management of waste containers so as not to exceed storage limits mandated by state regulations; lack of contractor oversight by the installation's DOL and environmental staff members.

*Root causes* — Contractor or oversight failure, or management or supervisory failure.

DESCRIPTION (FINDING #6) — FAILURE TO MAINTAIN RECYCLABLE MATERIALS RECORDS

*Narrative* — The installation was not maintaining records and manifesting shipments of silver recovered from photo processing operations. Although this activity was regulated by the state environmental agency, the environmental office was not aware of these requirements.

*Reason for violation* — Environmental office staff were not aware of amendments to state regulations regarding the management of certain classes of recoverable materials.

*Root causes* — Lack of environmental knowledge.

# INSTALLATION E

## RCRA-C

### EA #1

#### DESCRIPTION — FAILURE TO SUBMIT CONTINGENCY PLAN

*Narrative* — A staff change had occurred within the environmental office and Department of Public Works prior to the inspection. The contingency plan was not amended and an updated copy sent to the state regulatory agency as required.

*Reason for violation* — Environmental staff were not aware of requirement to update contingency plan and forward the amended copy to state.

*Root causes* — Lack of environmental knowledge.

### EA #2

#### DESCRIPTION (FINDING #1) — FAILURE TO SHIP HAZARDOUS WASTE FROM STORAGE WITHIN REQUIRED 90-DAY PERIOD

*Narrative* — A Part B permit for storage of hazardous wastes at the Defense Reutilization Marketing Office (DRMO) had been filed but not approved. Waste was found in the DRMO yard that had been stored beyond the 90 days allowed for such an operation. DRMO had anticipated such an occurrence but the contractor transporting wastes off-site could not remove these items in a timely manner.

*Reason for violation* — Failure to manage the disposition of hazardous wastes to meet statutory storage time limits.

*Root causes* — Contractor or oversight failure, or management or supervisory failure.

DESCRIPTION (FINDING #2) — FAILURE TO REPORT ALL HW HANDLED ON PERMIT APPLICATION

*Narrative* — Hazardous wastes generated from hospital operations were found at the DRMO. These wastes were not listed in the Part A or Part B application and should not have been handled at this site.

*Reason for violation* — Failure to properly document all waste streams handled by the installation DRMO.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

EA #3

DESCRIPTION — FAILURE TO REPAIR FENCING AROUND HW FACILITY, INSTALL FIRE FIGHTING EQUIPMENT, AND TO POST SIGNS REQUIRED AT THIS SITE

*Narrative* — The Part B storage area was to be deficient relative to requirements stipulated in the permit. Supervisory personnel responsible for operating the storage area had not reviewed permit requirements addressing such issues.

*Reason for violation* — Failure to identify and comply with storage permit requirements.

*Root causes* — Management or supervisory failure.

EA #4

DESCRIPTION (FINDING #1) — FAILURE TO PROVIDE TRAINING RECORDS FOR PERSONNEL HANDLING HAZARDOUS WASTE

*Narrative* — Two employees at the DRMO had not received their annual training as required by state environmental regulations. The DRMO has a trainer on its staff.

*Reason for violation* — Failure to maintain training records in a manner allowing for the training of HW personnel in accordance with regulatory criteria.

*Root causes* — Management or supervisory failure.

DESCRIPTION (FINDING #2) — FAILURE TO MAINTAIN HW CONTAINER IN ACCORDANCE WITH REGULATIONS

*Narrative* — Waste material being accumulated was not labeled as HW. The waste material in this case was lithium batteries, which can be accumulated for potential re-sale and thus may not be subject to HW regulations. They would become subject to management as a hazardous waste once declared to be a waste (as opposed to a resalable material). Personnel at the DRMO were unclear about the status of these items thus causing their classification as a waste unless proven otherwise.

*Reason for violation* — Failure to manage hazardous wastes in accordance with regulations. Inadequate training of personnel managing waste materials was a contributing factor to this violation.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #3) — A BUNG ON A 55-GALLON DRUM CONTAINING HAZARDOUS WASTE WAS FOUND TO BE RUSTED RENDERING IT IMMOVABLE. THE WASTE MATERIAL SHOULD HAVE BEEN TRANSFERRED TO ANOTHER CONTAINER

*Reason for violation* — Poor management of stored wastes. Containers should have been inspected pursuant to state regulatory criteria or the installation's SOP to detect the presence of containers with defects.

*Root causes* — Lack of environmental knowledge, inadequate inspections.

DESCRIPTION (FINDING #4) — FAILURE TO MAINTAIN A COMPLETE AND UPDATED CONTINGENCY PLAN AT A HW FACILITY

*Narrative* — The contingency plan at a site generating hazardous waste did not list the names of the emergency coordinator or alternate. A list of emergency equipment and their locations was not current.

*Reason for violation* — Inadequate oversight and management by environmental staff and other personnel responsible for the hazardous waste management program. Documents/records are not reviewed with enough frequency to reflect the installation's current status and to amend needed emergency response and other RCRA-mandated plans.

*Root causes* — Lack of environmental knowledge.

## RCRA-I

### EA #5

#### DESCRIPTION (FINDING #1) — FAILURE TO MAINTAIN LEAK DETECTION EQUIPMENT IN AN OPERABLE MANNER

*Narrative* — Automatic leak detectors had been installed in the fuel point. At the time of the inspection, the control board for the total system was shut down. Personnel on site were not familiar with the operation of the system. The one individual trained in the operation of the leak detection system was not on site the day of the inspection.

*Reason for violation* — Failure to provide adequate training in the operation of UST leak detection systems. Insufficient supervisory oversight was a contributing factor because this system should not have been shut down without proper authorization or the installation of a fail-safe measure to alert environmental or fuel point staff that the system was deactivated.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

#### DESCRIPTION (FINDING #2) — FAILURE TO EQUIP PRESSURE PIPING WITH AUTOMATIC LINE LEAK DETECTORS

*Narrative* — During an inspection, a gasoline tank at an Army and Air Force Exchange Service (AAFES) station was found to be equipped with pressurized piping. AAFES personnel and environmental staff were not aware of this. The tanks were supposed to have been installed with suction piping, which does not require leak detection equipment.

*Reason for violation* — Failure to install required equipment on UST piping assumed to have been provided with a fuel pumping system that was not subject to leak detection requirements. As-built drawings should have been reviewed during identification of regulated USTs to verify construction details.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure, inadequate inspections.

DESCRIPTION (FINDING #3) — FAILURE TO MAINTAIN RELEASE DETECTION RECORDS  
FOR INTERSTITIAL SPACE MONITORING

*Narrative* — Release detection records were not maintained at the fuel tank farm as required. Tanks had been provided with leak detection equipment and control panels.

*Reason for violation* — Personnel responsible for the operation of this equipment were not properly trained; they periodically deactivated the system. Records were not maintained as one consequence of this action; inadequate supervision and training of tank farm personnel.

*Root causes* — Lack of environmental knowledge, management or supervisory failure.

DESCRIPTION (FINDING #4) — FAILURE TO REPORT A SUSPECTED RELEASE IDENTIFIED  
AFTER INVENTORY RECONCILIATION

*Narrative* — A UST at an AAFES station was indicating loss of product after completing an inventory reconciliation using stick testing. This was not reported to the environmental office because the station manager was of the opinion that product was being removed through theft as opposed to leakage.

*Reason for violation* — Failure of supervisory personnel to contact environmental staff in a timely manner of the possibility of product loss to the environment from a UST. Lack of proper training and periodic oversight of this operation are contributing factors.

*Root causes* — Miscellaneous (i.e., regulator disagreed with legitimate managerial judgment); lack of environmental knowledge (i.e., manager should have considered and reported the possibility of leakage).

# INSTALLATION F

## RCRA-C

### EA #1

DESCRIPTION (FINDING #1) — FAILURE TO CONDUCT WEEKLY INSPECTIONS OF HW STORAGE FACILITY

*Narrative* — Hazardous wastes are stored in a designated area on the installation prior to shipment off-site. This facility is not in interim status or subject to a Part B permit as wastes are not stored for greater than 90 days. However, state regulations require that such a facility be inspected weekly and that records be maintained noting the results of such inspections. The environmental staff was not aware of these requirements at the time of the inspection.

*Reason for violation* — Environmental staff were not aware of a requirement in state regulations.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #2) — FAILURE TO DOCUMENT ANNUAL TRAINING OF PERSONNEL

*Narrative* — Training of personnel with hazardous waste responsibilities had been conducted but a centralized record of such training was not maintained. References to training were noted in various memos and other documents but not aggregated in a single record as required.

*Reason for violation* — Failure to acknowledge and comply with state regulatory requirements. The environmental staff should have been aware of this requirement.

*Root causes* — Management or supervisory failure, lack of environmental knowledge.

DESCRIPTION (FINDING #3) — OPERATING RECORDS FOR THERMAL TREATMENT LACKED STATE WASTE AND TREATMENT CODES

*Narrative* — Open burning operation records were incomplete with regard to specific data required by state regulations.

*Reason for violation* — Failure of environmental staff to properly maintain treatment records required by state permit requirements.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #4) — IMPROPER WASTE IDENTIFICATION OF SPRAY BOOTH FILTERS AND WASTE PAINT CONTAINERS

*Narrative* — Waste paint and paint filter containers were not provided with labels identifying these hazardous waste streams.

*Reason for violation* — Supervisory personnel not enforcing environmental SOPs established for waste streams generated in their work areas. Environmental staff also should have provided more oversight of hazardous waste generating operations to avoid such occurrences.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #5) — CONTAINER LACKED HW LABEL AND ACCUMULATION START DATE

*Narrative* — A waste container in a satellite accumulation area was not provided with a HW label or an accumulation start date when ready for transfer to the central waste storage area.

*Reason for violation* — Satellite accumulation supervisory personnel were not adequately enforcing compliance with installation SOPs relative to management of HW containers. Personnel in the area with responsibility for transferring HW to containers and providing proper labeling were also delinquent in the performance of their responsibilities. Additional oversight of such areas is required by the installation's environmental staff.

*Root Causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #6) — HAZARDOUS WASTE BUILDING LACKS REQUIRED EMERGENCY RESPONSE EQUIPMENT

*Narrative* — Emergency clean-up equipment and materials were not available in the central waste storage area.

*Reason for violation* — Failure of environmental staff and HW storage area personnel to identify need for spill response materials and equipment. Inspections of this area were not frequent enough to identify and rectify such issues.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure, inadequate inspections.

DESCRIPTION (FINDING #7) — HAZARDOUS WASTE STORED IN OPEN CONTAINERS

*Narrative* — Drums in the HW storage area were found with loose or missing bungs as well as improperly secured lids.

*Reason for violation* — Inadequate management of the HW storage area by personnel trained to work in this area and inadequate oversight of such operations by the installation's environmental staff.

*Root causes* — Management or supervisory failure.

RCRA-D

EA #2

DESCRIPTION (FINDING #1) — FAILURE TO DIVERT SURFACE WATER FROM LANDFILL CELLS

*Narrative* — Sanitary landfill areas were not properly graded so as to divert run-on and eliminate ponding of water on closed cells. This problem occurred during a period of rainfall lasting for approximately three weeks.

*Reason for violation* — Landfill areas were not properly graded to prevent run-on from ponding on landfill cells. The problem can be partly attributed to sustained rainfall preventing the use of grading equipment in the landfill area.

*Root causes* — Management or supervisory failure, or inadequate design or structure.

DESCRIPTION (FINDING #2) — FAILURE TO MANAGE LEACHATE TO PREVENT OFF-SITE MIGRATION

*Narrative* — Leachate was flowing from a sanitary landfill in numerous areas. This event had been preceded by a three-week rainfall period.

*Reason for violation* — Failure to control leachate from a sanitary landfill. System design and operation problems may have contributed to the uncontrolled flow of leachate even given the rainfall event preceding this occurrence. Such systems must be designed to operate with a predetermined rainfall event in consideration.

*Root causes* — Inadequate design or structure.

# INSTALLATION G

RCRA-D

EA #1

DESCRIPTION (FINDING #1) — DRAINAGE DITCH REQUIRES SILT REMOVAL AND SOIL AND EROSION CONTROL STRUCTURES

*Narrative* — A drainage ditch discharging to a wetlands was receiving silt-laden runoff from the landfill site. State regulatory requirements and permit conditions required soil and erosion-control measures for this activity. Both the facilities engineering group operating the landfill and the environmental office responsible for permit compliance did not recognize this discharge as one covered by permit criteria.

*Reason for violation* — Failure to comprehend the scope of the landfill permit requirement related to soil and erosion control, or to take action where necessary. State regulations requiring recognition of such issues were not identified; so compliance measures were not put into effect.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #2) — FAILURE TO COVER EXPOSED REFUSE

*Narrative* — During an inspection, a landfill cell that was closed for the day had not been provided with adequate cover as required by the site permit and state solid waste regulations. The facilities engineering group operating the landfill was familiar with permit requirements.

*Reason for violation* — Failure to comply with permit conditions. The environmental staff was not providing adequate oversight of landfill operations to avoid a violation of permit conditions and SOPs for landfill operations.

*Root causes* — Management or supervisory failure.

# INSTALLATION H

## RCRA-D

### EA #1

#### DESCRIPTION — LANDFILL EXCEEDS PERMITTED ELEVATION CRITERIA

*Narrative* — During an inspection of landfill operations, the installation was cited for exceeding benchmark elevation criteria referenced in the permit. A contract was issued to perform a topographic survey and forward a revised contour plan to the state for review. The installation's environmental staff and consultant reviewed the survey results and submitted the contour plan for review by the state. The results of these surveys do not seem to indicate a flaw in design and operations relative to elevation criteria. The issue is under review by the state and is pending resolution.

*Reason for violation* — Alleged violation of landfill design and operations. The validity of the EA is under review by the state regulatory agency.

*Root causes* — Regulator error or legal dispute.

### EA #2

#### DESCRIPTION (FINDING #1) — WINDBLOWN DEBRIS ON ROAD ADJACENT TO LANDFILL

*Narrative* — Solid waste debris was seen along the roadway adjacent to the landfill. The landfill operator typically collects wind blown debris on a daily basis and returns such material to landfill cells. The inspection occurred during a period of heavy winds and operations are such that there will always be some debris adjacent to the site given the volume of waste received each day and prevailing climactic conditions.

*Reason for violation* — Failure to maintain areas adjacent to landfill free from debris during operating hours. SOPs developed for site operations required removal of litter/debris from adjacent areas prior to the end of the working day. The operator may need to be directed to devote more attention to this issue during the work day.

*Root causes* — Miscellaneous (i.e., one-time climatic excess); management or supervisory failure (i.e., inadequate procedures); inadequate design or structure.

DESCRIPTION (FINDING #2) — CONTAINERS OF OIL AND GREASE DISPOSED OF AT THE LANDFILL  
IN VIOLATION OF PERMIT CONDITIONS

*Narrative* — A five-gallon container of oil and grease was seen by an inspector in an Army vehicle preparing to deposit solid waste into a sanitary landfill cell. The oil and grease was traced to a dumpster outside a motor pool. The operator of the landfill must rely on vehicle drivers to identify the type of waste being carried. All installation units and tenants have been informed about the wastes that are acceptable and those that are unacceptable for this site. The oil and grease was disposed of in a dumpster designated for wastes other than waste oils and lubricants from motor pool operations.

*Reason for violation* — Unauthorized disposal of waste materials into containers designated for specified solid wastes. Drivers should be more aware of the contents of individual dumpsters before loading them into vehicles for transfer to the sanitary landfill.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #3) — INFECTIOUS WASTES DISPOSED OF IN SANITARY LANDFILL

*Narrative* — The state inspector identified waste in a landfill as infectious, which should be disposed of in another manner. Upon further inquiry, it was determined that the waste in question was "chicken livers" from family housing units' solid waste containers. Infectious wastes from labs and hospitals are disposed of by a separate contract. (This narrative depends upon the installation's recollection of the event, which appears to be an extraordinary extension of regulatory haste to write citations.)

*Reason for violation* — Inspector incorrectly identified waste in a landfill cell as infectious and issued an EA.

*Root causes* — Regulator error or legal dispute.

# INSTALLATION I

RCRA-D

EA #1

DESCRIPTION (FINDING #1) — FAILURE TO CONTROL LITTER AND AVOID A PUBLIC NUISANCE

*Narrative* — On the day of the inspection, litter was seen beyond the operational area of the sanitary landfill.

*Reason for violation* — No controls were in place to prevent windblown waste materials from discharge onto sites beyond landfill cells and adjacent work areas. Landfill operational personnel were not aware of such requirements. A fence has been installed on the downwind side of the landfill to control debris from entering areas beyond the confines of the site.

*Root causes* — Lack of environmental knowledge, management or supervisory failure, inadequate inspections, or inadequate design or structure.

DESCRIPTION (FINDING #2) — FAILURE TO POST SIGNS AT LANDFILL

*Narrative* — Signs were not posted to restrict unauthorized personnel from entering the landfill.

*Reason for violation* — Failure to properly identify solid waste management operations area and to restrict access to the landfill site. Lack of proper management oversight and awareness of applicable environmental regulations are the primary factors resulting in the violation.

*Root causes* — Lack of environmental knowledge.

DESCRIPTION (FINDING #3) — FAILURE TO MAINTAIN WRITTEN OPERATING RECORDS

*Narrative* — Records relating to daily operations at the landfill were not maintained as required by state regulations. Such records were required to reference operational activity such as cells in use, volume of waste received, number of vehicles transporting waste on-site, and the time for closing landfill daily operations.

*Reason for violation* — Failure to provide proper operational oversight. Landfill operations personnel were not aware of state regulatory requirements concerning landfill operations and recordkeeping.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

DESCRIPTION (FINDING #4) — FAILURE TO TRAIN LANDFILL PERSONNEL IN HW IDENTIFICATION

*Narrative* — Landfill personnel were queried by a state inspector about the training that had been provided to identify HW streams and prevent their entrance into the site. No training had been specifically provided for drivers or other operational personnel concerning this issue.

*Reason for violation* — Failure to identify and comply with state regulatory requirements related to landfill operations.

*Root causes* — Lack of environmental knowledge, or management or supervisory failure.

# REPORT DOCUMENTATION PAGE

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<b>13. ABSTRACT (Maximum 200 words)</b>  The Army continues to receive enforcement actions (EAs) that detract from its image as a conscientious adherent to environmental laws. In some cases, receipt of violations may indicate the persistent presence of systemic problems. In the past 2 years, the Army has been investigating its EAs to determine whether some problems are more prevalent than others and what can be done to resolve them. This report addresses EAs issued to the Army pursuant to the Resource Conservation and Recovery Act (RCRA) and similar state laws and their implementing regulations. RCRA is similar to other regulatory programs reviewed by the Logistics Management Institute, in that the root causes were in procedural and oversight failures. Thus, action taken to address the systemic problems in any of the environmental program areas should relieve compliance problems in all areas. The systemic problems occur in four general areas: maintaining knowledgeable staff; spreading awareness of requirements to operators and supervisors who are not part of the environmental staff; improving oversight of environmentally sensitive operations conducted by both government and contractor personnel; and, once people have the appropriate knowledge, holding them responsible for applying it. We recommend that the Army hold individuals having responsibility for the operation and oversight of environmentally sensitive facilities accountable for proper performance, devise means to make RCRA training more effective, and require certifications and continuing professional development of environmental professionals.			
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