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COMMENT: The Military Munitions Rule and Environmental Regulation of Munitions

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SUMMARY:

... The Munitions Rule specifies that an unused military munition becomes discarded, and therefore a solid waste for regulatory purposes, when it has been abandoned by being disposed of, burned, or incinerated, or otherwise treated prior to disposal. ... Therefore, a non-chemical military munition that meets the regulatory definition of a solid waste under the Munitions Rule, and exhibits characteristics as a hazardous waste under RCRA, is not subject to Subtitle C regulation as long as it is being transported in accordance with applicable DOD safety standards.

In the current post-Cold War era, when the need for combat readiness no longer seems necessary, the training activities of the United States military have come under fire. Military training sites across the nation are littered with spent munitions and unexploded ordnance, the result of decades of weapons development and training exercises. The problem is that these military munitions contain materials and chemicals which are potentially hazardous to the environment, and their destruction and cleanup pose special environmental and safety concerns. Congress has tried to strike a balance between the United States military's need for continued training and the Environmental Protection Agency's (EPA) desire to have the military clean up its hazardous waste sites. To do this, Congress enacted the Military Munitions Rule (Munitions Rule), which, if administered properly, is designed to effectively accomplish the goals of both the military and the EPA. However, the Munitions Rule is already the subject of litigation and controversy, leading some to question its actual effectiveness.

TEXT:

[*467] INTRODUCTION

Since the fall of the Soviet Empire, which marked an end to the decades-long Cold War, the United States has been confronted with a period of critical reevaluation of both its international and domestic policies. n1 Foremost among the areas of reevaluation are the role of the military establishment in the emerging geopolitical landscape and the environmental consequences of combat readiness. n2

[*468] The Cold War embodied a markedly different political and strategic landscape than faces the United States today. n3 The threat of nuclear war constantly loomed as the ultimate



risk in an international arms race, and this omnipresent risk factored into every decision with even the slightest bearing on military operations. n4 Any devaluation in the priority of military development and combat readiness might have resulted in a tipping of the fragile international balance. n5

The nature of warfare as we progress into the twenty-first century is changing dramatically. n6 The lesson learned from the Persian Gulf War is that massive, industrial-age armies are no longer the preeminent force in the emerging strategic landscape. n7 The nature of modern warfare is conflict on a smaller scale, involving international peacekeeping missions, anti-insurgency roles, and surgical strike operations. n8 Success in these conflicts requires smaller, highly trained professional armies using the most advanced military technology. n9

Analysts and policymakers have recognized that the changing geopolitical climate, coupled with advancements in military technology, heralded a new information-age of warfare. n10 This revolution in military technology has prompted a critical domestic reappraisal of the United States military and the nation's role in the world. n11 Technological advancements utilized during the Persian Gulf War have induced the United States military to refocus its strategic direction. n12 So-called "technological revolution" proponents call for replacement [*469] of the military's extensive industrial-age, mass-produced "sunset systems," such as heavy direct-fire ground forces, nonstealthy aircraft, and carrier battlegroups. n13 Instead, proponents of the military's technological revolution stress the need for a wholly new generation of deep precision-strike and information-warfare technologies. n14 The very nature of the United States military is in metamorphosis, becoming the technology-based military of the twenty-first century. n15

A stark reminder of the industrial age military of the Cold War is the vast quantities of unused munitions stored around the country in military warehouses. n16 Further, spent munitions and unexploded ordnance (UXO) litter firing ranges across the nation, representing the accumulation of decades of weapons development and training exercises vital to military preparedness. n17 These military munitions are the legacy of the Cold War, and the destruction and cleanup of these munitions pose special environmental and safety concerns. n18

Historically, the call of military necessity has been in direct conflict with the goal of environmental protection. n19 National security and environmental regulation were seen as an either/or proposition, with the environment uniformly sacrificed in the name of national defense. n20 During the Cold War, the executive, legislative, and judicial branches of the government systematically prioritized military operations at the expense of environmental regulation. n21 As Professor Stephen [*470] Dycus noted, the government's deferential treatment of the military during the Cold War was not wholly unjustified. n22 "Because the consequences of a wrong choice could be catastrophic, our tendency has been to resolve any doubts, without extensive analysis or public discussion, in favor of security." n23 With the end of the Cold War, however, the military can no longer ignore the environmental impact of its actions under the justification of unquestioning military necessity. n24

The fall of the Soviet Union has left the United States and the NATO alliance the victors in the decades-long economic, political, and military struggle. n25 The new face of geopolitical relations, without the backdrop of an arms race, will allow the government to insist upon increased environmental consideration and awareness by the military establishment. n26 As former Secretary of Defense Dick Cheney stated in 1990, "defense and the environment is not an either/or proposition. To choose between them is impossible in this real world of serious defense threats and genuine environmental concerns." n27 The nation is now in a position to insist that the government adhere to the environmental regulations it imposes on local and state governments and the private sector. n28

In 1992, Congress took a significant first step in enacting the Federal Facilities Compliance Act (FFCA), holding the federal government as liable for environmental regulation under the

Resource Conservation and Recovery Act (RCRA) as the states and private industry. n29 Under the FFCA, Congress directed the Environmental Protection Agency (EPA) to make special consideration for the regulation of military munitions. n30 In light of the need to avoid burdensome public interference with the military's fundamental mission of combat readiness, the EPA was to consult with the Department of Defense [*4711] (DOD) and determine when military munitions were subject to RCRA's strict cradle-to-grave regulatory scheme. n31

The resultant Military Munitions Rule (Munitions Rule) is a controversial example of the emerging national attitude towards the military and its role in environmental protection. n32 The Munitions Rule has been criticized for its reliance on military initiative in cleaning up the spent munitions and unexploded ordnance littering firing ranges across the country. n33 Many critics see the Munitions Rule as perpetuating the Cold War tradition of EPA deference to military authority, in contradiction of the spirit and intent of the FFCA and RCRA. n34 On the other hand, proponents praise the Munitions Rule as a pragmatic regulation, accounting for the military's unique expertise in handling munitions and recognizing the emerging environmental conscience of the military. n35

This Comment will discuss the legal and policy issues regarding the EPA's recent promulgation of the Military Munitions Rule. Section I will provide a legislative history of the EPA's rule. Section II will give a legal analysis of the resultant Military Munitions Rule and its practical effect on the military's use, handling, and transport of munitions. Section III will evaluate the rule's major criticisms and commendations, focusing on the recent judicial challenge in the D.C. Circuit case of *Military Toxics Project v. EPA*. Finally, Section IV will look briefly at the legal and political implications of military munitions contamination at Camp Edwards National Guard Base located on Cape Cod in Massachusetts.

I. HISTORY

A. *Military Deference*

The United States government has traditionally exhibited extreme deference to the military establishment, allowing the DOD and [*4721] the Department of Energy (DOE) to avoid strict compliance with environmental legislation. n36 The oft-cited reasons for allowing the military to operate independently of environmental regulatory oversight are military necessity and national defense priority. n37 During the Cold War, with the stakes as high as global domination, if not global destruction, it was thought best to leave to the military what the military did best: preparation for a national defense. n38 Moreover, the military has traditionally perceived environmental laws as burdens to the DOD's unique national defense mission, and has therefore systematically resisted enforcement efforts. n39 The Department of Justice (DOJ) and the judiciary have allowed the military to escape environmental liability under the "unitary executive theory" and the doctrine of "sovereign immunity." n40 Together, these two doctrines created a nearly impenetrable shield against federal, state, and local enforcement against the military establishment for violations of environmental regulation. n41

1. The "Unitary Executive" Theory

For many years, the EPA and the DOJ refused to enforce the requirements of the environmental statutes and regulations against the military under the "unitary executive" theory. n42 The unitary executive theory states that the Constitution creates a unitary executive branch, headed by the President. n43 The President alone is responsible for the activities of the executive branch, and federal agencies, as various subparts of a unitary executive branch, cannot sue each other because [*4731] "the executive cannot sue himself." n44 Moreover, allowing the judiciary to adjudicate controversies between executive agencies would offend the doctrine of separation of powers. n45

While the courts never embraced the unitary executive theory defense offered by the executive branch, n46 the DOJ adopted the unitary executive theory, and has interpreted it to mean that neither the DOJ nor any other federal entity may institute a suit against another

federal agency. n47 The DOJ has determined that a suit between executive entities and agencies does not present a justiciable controversy under Article III of the Constitution because only one party is involved in the suit: the federal executive. n48 As a result of the DOJ's adherence to the unitary executive theory, the EPA was neither allowed to sue, nor issue binding administrative orders against federal agencies. n49 Therefore, the EPA could only resort to persuasion and negotiated agreements to enforce military compliance. n50

This reluctance to enforce environmental regulations against federal agencies furthered the public perception that closed-door politics discouraged the EPA from fulfilling its duties against federal entities. n51 The government was literally held to a relaxed standard of compliance, whereas rigid enforcement was required of private industry. n52 Further, the negotiated agreements the EPA was forced to rely upon against military violators suffered for lack of enforceability. n53 The success of negotiated agreements therefore rested entirely upon the military's good faith, which proved to be an unreliable measure. n54

2. The Doctrine of "Sovereign Immunity"

With the EPA powerless to institute judicial proceedings or issue administrative orders against federal facilities, only citizens and the **[*474]** states were left to seek enforcement of environmental statutes by federal facilities. n55 Although the EPA did not interfere with such suits, the success of citizen- and state-instituted judicial actions were limited due to the doctrine of "sovereign immunity." n56 Very simply put, the sovereign immunity doctrine provides that unless Congress explicitly waives federal sovereign immunity under each of the environmental statutes, the federal government is not liable for statutory violations. n57 In the 1992 case of *Ohio v. United States Department of Energy*, the Supreme Court reaffirmed the doctrine of sovereign immunity. n58 The Supreme Court held that unless Congress unequivocally waives the sovereign immunity of the federal government, states may not institute lawsuits and may not impose penalties against federal facilities for statutory violations. n59

Even when the military was brought to the courts to enforce environmental compliance, the judicial branch was extremely reluctant to force the military to conform to environmental legislation. n60 Courts often cited the need for the judiciary to distance itself from military issues because of their bearing on international policy, or the lack of judicial experience or expertise to deal with such issues. n61 Similarly, judges often refused to enforce environmental compliance based upon the judge's perceptions that a case might compromise national security. n62

Despite courts' reluctance to enforce national environmental statutes against the military, the legislature compounded the situation by refusing to amend or pass environmental statutes explicitly holding the federal government subject to environmental compliance. n63 National defense and environmental regulation was consistently seen as **[*475]** an either/or proposition, with the environment losing at the mere hint of a national security implication. n64 Not until 1992, when Congress passed the FFCA, did Congress finally demand that federal facilities, including and in particular the DOD and the DOE, comply with the requirements of RCRA. n65 The FFCA specifically directed the EPA to consult with the DOD to determine when military munitions come within RCRA's definition of "hazardous waste," and thus became subject to RCRA's strict "cradle-to-grave" regulatory scheme. n66 On February 12, 1997, the EPA responded to the congressional mandate and issued its Military Munitions Rule. n67

B. The Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act was passed by Congress in 1978 as a comprehensive program to monitor the creation, storage, and disposal of solid waste. n68 Subtitle C of RCRA establishes a regulatory program designed to track and control hazardous waste from generation to disposal, a strict "cradle to grave" regulatory scheme. n69 However, RCRA not only governs the day-to-day management of regulated waste, but also the cleanup of wastes that have been deliberately or inadvertently released into the environment. n70

1. Statutory and Regulatory Definitions of "Solid Waste" Under RCRA

RCRA establishes a program to regulate the handling of "solid waste." n71 RCRA defines solid waste broadly as "any garbage, refuse, . . . and other discarded material." n72 However, the courts have noted a dichotomy between RCRA's statutory and regulatory definitions of solid waste. n73 The regulations define solid waste as "any discarded material" [*476] and in turn define discarded material as "abandoned." n74 Material is abandoned if it is: (1) disposed of; (2) burned or incinerated; or (3) accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated. n75

Under the statutory definition of solid waste, material need only be discarded, and does not require the element of abandonment. n76 According to the EPA and the courts, the element of abandonment in the regulatory definition of solid waste makes that definition somewhat narrower than the statutory definition. n77

Only material that has been determined to satisfy the narrower regulatory definition of solid waste is then subject to RCRA regulation as "hazardous waste" under Subtitle C's cradle-to-grave regulatory scheme. n78

2. RCRA's "Cradle-to-Grave" Regulatory Scheme

RCRA's regulatory plan involves a strict scheme of permitting, manifest tracking requirements, and waste treatment and handling standards and practices administered by the EPA. n79 Before an entity may treat, store, or dispose of hazardous wastes, it must apply to the EPA for a permit. n80 RCRA's manifest system further requires that the hazardous waste be rigidly documented along the entire life cycle of the waste, from generators of the waste, to transporters, to treatment, storage, and disposal facilities (TSDF). n81

RCRA's tracking program is enforced either by the EPA or by state programs approved by the EPA. n82 Enforcement of RCRA's provisions may be achieved through administrative compliance orders, civil actions for injunctions, civil penalties, and criminal sanctions. 

or solid
[*477] Under Subtitle G, the Administrator of the EPA may also issue an administrative order or bring suit for an injunction against anyone responsible for hazardous waste that is "an imminent and substantial endangerment to health or the environment." n83 This provision reaches beyond RCRA-permitted facilities, holding any individual responsible for hazardous waste liable for its containment. n84 If the EPA fails to take action against the responsible parties, citizens are similarly empowered to sue for an injunction under RCRA. n85

Further, due to the more broad statutory definition of solid waste, wastes that may not be subject to RCRA's regulatory jurisdiction are still subject to RCRA's statutory authority. n86 Solid waste under the statute is broadly defined as "discarded material." n87 By regulation, however, solid wastes for purposes of Subtitle C are narrowly defined as discarded material that has been "abandoned" by being "disposed of." n88 Under this distinction, any discarded material that poses an imminent and substantial hazard may be the subject of a Subtitle G lawsuit, while for purposes of Subtitle C regulation, only material that has been "disposed of" is deemed solid waste by the EPA. n89 Hence, while a material must meet the EPA's more narrow definition of solid waste in order to be subject to RCRA's strict cradle-to-grave regulatory scheme, any discarded material is subject to a Subtitle G action. n90

C. The Federal Facilities Compliance Act of 1992

Recognizing the refusal of the EPA and the DOJ to enforce, and the failure of the courts to impose RCRA compliance upon federal facilities, Congress enacted the Federal Facilities Compliance Act of 1992. n91 The FFCA's primary purpose was to ensure that federal facilities, both civil and military, conform to the procedural and substantive requirements of RCRA on an equal footing with private industry. n92 [*478] The FFCA was an explicit congressional waiver of federal sovereign immunity under RCRA. n93

Specifically, the FFCA clarified several points regarding RCRA compliance at federal facilities. First, section 102(b)(2) of the FFCA provides that administrative order authority is available to the EPA for enforcement against federal facilities, n94 while section 103 includes federal agencies as "persons" for purposes of RCRA. n95 Also, the FFCA addresses judicial apprehension in empowering the states to bring suit and assess penalties against federal facilities for RCRA violations. n96

In enacting the FFCA, Congress identified the history of DOD and DOE non-compliance as inducement for enactment of the statute. n97 While federal facility compliance was the purpose of the FFCA, politicians and agency officials recognized the potentially debilitating effect that blanket enforcement of RCRA could have upon military operations, specifically regarding the use of military munitions during training and weapons development. n98 Congress noted that "military units deal regularly with items that are virtually unknown in the civilian world . . . [and] regulations intended to apply to industrial processes may not make sense when applied to military munitions." n99 Congress realized that although the military should be held accountable for environmental considerations, it must be allowed special consideration in light of the military's fundamental purpose of national defense and military preparedness. n100 Therefore, section 107 was added to the FFCA, directing the Administrator of the EPA to modify the existing hazardous waste regulations and promulgate these modified regulations to deal specifically with military munitions. n101

[*479] Importantly, section 107 of the FFCA mandates that the Administrator first consult with the Secretary of Defense. Section 107 then provides that the Administrator and Secretary of Defense shall: (1) identify when military munitions become hazardous waste for purposes of Subtitle C regulation under RCRA; and (2) provide for the safe transportation and storage of such munitions that qualify as hazardous waste under the regulations. n102 On February 12, 1997, two years overdue, and after five years of deliberation and consultation with the Secretary of Defense and state officials, as well as public input, the EPA promulgated the Munitions Rule. n103 The Munitions Rule met with immediate political and legal opposition.

II. THE MILITARY MUNITIONS RULE

The Munitions Rule's two mandates were: (1) to determine when military munitions become hazardous waste under RCRA; and (2) to provide for the safe transportation and storage of munitions that are deemed hazardous waste. n104 The Munitions Rule provides the DOD with a great deal of regulatory latitude in the handling of used and unused military munitions. n105 The Munitions Rule also provides a conditional exemption for the transportation and storage of used munitions that satisfy the definition of hazardous waste, relying upon equivalent DOD and Department of Transportation regulations. n106

A. When Military Munitions Become Hazardous Waste

The primary congressional mandate under FFCA section 107 was for the Administrator of the EPA to determine when military munitions become hazardous waste for purposes of RCRA regulation. n107 The Munitions Rule addresses the first mandate under RCRA regulatory standards for "hazardous waste." n108

Under the RCRA regulations, the threshold question is defining what materials are to be regulated as "solid waste," and further, what [*480] solid waste is to be regulated as "hazardous waste." n109 Accordingly, munitions must first meet the criteria of a solid waste, and then must be evaluated to determine whether they will also be subjected to regulation as a hazardous waste. n110 In general, solid waste materials may be subject to regulation as a hazardous waste if they are either specifically listed by the Administrator of the EPA, n111 or they exhibit any of the following four hazardous characteristics: (1) ignitability; (2) corrosivity; (3) reactivity; (4) or toxicity. n112 The Munitions Rule focuses only upon the first question: clarifying when military munitions become solid waste. n113

The RCRA regulations define solid waste as "any discarded material" and in turn define discarded material as, among other things, "abandoned." n114 Material is deemed abandoned if it is: (1) disposed of; (2) burned or incinerated; or (3) accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated. n115 Only materials that satisfy the elements of abandonment meet RCRA's regulatory definition of solid waste. n116 Therefore, according to the RCRA regulations, only discarded material that has been "disposed of" can constitute hazardous waste that is subject to the strict "cradle-to-grave" regulatory scheme of Subtitle C. n117

The Munitions Rule added a new provision to the RCRA regulations which specifies how the regulatory term "discarded material" applies to unused and used military munitions. n118 The Munitions Rule uses the RCRA "intended use" analysis in determining when munitions become a material that is discarded, and therefore a regulatory solid waste subject to RCRA regulation. n119 The Munitions Rule identifies three specific categories of military munitions: (1) unused [*481] munitions; (2) munitions used for their intended purpose; and (3) used or fired munitions. n120

1. Unused Munitions

The Munitions Rule provides that unused munitions become solid waste for regulatory purposes in four circumstances: (1) when the unused munitions are "abandoned by being disposed of, burned, or incinerated, or treated prior to disposal;" (2) when the unused munitions are removed from storage for purposes of disposal or treatment prior to disposal; (3) when the unused munitions are deteriorated, leaking, or damaged to the point that they can no longer be returned to serviceable condition, and cannot reasonably be recycled or used for other purposes (excluding the use of the munition for its intended purpose, i.e. training); or (4) when an authorized military official has determined the munitions are solid waste. n121

a. Unused Munitions That Have Been Discarded

The Munitions Rule specifies that an unused military munition becomes discarded, and therefore a solid waste for regulatory purposes, when it has been abandoned by being disposed of, burned, or incinerated, or otherwise treated prior to disposal. n122 Accordingly, unused munitions that have been buried or deposited in a landfill in the past are considered abandoned, and therefore are solid waste. n123 However, the Munitions Rule provides that such unused munitions will only be subject to Subtitle C regulation when unearthed and further managed. n124 Therefore, EPA oversight is not triggered while the unused munitions sit buried.

[*482] *b. Munitions Removed from Storage for Purposes of Treatment or Disposal*

Unused munitions become solid waste for regulatory purposes when removed from military magazines or other storage areas for the purpose of disposal, burning, incineration, or other treatment prior to disposal. n125 Under the Munitions Rule, the EPA considers unused military munitions comparable to unused commercial products stored by manufacturers or their customers. n126 The storage of such products is an intended use of the product, and therefore only when a decision to "discard" the munition is clearly made will RCRA regulation begin. n127

c. Leaking or Deteriorated Munitions

The Munitions Rule also provides that unused munitions which are "deteriorated or damaged to the point that [they] cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes" constitute solid waste. n128 However, in order to satisfy this standard it must be certain that no repair or recycling plan is established under which the munitions might be used. n129 Even munitions that no longer may be used for the purposes of firing may be reused or recycled under an alternative intended use of the product. n130 This provides great latitude in classifying when a munition is capable of use or recycling, and not until it is established that a munition is beyond use recycling is EPA oversight triggered.

d. Munitions Determined to Be Solid Waste by an Authorized Military Official

Finally, the Munitions Rule provides that an authorized military official may specifically designate certain military munitions as solid **[*483]** waste subject to RCRA regulation. n131 Existing DOD classification systems which categorize certain munitions as "unserviceable" do not satisfy the Munitions Rule's requirements because the military might seek to recycle such munitions. n132 Under the Rule, the military official must issue a specific written declaration that particular munitions are deemed solid waste and are therefore subject to RCRA regulatory oversight. n133

2. Intended Use of Military Munitions

Under RCRA, the use of products for their intended purpose, even when the use of the product results in deposits on the land, does not always constitute abandonment, is not considered waste management, and therefore is not subject to EPA regulation. n134 The Munitions Rule clarifies that military munitions are not solid waste for regulatory purposes when: (1) a munition is used for its intended purpose; or (2) an unused munition is repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subject to materials recovery activities. n135 Thus, military munitions only become solid waste, subject to potential regulation under Subtitle C as hazardous waste, when the munitions have been abandoned and are therefore no longer serving their intended purpose. n136

In an effort to define the "intended use" of military munitions, the Munitions Rule provides three specific examples of military activities that are excluded from RCRA regulation. These include: (1) munitions used for the training of military personnel and explosive ordnance disposal personnel; n137 (2) munitions used in weapon's research, development, testing, and evaluation programs; n138 and (3) the recovery, collection, and on-range destruction of used munitions and **[*484]** UXO. n139 These examples constitute the intended use of military munitions and thus are exempt from RCRA regulation. n140

a. Training Exercises

The Munitions Rule provides that munitions used for the training of military personnel and explosive ordnance disposal personnel are not solid waste and not subject to RCRA regulation. n141 The EPA views such training activities as constituting the normal use of the product rather than waste disposal. n142 Further, the training of military personnel in the wartime use of munitions is recognized as a legitimate use of military munitions and already follows a detailed military protocol in the handling and safe use of such munitions. n143 The EPA views RCRA regulation, in light of the military's existing practices, as duplicative and unnecessary. n144

b. Weapons Research, Development, Testing, and Evaluation

Weapons research, development, testing, and evaluation programs are considered to be intended uses of munitions. n145 Because the testing of munitions is a natural use of the material, the EPA does not consider the munitions used in such research to be abandoned. n146 The Munitions Rule extends the intended use of used or fired munitions to include recovery of such munitions from a range area for further testing and evaluation. n147

c. On-Range Recovery, Collection, and Destruction

The Munitions Rule provides that range-clearance activity, such as the recovery, collection, and on-range destruction of UXO is a necessary part of the safe use of munitions. n148 The EPA therefore considers **[*485]** such activities to constitute an intended use of the munitions, and therefore outside the scope of RCRA regulation. n149

3. Used or Fired Munitions

The Munitions Rule determines that military munitions become a solid waste when they are no longer used for their intended purpose and are treated with the intent to discard. n150 The EPA explains that used munitions transported off-range for the purpose of storage, reclamation, treatment, or disposal are no longer being used for their intended purpose and are being treated with an intent to discard. n151 Similarly, used munitions collected on-range for disposal

either on-site or off-site are being used with an intent to discard, and therefore satisfy the regulatory definition of solid waste. n152

Used or fired munitions are also considered a solid waste subject to RCRA regulations "if the munitions lands off-range and [is] not promptly rendered safe and/or retrieved." n153 The EPA explains that munitions which do not land within an intended target area are not being used for their intended purpose, and the failure to promptly recover such munitions evidences an intent to discard. n154 Such munitions are thus considered solid waste. n155

In summary, the Munitions Rule provides that munitions which land on a firing range are not solid waste, and hence cannot be a hazardous waste for the purposes of Subtitle C regulation. In effect, the EPA has exempted the regular use of military munitions from RCRA's strict regulatory scheme by excluding them from the definition of solid waste. n156 If a munition lands off-range however, or if the used munitions are transported off-range or disposed of on-range, they are subject to the RCRA regulatory scheme and EPA oversight.

[*486] B. *Regulations for the Storage and Transportation of Military Munitions*

The second mandate of FFCA section 107 was for the Administrator of the EPA, after identifying when military munitions become hazardous waste, to provide for their safe transportation and storage. n157 The EPA considered the DOD's history of munitions handling, noting in its decision the military's unique experience and expertise in the use and handling of munitions. n158 The Munitions Rule provides a conditional exemption from the RCRA regulatory scheme for the transportation and storage of certain military munitions. n159

1. Transportation Standards

The Munitions Rule regulations "conditionally exempt from RCRA hazardous waste generator and transporter requirements (including RCRA manifest requirements and the container marking requirements . . .) waste non-chemical military munitions that are shipped from a military-owned or operated TSD in accordance with DOD shipping controls for military munitions." n160 In making this determination, the EPA looked to the existing DOD standards for the handling of munitions. n161 The EPA concluded that the department's regulations provide a level of protection of human health and the environment equal to that of the RCRA manifest system. n162 Therefore, a non-chemical military munition that meets the regulatory definition of a solid waste under the Munitions Rule, and exhibits characteristics as a hazardous waste under RCRA, is not subject to Subtitle C regulation as long as it is being transported in accordance with applicable DOD safety standards. n163

[*487] 2. Storage Standards

The Munitions Rule provides the military with a conditional exemption in the storage of non-chemical military munitions, provided that the munitions are stored in accordance with the Department of Defense Explosives Safety Board's (DDESB) standards. n164 To qualify for the exemption, the munitions must be within the jurisdiction of the DDESB, managed in accordance with the DDESB's published standards, stored in units identified to regulators, inventoried annually, and inspected quarterly. n165 Therefore, as long as the military follows its own standards for storage of military munitions, the EPA does not require RCRA regulation as well. n166

C. *State Authority*

Under RCRA section 3006, the EPA may authorize a state to administer and enforce the RCRA hazardous waste program. n167 Authorized states administer the RCRA program in lieu of the federal government, although the EPA retains enforcement authority over the program. n168 When the EPA promulgates new federal standards that are more stringent or broader in scope than existing federal standards, authorized states are required to review and modify their programs in accordance with RCRA section 3009. n169 Section 3009 provides that states may not implement requirements that are less stringent than the federal program. n170 However,

absent preemptive federal regulations, section 3009 does allow states to implement standards that are more stringent than the federal requirements. n171

Only two provisions of the Munitions Rule are deemed by the EPA to constitute more stringent federal regulation than RCRA, requiring their adoption by the states. n172 These provisions include: (1) the requirement that personnel retrieve those munitions that land off-range; n173 and (2) the requirement that personnel responding to immediate threats involving munitions maintain records of the event. n174 Under the Munitions Rule, states are not required to adopt the remaining provisions of the Munitions Rule, but are free to adopt more stringent standards than the Munitions Rule provides. n175 In recognition of the EPA's interpretation of Congress's intent, the DOD's national defense mission, and the DOD's need for national uniformity, however, the EPA "strongly urges" states to adopt the Munitions Rule in its entirety. n176

III. ANALYSIS OF THE MILITARY MUNITIONS RULE

The Munitions Rule has groundbreaking implications for the future of environmental regulatory oversight of the military establishment. n177 With the enactment of the FFCA, Congress took an important first-step in holding the federal government accountable for the environmental consequences of its conduct under RCRA. n178 In enacting the FFCA, however, Congress recognized the potentially debilitating effect that EPA regulation of military munitions might have on combat readiness and the DOD's fundamental national defense mission. n179 Congress accounted for this conundrum by mandating that the EPA first consult with the DOD and promulgate regulations specifically determining when military munitions are hazardous waste subject to RCRA oversight. n180 Congress's mandate to the EPA was to strike a balance between the competing interests of environmental compliance and national defense. n181

There are questions as to the Munitions Rule's legal authority and the EPA's policy rationale. This controversy has prompted public opposition to the Munitions Rule, culminating in a 1998 judicial challenge mounted by the Military Toxics Project (MTP), a national advocacy coalition. n182 While the D.C. Circuit affirmed the legality of the Munitions Rule, the policy and the practicality of the Munitions Rule continue to incite skepticism. n183 There remain several inconsistencies and potential loopholes within the Munitions Rule's regulatory framework that could prove problematic and arguably are in contravention to the congressional mandate.

A. Military Toxics Project v. EPA

In April 1998, a three-judge panel for the United States Court of Appeals for the District of Columbia Circuit heard oral arguments in the case of *Military Toxics Project v. EPA*, which challenged the EPA's recent promulgation of the Munitions Rule. n184

The D.C. Circuit applied a deferential standard of review, expressing willingness to set aside the EPA's action in promulgating the Munitions Rule only if it was found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." n185 The court relied on the two-step analysis set forth in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*: "If the Congress has 'directly spoken to the precise question at issue,' then we 'must give effect to the unambiguously expressed intent of Congress; otherwise we defer to the agency's reasonable interpretation of a statute it administers.'" n186 In sum, the burden of persuasion weighed heavily against the MTP. n187

The MTP had to show either that the EPA had not followed Congress's specific mandate under section 107 of the FFCA, or, in the alternative, that the EPA had made an unreasonable interpretation of the congressional directive. n188

1. The Military Toxics Project's Arguments

The MTP challenged the EPA's legal authority in promulgating the Munitions Rule on two primary points. n189 First, the MTP attacked the EPA's threshold definitions of when munitions become solid waste, and are therefore subject to RCRA regulation. n190 The MTP argued that

the intended-use principle as applied to military munitions was arbitrary and capricious for three reasons: (1) the intended use principle is inapposite to military munitions because once a fired munition hits the ground, the UXO or explosive residue serves no further purpose; n191 (2) the Munitions Rule is internally inconsistent because it does not regulate fired munitions that are left undisturbed, but does regulate munitions that are subsequently buried after firing; and (3) the EPA has not consistently applied its intended-use interpretation because, while a spent munition lying undisturbed on a firing range is not a solid waste, a spent munition that lands off-range is a solid waste "if it is not promptly rendered safe and/or retrieved." n192

Second, the MTP challenged the EPA's conditional exemption for munitions stored and/or transported in accordance with DDESB standards. n193 The MTP argued that the conditional exemption was not authorized by RCRA section 3001(a), n194 is prohibited by RCRA section 3004(y), n195 and is arbitrary and capricious because the DOD transportation and storage regulations are not as protective as the Subtitle C regulations. n196

I*4911 2. The Findings of the D.C. Circuit

a. *The Intended-Use Principle*

i. *Chevron* Analysis

The *Military Toxics Project* court first evaluated the intended-use principle used by the EPA in the Munitions Rule. n197 In applying step one of the *Chevron* analysis, the court looked to section 3004(y) of RCRA, as amended by section 107 of the FFCA. n198 The statute required the EPA to "adopt regulations identifying when military munitions become hazardous waste for the purposes of [Subtitle C]." n199 The MTP argued that the use of the word "when" in the statute contemplated that all military munitions would be subject to Subtitle C regulation. n200 While the court found that the MTP's interpretation was not unreasonable, it stated that "we think it hardly rises to the level of 'the unambiguously expressed intent of Congress' required for the petitioner to prevail under *Chevron* step one." n201

In applying the second step of the *Chevron* analysis, the D.C. Circuit summarily determined that the EPA had made a reasonable interpretation of the statute in excluding certain munitions from the definition of solid waste. n202

ii. Arbitrary and Capricious Review

The D.C. Circuit proceeded to evaluate the EPA's intended-use principle under an arbitrary and capricious review. n203 Addressing the MTP's first argument, the court found that although the distinction between military munitions and products which continue to serve a function after application to the land was reasonable, the EPA's policy was rational and consistent with other EPA policies. n204

Second, the court found that the intended-use principle of the Munitions Rule was not internally inconsistent in treating munitions landing on a firing range as different from munitions intentionally **I*4921** buried or landfilled. n205 The court found that because munitions were not produced to be buried or landfilled, burial of munitions therefore evinced an intent to discard, and the EPA's policy was sound. n206 The court further stated that a "difference in regulatory treatment does not evince a logical flaw in the final Rule." n207

Finally, the D.C. Circuit determined that the difference in treatment between munitions that land off-range and those that land on-range did not constitute an inconsistency in the Munitions Rule. n208 The court distinguished that the difference in treatment resulted from differences in the regulatory and statutory definitions of solid waste. n209 Therefore, munitions landing off-range were subject to the statutory definition of solid waste, as imminent and substantial threats to human health and the environment, but were not held to the regulatory definition as promulgated by the Munitions Rule. n210 The court found that "because the EPA's interpretation of its own regulation is neither plainly erroneous nor inconsistent with the regulation, we accept it as controlling." n211

b. Conditional Exemption for Transportation and Storage of Non-Chemical Munitions

i. Chevron Analysis

The *Military Toxics Project* court also addressed the MTP's second claim, that the conditional exemption of munitions transported or stored pursuant to DOD and DOT regulations was inconsistent with the EPA's obligation to "propose . . . regulations" as RCRA and FFCA command. n212 The court determined that the statute required the EPA to undertake a two-step process: (1) to identify the conditions under which military munitions become hazardous waste; and (2) to promulgate regulations ensuring the safe transportation and storage of that hazardous waste. n213 Therefore, if the EPA has conditionally exempted certain munitions from hazardous waste classification, the obligation [*493] to promulgate regulations governing their transport and storage never arises. n214 Further, the court decided that because Congress had not spoken directly on the issue of conditional exemptions, the interpretation of the statute was left to the EPA's discretion under step two of the *Chevron* analysis. n215 Under the second step, the court found nothing in the statute that precluded the EPA's authority to grant conditional exemptions. n216

ii. Arbitrary and Capricious Review

The MTP also challenged the conditional exemptions on the ground that they arbitrarily exempted the military from certain restrictions under Subtitle C's manifest system which are not present under the corresponding DOD regulations. n217 The D.C. Circuit accepted the EPA's authority to rationally rely on other governmental agencies' regulatory programs in deciding not to regulate a particular waste as hazardous under Subtitle C. n218 However, the court did recognize that certain procedural gaps existed between RCRA and the DOD storage and transport requirements, but chose to defer to the EPA's judgment in finding that the procedural gaps did not "undermine the protection of human health and the environment in any significant way." n219

B. Legal and Policy Analysis of the Munitions Rule

Under section 107 of the FFCA, Congress directed the EPA to consult with the DOD in preparing a new rule regarding EPA oversight of military munitions under RCRA. n220 In accordance with Congress's directive, the EPA consulted extensively with the DOD in promulgating the new Munitions Rule. n221 The resultant Munitions Rule strikes a balance between public environmental concerns, explosives [*494] safety concerns, and the need to maintain combat readiness. n222 In light of the potentially stifling and burdensome regulatory oversight the EPA might have exercised over military use of munitions, the DOD staunchly supports the new Munitions Rule. n223

The DOD praises the EPA's policy under the Munitions Rule in accounting for the military's fundamental national defense mission of combat readiness. n224 In promulgating the Munitions Rule, the EPA used the discretion it was afforded by Congress under FFCA section 107, choosing to minimize EPA oversight of military environmental management, opting instead for military self-regulation. n225

The Munitions Rule has also been praised for avoiding duplicative environmental regulation. n226 The Munitions Rule expresses the EPA's recognition of the military's expertise and experience in the handling of military munitions. n227 Thus, the Munitions Rule avoids unnecessary administrative burdens and duplicative regulation. n228 The EPA acknowledges that DOD management practices ensure explosive safety and security, while at the same time protecting human health and the environment. n229

Critics of the Munitions Rule point to the extremely deferential nature of the regulation. n230 While the Munitions Rule has survived the MTP's judicial challenge unscathed, the soundness of the policies chosen by the EPA are not so easily accepted. n231 The EPA has undeniably granted the military a great deal of regulatory latitude. n232 First, the intended-use principle,

used to determine when munitions become hazardous waste, has proven quite controversial. n233 The choice not to regulate certain munitions by excluding them from the **[*495]** definition of solid waste under RCRA is a critical one, with potentially severe consequences. n234

Similarly, the determination of what uses constitute the "intended" uses of military munitions leaves to the DOD a great degree of regulatory flexibility. n235 The classification status of the activity in which the munition is used proves determinative as to the amount of regulatory oversight the EPA might exercise over the activity. n236 This creates inconsistencies in the degree of regulatory oversight for the same types of activities. n237

Finally, the conditional exemption for waste munitions that are stored or transported in accordance with DOD and DOT standards removes these materials from RCRA regulatory jurisdiction. n238 While DOD and DOT standards may prove equivalent to RCRA regulation, perhaps the better policy would provide a greater degree of EPA oversight to ensure DOD compliance. n239 As the conditional exemption stands, the EPA's jurisdiction is triggered only when DOD requirements are not followed or accidents which pose immediate and substantial threats occur. n240

Many of the policy considerations surrounding the Munitions Rule have manifested at Camp Edwards on Cape Cod in Massachusetts. n241 Camp Edwards has been the site of extensive weapons training since before World War II. n242 The result of this training is the accumulation of several decades worth of spent munitions and UXO which have leaked toxic chemicals into the groundwater. n243 Camp Edwards is **[*496]** representative of thousands of DOD and DOE bases across the nation where military practices went virtually unchecked during the Cold War. n244 Contamination as a result of military practices is a dangerous legacy, one which the Munitions Rule is intended to avert in the future. n245

For both proponents and critics of the Munitions Rule, the success of the regulation depends upon the military's willingness to regulate itself with genuine concern for protection of human health and the environment. n246 Admittedly, the military's environmental track record is not fully satisfactory. n247 The effectiveness of the Munitions Rule further depends upon the willingness of RCRA-authorized states to adopt the EPA's deferential regulations, and is grounded in the hope that a new military perspective regarding environmental compliance will prevail. n248

1. Support for the Munitions Rule

a. *The National Defense Mission: Minimizing EPA Oversight in the Name of Combat Readiness*

Congress recognized the potentially devastating effect that strict RCRA enforcement might have on the military's fundamental purpose of combat readiness. n249 While the policy behind the FFCA was to bring federal facilities into compliance with RCRA on an equal footing with state and local governments and private industry, n250 Congress made certain to advise the EPA to promulgate regulations specific to military munitions, accounting for the military's unique national defense mission. n251 Congress noted that while federal facility compliance **[*497]** with environmental regulations is a vital national priority, it is critical not to allow such regulation to unreasonably compromise the military's combat readiness. n252

The DOD has applauded the Munitions Rule for providing the military with the flexibility it needs to maintain the integrity of its training programs and weapons development. n253 At the same time, the DOD regards the Munitions Rule as sufficiently "protecting human health and the environment," in conformity with section 107 of the FFCA. n254

b. *The Intended-Use Principle: The EPA's Rational Policy Choice*

Under the intended-use principle of the Munitions Rule, the military may continue to train, research, and develop munitions unimpeded by the EPA's burdensome administrative and substantive requirements. n255 Military munitions are thus subject to RCRA's strict cradle-to-grave regulatory scheme only when they are not being used in accordance with their intended

use. n256

The Munitions Rule's intended-use principle derives from an established EPA precedent which provides that materials that involve application to the land as part of their ordinary manner of use are not solid wastes. n257 The reasoning goes that because such materials are applied to the land as part of their intended use, such application does not constitute abandonment, and therefore the materials are not solid waste under RCRA. n258 The EPA has applied the intended-use principle to munitions once before in *Connecticut Coastal Fisherman's Ass'n v. Remington Arms Co., Inc.* n259 In *Connecticut Coastal Fisherman*, the EPA filed a brief as *amicus curiae* extending its position that regulatory jurisdiction under RCRA does not apply to products, such as lead shot and clay targets, that are deposited on the land as incident to their ordinary manner of use. n260

The EPA's implementation of the intended-use principle for military munitions is a consistent and rational policy choice. n261 Conversely, if the EPA had determined that munitions were subject to RCRA regulation immediately after their discharge on to the land, the military would be subject to burdensome administrative and cleanup duties. n262 Such RCRA regulatory responsibilities would inherently obstruct the military's fundamental purpose of training soldiers, greatly complicating standard training procedures. n263 Moreover, such an obstruction directly conflicts with Congress's directive to the EPA under FACA section 107 to promulgate regulations specific to military munitions so as not to compromise military preparedness. n264 The EPA's application of the intended-use principle to military munitions avoids this result. n265

Ideally, the EPA's intended-use principle will not result in dangerous accumulations of munitions on firing ranges. n266 As noted by the D.C. Circuit in *Military Toxics Project v. EPA*, even though munitions are not subject to RCRA's regulatory system under the intended-use principle, munitions posing imminent and substantial hazards are subject to lawsuit under RCRA's Subtitle G statutory definition of hazardous waste. n267 Therefore, as a result of the distinction between the regulatory and statutory definitions of solid waste under RCRA, even munitions used for their intended purpose, and exempt from RCRA's [*499] cradle-to-grave regulatory scheme, are subject to RCRA's citizen-suit provision and EPA intervention. n268

The EPA's involvement at Camp Edwards provides a good example of the effectiveness of the Munitions Rule and the availability of a RCRA Subtitle G action. Under the Munitions Rule, the EPA would not have had the regulatory oversight to monitor munitions use at Camp Edwards as long as the National Guard used the munitions for their "intended purpose." n269 However, the EPA has exerted its authority to intervene under RCRA's Subtitle G. n270 The EPA based its authority to abate "imminent and substantial" hazards on the detection of munitions-related wastes in the groundwater near the impact area of the firing ranges at the base (Impact Area). n271 Since discovery of the munitions-related contamination, the EPA has issued administrative orders prohibiting the use of munitions at the base and commanding that the military undertake extensive groundwater and soil testing and range clearance. n272 Therefore, despite the deferential nature of the Munitions Rule, the EPA would have little difficulty in legally justifying intervention to correct situations that present imminent and substantial danger to human health and the environment. RCRA's Subtitle G thus supplants the Munitions Rule when necessary.

c. Avoiding Duplicative Regulation: RCRA and the Military's Unique Expertise

While the Munitions Rule minimizes EPA regulation of military munitions under RCRA, it does so in an area where Congress recognizes that the military has undeniable experience and expertise. n273 Congress specifically mandated the Administrator of the EPA to [*500] evaluate DOD munitions' policies and practices before promulgating the Munitions Rule. n274 A review of the legislative record makes it clear that Congress intended that the EPA modify RCRA regulations where DOD regulations already provide safety management and adequate protection of human health and the environment. n275 As the House Committee on Energy

and Commerce reported:

Industrial processes, which RCRA was written to cover, are not designed to kill anyone. But military munitions are designed to do exactly that. . . . Regulations intended to apply to industrial processes may not make sense when applied to military munitions. . . . Requirements under RCRA will have to be modified to accommodate the special requirements of military munitions. n276

The Munitions Rule is the pragmatic result of the EPA's evaluation of DOD safety standards, and comports with Congress's mandate under the FFCA. n277

The conditional exemption provided by the Munitions Rule for the storage and transport of munitions reflects Congress's and the EPA's recognition of the DOD's unique munitions-related experience and expertise. n278 As Congress noted, and the EPA has recognized, the imposition of RCRA's environmental regulations in military scenarios could lead to disastrous results. n279 For example, Congress remarked that bomb disposal personnel should not be forced to consider all of the requirements of RCRA if they lead to increased safety hazards for those personnel, particularly in emergency situations. n280

[*501] The EPA determined that the most reasonable way to achieve Congress's goal was to allow the DOD to continue to follow DDESB munitions management standards and DOD and DOT transportation standards rather than impose a second regulatory scheme under RCRA. n281 The EPA based its conclusion on both the protective nature of the DDESB standards and the military's record of safe storage and transport of military munitions. n282

i. The DOD's Storage and Transportation Standards

The EPA found that the DDESB storage requirements, and the DOD and DOT shipping requirements for munitions, provided an adequate level of protection of human health and the environment, and was equivalent to the RCRA manifest system. n283 The EPA stated, "it is not necessary to regulate a waste as hazardous where the wastes are already adequately regulated, and reasonable mismanagement scenarios have thereby been controlled." n284

The EPA has concluded, and the courts have affirmed, that it has the legal authority to provide a conditional exemption for certain **[*502]** wastes from RCRA standards. n285 The EPA has determined that RCRA section 3001 provides the EPA with flexibility, in deciding whether to list or identify certain wastes as hazardous waste, to consider the need for such regulation. n286 Section 3001 specifically authorizes the EPA to decide whether a particular waste "should be subject to the requirements of Subtitle C." n287 Therefore, the EPA has concluded that it has the authority to determine if RCRA Subtitle C regulation of a particular waste is appropriate. n288

RCRA directs the EPA to regulate hazardous waste generators, transporters, and treatment, storage, and disposal facilities "as necessary to protect human health and the environment." n289 Therefore, by extension, the EPA has determined that the decision to subject a waste to the requirements of Subtitle C regulation as a hazardous waste is "a question of whether regulatory controls promulgated under sections 3002-04 are necessary to protect human health and the environment." n290 One guideline the EPA has consistently utilized in evaluating the potential danger a particular waste poses to human health and the environment is whether other regulatory programs already address the hazard posed by the particular waste. n291

The EPA concluded that the documentation requirements used by the DOD in the shipping of munitions were equally as effective as RCRA's manifest system. n292 Similarly, the EPA found that the DOD's storage standards under the DDESB requirements provided a safety **[*503]** net equal to the manifest requisite under RCRA. n293 Furthermore, the EPA determined that the DOD's storage and transportation requirements offered a better level of security than RCRA did. n294 Thus, the DOD transportation requirements under DOD and DOT standards, and the storage requirements under DDESB standards, provide a level of protection of human health and the environment equal to that of the RCRA manifest system. n295 Imposing RCRA regulations in

addition to the DOD standards is duplicative, unnecessary, and perhaps worse, an impediment to the safe handling of military munitions.

ii. The DOD's Record in Munitions Storage and Transportation

The EPA also based its conditional exemption for the transportation and storage of waste munitions on the military's good record of munitions handling. n296 With regard to the military's record of shipping waste munitions, the EPA reviewed the United States Army's Technical Center for Explosives Safety Information Database as well as the DDESB's Historical Accident Database. n297 The EPA found that of approximately 45,000 shipments of military munitions made annually, only a very small percentage would involve waste munitions as defined under the Munitions Rule. n298 Further, in the last twenty years, there have been only eighteen mishaps involving commercial carriers of military munitions, of which only six accidents resulted in fires or detonation that affected the munitions cargo. n299

With regard to the storage of waste munitions, the EPA reviewed documentation concerning incidents involving the handling of DOD munitions. n300 The EPA found that although there have been incidents over the years involving munitions detonation that have caused personal injury and property damage, few of these incidents involved waste munitions as defined by the Munitions Rule. n301 Moreover, given the vast quantities and the dangerous nature of the munitions handled [§ 504] by the DOD, these few incidents of mismanagement represent a miniscule percentage of the DOD's overall record. n302

2. Criticism of the Munitions Rule

a. *The Intended-Use Principle: The EPA's Dissimilar Treatment of Similarly Situated Munitions*

i. Use Versus Effect

While the EPA has applied the intended-use principle in the past for items that involve application to the land in their ordinary manner of use, such as pesticides, fertilizers, and construction explosives, the logic of this principle is uncertain. An important criticism of the intended-use principle is that it ignores the effect of the product's application to the land, instead focusing on the manner in which the product is used. n303 As many critics have noted, military munitions do not serve a function after they have been applied to the land. n304 The EPA responds simply that the "interpretation focuses on whether a product was used as it was intended to be used, not on whether the purpose of the product is to perform some function on the ground." n305 The D.C. Circuit affirmed that the EPA's policy choice was within the EPA's reasonable interpretation of the congressional mandate, and was not arbitrary and capricious. n306 However, the court did note that "the distinction *Military Toxics Project* draws between munitions and other chemicals applied to the ground is perhaps a reasonable one." n307

Under the intended-use principle, the military is under no regulatory obligation to clean up its training areas because munitions that have landed on the ground are still "legally" being used for their intended purpose under the Munitions Rule. n308 Therefore, spent munitions and UXO may accumulate within Impact Areas, allowing the [§ 505] munitions residue to seep into the ground. n309 Not until the leaking and deteriorated munitions present an imminent and substantial hazard sufficient to qualify for an EPA administrative order or citizen suit under Subtitle G will the military be forced to clean up training areas. n310

In promulgating the Munitions Rule, the EPA refused to acknowledge that the accumulation of munitions on training ranges was a proven cause of ground or surface water contamination, despite significant evidence to the contrary. n311 As Camp Edwards and several other military training installations across the nation illustrate, contamination from training ranges is a real and potent threat to human health and the environment. n312 Further, history shows that without independent pressure, the military will allow such accumulation to occur. In dismissing the potential for munitions-related contamination at training ranges, the EPA ignored Congress's mandate that the Munitions Rule sufficiently protect human health and the environment. n313 [§ 506]

3. Classifications of Intended Uses

A further criticism of the EPA's incorporation of the intended-use principle results from the EPA's broad definition of intended uses of military munitions. n314 The Munitions Rule provides that training is an intended use of military munitions, including training military personnel in the destruction of spent munitions, UXO, and unused munitions and propellants. n315 Further, weapons testing and research is unregulated under the Munitions Rule as an intended use. n316 The EPA has also determined that the collection and destruction of spent munitions and UXO, if done for either range maintenance or research, is an unregulated intended use of military munitions. n317 In total, these intended-use determinations are ultimately left to the military's own discretion. n318 The military thus has a great deal of regulatory latitude in how it categorizes its munitions activities. n319

The latitude afforded the military leads to inconsistencies within the Munitions Rule. n320 Similarly situated munitions are treated differently under the Rule. n321 When conducting on-range destruction of spent munitions and UXO, the military may classify its actions as "range maintenance" and avoid Subtitle C regulations. n322 The military may also collect, transport, and store waste munitions under the guise of "research" and "weapons testing." n323 Similarly, the military may destroy unused military munitions and propellant and categorize the activity as "training" personnel in the proper destruction of such materials. n324 In each of the foregoing examples, these same activities would be subject to strict RCRA regulation if classified as disposal activities. n325 For example, in Makua Valley, Hawaii, the Army conducts ninety-five percent of its open-burn, open-detonation under the rubric of "training," and is therefore exempt from EPA oversight under [*507] the Munitions Rule. n326 In classifying its open-burn, open-detonation as training, the Army thus uses the munitions for its "intended purpose" and therefore is not evidencing an intent to discard the munitions. n327 However, if the military were to conduct the same destruction of munitions for the purposes of "disposal," the activity would be subject to strict RCRA Subtitle C regulation and permitting requirements. n328

a. *Gaps Between the RCRA and DOD Transportation and Storage Standards*

Although the court in *Military Toxics Project v. EPA* upheld the EPA's conditional exemption for munitions stored or shipped in accordance with DOD and DOT standards, the basis for the EPA's conditional exemption is not consistent with the congressional record. n329 The EPA based its conditional exemption on two grounds: (1) the fact that DOD and DOT transportation and storage requirements provided an equivalent level of protection of human health and the environment as the RCRA requirements; and (2) the military's "good safety record." n330 The D.C. Circuit upheld the EPA's interpretation that the DOD and DOT requirements were equivalent to RCRA's regulatory scheme. n331 Importantly, however, the court declared that it found "nothing in [the statute] § 3004(y) that would restrict the ability of EPA to grant conditional exemptions for military munitions." n332

After reviewing the congressional record, it is clear that the military's poor record of storage and transport was an integral purpose in enacting the FFCA. n333 As one congressional report supporting FFCA enactment states, "significant non-compliance by DOD facilities involving violations in tracking hazardous waste shipments, hazardous waste container management, and ground water monitoring continues to be reported by the EPA." n334 This report is in direct contradiction to the EPA's findings that the DOD had a "good safety record" for the storage and transport of munitions. n335

[*508] Further, the logic upon which the conditional exemption is based is that if a military transporter or storage facility fails to comply with the DOD and DOT requirements, then the waste munitions are immediately subject to RCRA regulatory jurisdiction. n336 However, RCRA was created as a prophylactic measure, tracking wastes and implementing regulations to reduce the possibility of the escape of hazardous wastes. n337 If the military has a poor record of complying with hazardous waste management regulations, and the EPA declines to oversee the military's hazardous waste management, RCRA's strict cradle-to-grave regulatory scheme is undermined. n338 As United States Senator John Kerry wrote in a 1996 letter to EPA

Administrator Carol Browner urging the EPA to regulate munitions at military bases: we have learned that retrospective cleanup programs are not an adequate substitute for effective, prospective regulation of the pollution caused by weapons testing and stock-piles. . . . Such programs are very slow to remedy severe hazards, and it is not cost effective to wait several decades to address problems which are avoidable today. n339

Under the Munitions Rule, RCRA regulation will not be triggered until failure to comply with the DOD and DOT standards has been reported to the EPA. n340 RCRA is therefore triggered after the fact, not during the process of shipping or storage where it is intended to prevent accidents. n341 Therefore, the Munitions Rule's conditional exemption is in contravention of the spirit and intent of both RCRA and the FFCA.

b. The Munitions Rule: An End-Run Around the FFCA and RCRA

The Munitions Rule contains a potentially substantial loophole in the RCRA regulatory scheme. n342 This loophole, if exploited, would allow the military to accomplish under the Munitions Rule what it could not legally do under RCRA without strict EPA or state oversight. n343 **[*509]** The EPA has recognized the potential for "sham training," where the military conducts waste disposal activities under the guise of "training" to circumvent the EPA's regulatory oversight. n344 In light of this recognition, however, the EPA declined to impose more stringent RCRA regulation given the unique nature of military activities and the need for training. n345 The ultimate discretion as to the classification of a munitions-related activity therefore rests with the DOD. n346

For example, a standard training practice for artillery units is to burn unused propellant bags at the end of training exercises, a practice that simulates actual combat, where such a practice would take place to keep the propellant from falling into the enemy's hands. However, the propellants, which contain possible carcinogens, have been found in high concentrations in the soil and groundwater at Camp Edwards. n347 The use of such propellants at Camp Edwards has been suspended by administrative order from the EPA. n348

This loophole in the RCRA scheme is in contravention of the spirit and intent of the FFCA. n349 The FFCA was enacted to ensure federal compliance with RCRA's strict cradle-to-grave regulatory scheme. n350 Section 107 of the FFCA authorizes the EPA to promulgate regulations specific to military munitions. n351 This section evinces Congress's intent that military munitions be subject to a different standard than other potentially hazardous products under RCRA. n352 It is clear from the congressional record, however, that Congress did not **[*510]** intend that military munitions avoid RCRA regulation based on differences in the classification of munitions-related activities. n353

Congress specifically cited the DOD's poor record in hazardous waste management as its motivation in enacting the FFCA. n354 Further, a report to Congress attributed the DOD's poor record of hazardous waste management to, among other reasons, "ignorance of, and lack of attention to, the consequences of environmental contamination; and *decades of self-regulation, without independent oversight or meaningful public scrutiny.*" n355 The FFCA was enacted to alleviate the hazardous waste management problems associated with federal facilities, particularly DOD facilities which have been acknowledged by Congress. n356 Under the Munitions Rule's intended-use principle and conditional exemptions, the DOD is granted essentially the same degree of self-regulation it exercised prior to enactment of the FFCA. n357

Compounding the self-regulation afforded the DOD under the Munitions Rule is the military's ignominious record of ignorance and laxity with regard to environmental concerns. n358 The congressional report accompanying the FFCA is replete with references and examples of military indifference to its environmental problems. n359 Congress was also presented with numerous letters from state attorneys general and state program officials, which were made part of the congressional report, underscoring the need to enforce and oversee RCRA compliance at military facilities. n360 The self-regulation afforded **[*511]** the DOD under the Munitions Rule, in light of the congressional record discussed above, appears inconsistent with Congress's intent

in enacting section 107 of the FFCA. n361 Perhaps a more extensive review of the congressional record in *Military Toxics Project* might have convinced the court that Congress did not intend for the EPA to provide the DOD with such extensive self-regulation. n362

IV. CAMP EDWARDS: ENVIRONMENTAL BATTLEGROUND

The controversy surrounding regulation of military munitions is playing out at military bases across the nation. n363 A good example is Camp Edwards, a National Guard training base located on Cape Cod in Massachusetts, where the contamination from decades of small and heavy arms training is only now being fully realized. n364 The debate has implicated a wide-range of federal, state, and local agencies and branches of government, as well as numerous concerned citizens coalitions. n365

A. Camp Edwards's Facilities

Camp Edwards has been the site of military training since 1911. n366 The heaviest period of combat training occurred during the I*512I World War II era of the 1940s. n367 While it is believed that no chemical munitions training took place at Camp Edwards, the base's firing ranges have supported small-arms, artillery, tank, mortar, and various other weapons training. n368 In the 1970s, the base was turned over from the DOD to the Massachusetts National Guard. n369

The training advantage of Camp Edwards is noteworthy. While critics maintain that the base is nothing more than a training site for "part-time soldiers," a criticism leveled at the National Guard's use of the base, Camp Edwards is considered the only training area in the Northeast capable of supporting brigade-size deployment operations as well as artillery ranges. n370 Camp Edwards has been used extensively by the Massachusetts Army National Guard, National Guard units from surrounding states, law enforcement personnel, and regular United States Army and Marine Corps units. n371 It has been estimated that prior to the 1997 EPA Administrative Order halting live-fire training, military and law enforcement personnel fired roughly 1.8 million lead rounds each year into embankments at twenty-seven firing ranges within the Camp Edwards compound. n372

Camp Edwards could not be in a more environmentally fragile location. The Cape Cod Aquifer is the sole and principal source of drinking water for an estimated 200,000 residents year round, and 520,000 during Cape Cod's thriving summer months. n373 The Impact Area for the Camp Edwards artillery range sits directly atop the Sagamore Lens, the portion of the Cape Cod Aquifer identified as the source most capable of supplying sufficient water to satisfy future demand for drinking water on Cape Cod. n374 It is projected that by the year 2020 there will be a water shortage of between 9.8 and 11 million gallons per day for the regional water supply. n375 In addition, the soil of I*513I Cape Cod is highly permeable, making the aquifer highly susceptible to munitions-related contamination. n376 Preserving the integrity of this freshwater source is critical to sustaining the population of Cape Cod. n377

B. Munitions-Related Contamination

After discovering trace contamination in test wells located on the base, the EPA issued an administrative order in February 1997, directing the National Guard Bureau (NGB) n378 to investigate contamination at or emanating from the Camp Edwards training range. n379 Based upon preliminary findings, the EPA issued a second administrative order in April 1997, requiring the NGB and the Massachusetts National Guard to cease live-fire training activities. n380

Munitions-related contamination at the Camp Edwards training range consists of various metals, explosive compounds, and propellants. The primary contaminants at the base are: (1) lead, a metal used in most small arms ammunition and mortars; n381 (2) trinitrotoluene (TNT), Royal Dutch Explosive (RDX), and High Melting Explosive (HMX), explosive compounds used for grenades, as well as mortar, rocket, and artillery firing; n382 and (3) nitroglycerin, a propellant I*514I component used for mortar and rocket firing. n383 The EPA noted that the detection

of contaminants in soil and groundwater samples taken at the base demonstrated an immediate and substantial threat of contamination of the Sagamore Lens, a portion of the sole source aquifer underlying Cape Cod. n384

On January 7, 2000, over strong objections by the DOD, the EPA boldly acted to prevent further damage to the Cape's water supply. n385 In light of the significant evidence that the base's ranges were polluting the Sagamore Lens, the EPA issued an administrative order requiring the National Guard to clean Camp Edwards' six critical sites of all UXO and munitions-related contamination by October 2000. n386 EPA Administrator Carol Browner remarked, "today's landmark action will mean the improved protection of public health and the environment for Cape Cod as that community enters the 21st century." n387

Importantly, the EPA did not use its authority under RCRA's Subtitle G to issue the landmark order. Instead, the EPA issued the order pursuant to its authority under the Safe Drinking Water Act (SDWA), n388 which provided the EPA with unilateral authority to order the work. n389 The EPA specifically decided against pursuing a course [*515] under RCRA and/or the FFCA because these statutes do not give the EPA the same range of authority that the SDWA offers. n390

The EPA's order is revolutionary, marking the first time the EPA has required the military to clean up a training range. n391 If the EPA's order stands, it will set national precedent for the estimated 24 million acres of land throughout the United States currently used by the military as firing ranges. n392 Camp Edwards is thus a proving ground for the national debate over environmental regulation of military training ranges.

C. From Weapons Training to Nature Preservation

Prior to the EPA's order demanding the cleanup of Camp Edwards, Massachusetts Governor Paul Cellucci filed a bill that he hopes will alleviate the controversy by preserving the environment while allowing some training to take place. n393 As filed, the bill would permanently designate the 15,000 acres at Camp Edwards as conservation land. n394 Under separate executive orders, Governor Cellucci created a three-member Upper Cape Water Supply Commission (UCWSC) made up of state environmental officials, to oversee the new conservation land. n395 The UCWSC's primary directives are to develop regulations to manage the new conservation land and to determine what types of military training activities would be compatible. n396 Finally, a [*516] fifteen-member citizen's panel, comprised of officials and residents from Cape Cod, as well as a military representative, will advise the UCWSC. n397

While the bill has gained unanimous approval from the Massachusetts legislature's Committee on Natural Resources and Agriculture, it still must pass the both the House and Senate before it returns to Governor Cellucci to be signed into law. n398 EPA Regional Administrator John DeVillars has spoken in support of the bill at legislative hearings, but the transfer of the base is now contingent upon the NGB's compliance with the EPA order. n399

CONCLUSION

The Camp Edwards controversy is representative of thousands of DOD sites across the nation. A vast number of these sites pose imminent and substantial danger to human health and the environment resulting from Cold War policies and massive weapons development, production, and training. Enforcing RCRA compliance at these polluted sites was of critical concern to Congress in enacting the FFCA, which will hold federal facilities equally as accountable for environmental contamination as private industry and municipalities currently are.

The Munitions Rule is the EPA's attempt to balance environmental regulation of the military establishment with the military's need to maintain combat readiness. The EPA followed the congressional mandate in promulgating very deferential regulations, finding that the regular use of military munitions is not subject to EPA oversight. The EPA's authority to issue these regulations under the congressional mandate gained judicial affirmation in *Military Toxics Project v. EPA*. n400 As with many regulations involving agency line-drawing, the Munitions Rule is a

balance of interests with which neither side of the political debate will be fully satisfied.

In one sense, the deferential nature of the Munitions Rule is pragmatic. The military has firmly incorporated regulations for the safe storage and transport of munitions. The military's experience in the use of munitions is uncontested. More importantly, the military [*517] must be allowed to prepare for and perform its vital duty of national defense, as Congress has recognized. The military in the information-age era of warfare requires extensive training and state of the art weapons technology. This, in turn, will require the continued use of military munitions in training exercises and weapons development.

Although the use of munitions is inherently destructive to the environment, the priority of national defense requires that military training continue. The military must be allowed to train somewhere. It is recognized by scholars and lawmakers that there are instances where environmental sacrifices will have to be made to preserve combat readiness. n401 The Munitions Rule allows for this national priority.

However, Camp Edwards is a perfect example of a place where an environmental sacrifice should not be made. The unique location of the base, atop the largest and only viable aquifer for Upper Cape Cod, does not fit the model for what should be a national sacrifice zone. In this instance, continued military training could result in devastating contamination of the sole drinking water source for over 200,000 residents.

Critics consider the Munitions Rule as another example of closed-door inter-agency pressure resulting in EPA deference to the DOD. While Congress directed the EPA to account for the DOD's national defense mission, it seemingly did not intend to provide the military with virtual autonomy in the environmental regulation of its munitions. Such an overly deferential policy is arguably in contravention of the spirit and intent of the FFCA and RCRA. Further, loop-holes in the logic of the Munitions Rule's intended-use principle provides the DOD with extensive latitude in classifying munitions uses. This simple difference in classification dictates the degree of regulatory oversight the EPA may exert under RCRA, and leaves to the military the choice of when EPA oversight is triggered. This is in light of the DOD's and the DOE's poor environmental compliance track record, which was cited by Congress in enacting the FFCA. Therefore, the Munitions Rule appears under-inclusive as to when the EPA will regulate military munitions, and provides the military with a perhaps unintended environmental autonomy. Only when the threat of danger to human health and the environment is immediate and substantial may the EPA take action under RCRA.

Admittedly, the EPA has conceded a certain degree of its regulatory oversight of the military establishment under the Munitions [*518] Rule, but these concessions are well-founded in light of national security implications. The Munitions Rule removes EPA oversight from the day-to-day management of military munitions. It does not, however, entirely remove EPA authority to control threats to human health and the environment. While the EPA may be precluded from regulating munitions under RCRA's Subtitle C, it may step in to do so under RCRA Subtitle G to abate imminent and substantial dangers. Similarly, as Camp Edwards shows, the EPA may utilize its authority to abate or prevent contamination under alternative statutes, such as the SDWA. The Munitions Rule must not be analyzed in isolation, but in conjunction with the full panoply of environmental regulations. From this perspective, it is apparent that the Munitions Rule, although providing the military with some self-regulation, does not thwart the EPA in pursuing its goal of protecting the environment.

Although the state of international relations currently allows the United States the opportunity to enforce environmental compliance by the military, we should not hasten to diminish our military's effectiveness in the process. In order for a military to be effective, it must be allowed to develop state-of-the-art weapons systems and conduct training operations using these systems. There must necessarily be national sacrifice zones where our soldiers can prepare for war using live-fire weapons. These zones must be carefully located to cause the least possible

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threat to human health and the environment. As Camp Edwards demonstrates, when a training range is not well located, the EPA has the authority to intervene and abate or prevent threats. The Munitions Rule will not hinder the EPA. The national debate is certain to play out at military training sites across the nation. Until then, all eyes will be focused on Camp Edwards.

FOOTNOTES:

n1 See Carnes Lord, *The Role of the United States in Small Wars*, in 541 THE ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE 89, 95 (1995). See generally LAWRENCE FREEDMAN, WAR (1995); DOUGLAS A. MacGREGOR, BREAKING THE PHALANX: A NEW DESIGN FOR LANDPOWER IN THE 21ST CENTURY (1997).

n2 See STEPHEN DYCUS, NATIONAL DEFENSE AND THE ENVIRONMENT 1 (1996); MacGREGOR, *supra* note 1, at 2-3.

n3 See THE LAWS OF WAR: CONSTRAINTS ON WARFARE IN THE WESTERN WORLD 9 (Michael Howard et al. eds., 1997).

N4 See DYCUS, *supra* note 2, at 1.

n5 See *id.*

n6 See MacGREGOR, *supra* note 1, at 2-3; Stephen Biddle, *Victory Misunderstood: What the Gulf War Tells Us about the Future of Conflict*, INT'L SECURITY, Fall 1996, at 139, 143.

n7 See MacGREGOR, *supra* note 1, at 2-3; Biddle, *supra* note 6, at 175.

n8 See THOMAS G. WEISS ET AL., THE UNITED NATIONS AND CHANGING WORLD POLITICS 73 (2d ed. 1997); Lord, *supra* note 1, at 95-97.

n9 See Lord, *supra* note 1, at 95-97. Examples of the modern scale of limited warfare, or "small wars," are: the U.N. mission in Somalia (1992-93); the U.N. peacekeeping mission in the former Yugoslavia (1992-present); the U.N. peacekeeping mission in Liberia (1993); the U.N. peacekeeping mission in Haiti (1993); the U.S. peacekeeping mission in Lebanon (1982-83); the U.S. incursions into Grenada (1983) and Panama (1989); the U.S. bombing of terrorist targets in Pakistan (1998); the international oversight of Iraqi aggression in the Persian Gulf (1991-present); and the U.N. peacekeeping mission in Indonesia (1999-present). See *id.* at 91-95.

n10 See MacGREGOR, *supra* note 1, at 2.

n11 See DYCUS, *supra* note 2, at 3; Lord, *supra* note 1, at 95.

n12 See MacGREGOR, *supra* note 1, at 2; Lord, *supra* note 1, at 95-97; Biddle, *supra* note 6, at 175.

n13 See MacGREGOR, *supra* note 1, at 2.

n14 See *id.*

n15 See DYCUS, *supra* note 2, at 4; MacGREGOR, *supra* note 1, at 3.

n16 See DYCUS, *supra* note 2, at 80.

n17 See *id.* at 99. According to the Defense Science Board, a Pentagon advisory group, it will cost an estimated \$ 15 billion to clean up just five percent of the 50 million acres of land used for bombing and target ranges by the military. See David Armstrong, *More Costly Cleanup on the Horizon*, BOSTON GLOBE, Nov. 14, 1999, at A32. The military is currently spending \$ 51 million per year to clean up training ranges. See *id.* The military's total environmental budget is \$ 3.5 billion annually. See *id.*; see also Anne Brennan & William Mills, *Failed Base Cleanup*, CAPE COD TIMES, Jan. 5, 1997.

n18 See DYCUS, *supra* note 2, at 99-100.

n19 See *id.* at 8.

n20 See *id.* at 185.

n21 See *id.* at 154-58. For examples of judicial deference to the military, see generally *Weinberger v. Romero-Barcelo*, 456 U.S. 305 (1982) (holding that, although the Navy must apply for a discharge permit under the Clean Water Act, an injunction is not called for as it might jeopardize national security and combat readiness); *Ohio v. United States Dep't of Energy*, 503 U.S. 607 (1992) (finding that the United States's sovereign immunity from liability for state penalties was not waived by either a federal facility or citizen suit provision); *Wisconsin v. Weinberger*, 745 F.2d 412 (7th Cir. 1984) (noting that violation of NEPA's procedural requirements is perhaps justified in cases of national security and well-being); *Maine v. Department of the Navy*, 973 F.2d 1007 (1st Cir. 1992) (finding no waiver of sovereign immunity from state penalties for CERCLA violations at Navy shipyard in Kittery, Maine).

n22 See DYCUS, *supra* note 2, at 3.

n23 *Id.*

n24 See *id.* at 4.

n25 See Lord, *supra* note 1, at 90.

n26 See DYCUS, *supra* note 2, at 4.

n27 Dick Cheney, Secretary of Defense, Address to the Defense and Environment Initiative Forum, Washington, D.C. (Sept. 3, 1990), *quoted in* DYCUS, *supra* note 2, at 2.

n28 See DYCUS, *supra* note 2, at 189.

n29 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n30 See *id.*

n31 See *id.*

n32 See 40 C.F.R. § 266.20 (West 2000); Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 Fed. Reg. 6622, 6628 (1997).

n33 See Federal Document Clearing House, *Military Toxics Project Discusses Results of Proposed EPA Rule on Defense Department Toxic Wastes*, Dec. 4, 1995, available in 1995 WL 712022 [hereinafter *MTP Press Conference*].

n34 See *Military Toxics Project v. EPA*, 146 F.3d 948,951 (D.C. Cir. 1998).

n35 See Lieutenant Colonel Bell, *Final Military Munitions Rule: An Overview*, 97 ARMY LAWYER 49, 49 (1997) [hereinafter *Bell II*].

n36 See DYCUS, *supra* note 2, at 158-59; J.B. Wolverton, Note, *Sovereign Immunity and National Priorities: Enforcing Federal Facilities' Compliance with Environmental Statutes*, 15 HARV. ENVTL. L. REV. 565, 568 (1991).

n37 See generally H.R. Rep. No. 102-111 (1991), reprinted in 1991 U.S.C.C.A.N. 1287.

n38 See DYCUS, *supra* note 2, at 2.

n39 See generally H.R. Rep. No. 102-111. Military non-compliance was the result of "a history of emphasizing the urgency of weapons production for national security, to the neglect of

health and environmental considerations; ignorance of, and lack of attention to, the consequences of environmental contamination; and decades of self-regulation, without independent oversight or meaningful public scrutiny." OFFICE OF TECHNOLOGY ASSESSMENT, UNITED STATES CONGRESS, OTA-484, COMPLEX CLEANUP: THE ENVIRONMENTAL LEGACY OF NUCLEAR WEAPONS PRODUCTION (1991). See also DYCUS, *supra* note 2, at 8.

n40 See Wolverton, *supra* note 36, at 569.

n41 See *id.* at 569-70.

n42 See DYCUS, *supra* note 2, at 158; Wolverton, *supra* note 36, at 570. The executive branch may, however, establish internal mechanisms to resolve interagency disputes. See DYCUS, *supra* note 2, at 158.

n43 See *id.*; Wolverton, *supra* note 36, at 570.

n44 DYCUS, *supra* note 2, at 158; see Wolverton, *supra* note 36, at 570.

n45 See Wolverton, *supra* note 36, at 570.

n46 See *Kendall ex rel. Stokes v. United States*, 37 U.S. 524, 610 (1838) (stating that "duty and responsibility grow out of and are subject to the control of the law, and not to the direction of the President."); *Morrison v. Olson*, 487 U.S. 654, 680-82 (1988); *Lear Siegler, Inc. v. Lehman*, 842 F.2d 1102, 1108-10 (9th Cir. 1988).

n47 See Wolverton, *supra* note 36, at 570-71.

n48 See *id.* at 570.

n49 See *id.* at 570-71.

n50 See DYCUS, *supra* note 2, at 158; Wolverton, *supra* note 36, at 572.

n51 See DYCUS, *supra* note 2, at 158-70.

n52 See *id.*

n53 See Wolverton, *supra* note 36, at 572-73.

n54 See *id.* at 573.

n55 See DYCUS, *supra* note 2, at 158-69.

n56 See Wolverton, *supra* note 36, at 573. See also DYCUS, *supra* note 2, at 68.

n57 See DYCUS, *supra* note 2, at 159; Wolverton, *supra* note 36, at 577.

n58 See generally 503 U.S. 607 (1992) (holding that, in enacting RCRA, Congress did not intend to waive the government's sovereign immunity from state-imposed punitive penalties for past RCRA violations by federal facilities).

n59 See *id.* at 627-29. The State of Ohio sought to impose civil penalties against the DOE for several years of violations of both RCRA and the Clean Water Act at the Fernald Feed Materials plant. The Supreme Court found that in neither statute did Congress explicitly waive the federal government's sovereign immunity and allow the imposition of punitive state penalties. See *id.* at 624-29.

n60 See DYCUS, *supra* note 2, at 154-58.

n61 See, e.g., *Wisconsin v. Weinberger*, 745 F.2d 412, 427 (7th Cir. 1984).

n62 See, e.g., *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 310 (1982); *Aluli v. Brown*, 437 F. Supp. 602, 611 (D. Haw. 1977).

n63 See DYCUS, *supra* note 2, at 7.

n64 See *id.*

n65 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n66 See *id.*

n67 See 40 C.F.R. § 266.20 (West 2000).

n68 See Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992k (1988 & Supp. V 1993). See also *Military Toxics Project v. EPA*, 146 F.3d 948, 950 (D.C. Cir. 1998).

n69 See 42 U.S.C. §§ 6921-6939e; ZYGMUNT J.B. PLATER, ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW AND SOCIETY 768-69 (1998).

n70 See DYCUS, *supra* note 2, at 81-84.

n71 See 42 U.S.C. § 6901; PLATER ET AL., *supra* note 69, at 763.

n72 42 U.S.C. § 6903(27).

n73 See *Connecticut Coastal Fisherman's Ass'n v. Remington Arms Co.*, 989 F.2d 1305, 1314 (2d Cir. 1993) (noting that "the RCRA regulations create a dichotomy in the definition of solid waste"); *Military Toxics Project*, 146 F.3d at 951 (stating that, "for purposes of Subtitle C the EPA has provided a regulatory definition of solid waste that is distinct from the statutory definition").

n74 See *Military Toxics Project*, 146 F.3d at 951.

n75 See 40 C.F.R. § 261.2(b) (West 2000).

n76 See *id.*

n77 See *Military Toxics Project*, 146 F.3d at 951.

n78 See *id.*

n79 See PLATER ET AL., *supra* note 69, at 764.

n80 See Resource Conservation and Recovery Act, 42 U.S.C. § 6925 (1988 & Supp. V 1993); 40 C.F.R. pt. 270. See also DYCUS, *supra* note 2, at 82.

n81 See PLATER ET AL., *supra* note 69, at 776-80. The manifest system provides a paper trail linking the generator, the transporter, and the TSD for every shipment of hazardous waste from creation to disposal. See *id.* at 776.

n82 See 42 U.S.C. §§ 6941-6949a.

n83 *Id.* § 6973(a).

n84 See *id.*; DYCUS, *supra* note 2, at 82.

n85 See 42 U.S.C. § 6972(a)(1)(B). This provision reads that citizens may sue those "who have contributed or who are contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." *Id.*

n86 See *Military Toxics Project v. EPA*, 146 F.3d 948, 951 (D.C. Cir. 1998).

n87 See 42 U.S.C. §§ 6921, 6972-6973; *Military Toxics Project*, 146 F.3d at 951.

n88 See 42 U.S.C. §§ 6921-6939e; *Military Toxics Project*, 146 F.3d at 951.

n89 See 42 U.S.C. § § 6921, 6972-6973; *Military Toxics Project*, 146 F.3d at 951.

n90 See *Military Toxics Project*, 146 F.3d at 951.

n91 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n92 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287.

n93 See generally *id.*; Federal Facility Compliance Act; Enforcement Authorities Implementation, 58 Fed. Reg. 49044, 49044 (1993).

n94 See 58 Fed. Reg. at 49044. "The Administrator shall initiate an administrative enforcement action against such department . . . in the same manner and under the same circumstances as an action would be initiated against any other person." 42 U.S.C. § 6961(b)(2); Federal Facilities Compliance Act § 102(b)(1). See 58 Fed. Reg. at 49044.

n95 See Federal Facilities Compliance Act § 103.

n96 See *id.*

n97 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287.

n98 See generally *id.* Congress stated that "RCRA must clearly be modified so that the military can conduct training exercises that fulfill their fundamental purpose of training soldiers." *Id.*

n99 *Id.*

n100 See generally *id.*; H.R. Rep. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n101 See Federal Facilities Compliance Act § 107.

n102 See *id.*

n103 See 40 C.F.R. § 266.20 (West 2000).

n104 See Federal Facilities Compliance Act § 107.

n105 See generally Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 Fed. Reg. 6622 (1997).

n106 See 40 C.F.R. § 266.20.

n107 See Federal Facilities Compliance Act § 107.

n108 See 40 C.F.R. § 266.202(a).

n109 See PLATER ET AL., *supra* note 69, at 763.

n110 See 40 C.F.R. § 261.2.

n111 See *id.* § 261.2(d).

n112 See *id.* § 262.3.

n113 See Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 Fed. Reg. 6622, 6625 (1997).

n114 See 40 C.F.R. § 261.2(a).

n115 See *id.* § 261.2(b).

n116 See *id.*

n117 See *id.*; see also *Military Toxics Project v. EPA*, 146 F.3d 948, 951 (D.C. Cir. 1998).

n118 See 40 C.F.R. § 266.202; 62 Fed. Reg. at 6625.

n119 See 62 Fed. Reg. at 6628.

n120 See *id.* at 6625.

n121 40 C.F.R. § 266.202(b); see 62 Fed. Reg. at 6626.

n122 See 40 C.F.R. § 266.202(b)(1); 62 Fed. Reg. at 6626. The Munitions Rule provides that the open burning/open detonation of unused munitions is subject to RCRA Subtitle C regulation because such activity is a waste management activity. However, if the open burning/open detonation occurs as an incident to the intended use of the munitions, such as the firing of military rounds or the training in the destruction of the munitions, they are not subject to RCRA regulation. See 62 Fed. Reg. at 6626.

n123 See *id.* at 6631.

n124 See *id.* at 6626.

n125 See 40 C.F.R. § 266.202(b)(2); 62 Fed. Reg. at 6626.

n126 See 62 Fed. Reg. at 6627.

n127 See *id.* In the comment accompanying the Munitions Rule, the EPA explained that it chose the intent-based test, in part, because "it involves a minimum of interference with the military's established and proven system for managing unused munitions, and it will not conflict with the Service's logistical needs or constraints." *Id.* at 6627 n.4. Further, the EPA determined that the military's storage standards and practices under the Department of Defense Explosives Safety Board (DDESB) offer a comparable, if not better degree of protection than RCRA regulation would provide. See *id.*

n128 40 C.F.R. § 266.202(b)(3). The EPA defines "deteriorated or damaged" to require that the integrity of the munition is compromised by cracks, leaks, or other damage. See 62 Fed. Reg. at 6627.

n129 See *id.*

n130 See *id.*

n131 See 40 C.F.R. § 266.202(b)(4); 62 Fed. Reg. at 6627.

n132 See 62 Fed. Reg. at 6627.

n133 See *id.*

n134 See *id.* at 6625. The EPA likens the use of military munitions to the use of pesticides by farmers and the use of explosives during quarrying or construction activities. See *id.* In these cases, the application of the product to the land is a necessary and intended purpose of the use of that product and is therefore not regulated by RCRA. See *id.*

n135 See 40 C.F.R. § 266.202(a).

n136 See 62 Fed. Reg. at 6628.

n137 See 40 C.F.R. § 266.202(a)(1)(i).

n138 See *id.* § 266.202(a)(1)(ii).

n139 See *id.* § 266.202(a)(1)(iii).

n140 See *id.* § 266.202(a)(1)(i)-(iii).

n141 See *id.* § 266.202(a)(1)(i).

n142 See Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 *Fed. Reg.* 6622, 6628 (1997).

n143 See *id.*

n144 See *id.*

n145 See 40 C.F.R. § 266.202(a)(1)(ii).

n146 See 62 *Fed. Reg.* at 6628.

n147 See *id.*

n148 See 40 C.F.R. § 266.202(a)(1)(iii); 62 *Fed. Reg.* at 6628. In contrast, however, the EPA has banned both live-fire training and the on-site destruction of UXO discovered at the Camp Edwards firing ranges due to the threat of release of propellant/contaminants posing harm to the public. See EPA Administrative Order SDWA-1-1997-1019 [hereinafter *EPA Order I*]; EPA Administrative Order SDWA-1-1997-1030 [hereinafter *EPA Order III*].

n149 See 40 C.F.R. § 266.202(a)(1)(iii); 62 *Fed. Reg.* at 6628.

n150 See 40 C.F.R. § 266.202(c).

n151 See *id.*

n152 See *id.*

n153 *Id.* § 266.202(d); see 62 *Fed. Reg.* at 6632.

n154 See 62 *Fed. Reg.* at 6632.

n155 See *id.* The EPA likens the failure to retrieve and render safe munitions that land off-range to the failure to respond to the spill of a hazardous material. In both instances, the EPA believes that failure to respond indicates the requisite intent to discard. See *id.*

n156 See PLATER ET AL., *supra* note 69, at 768.

n157 See Resource Conservation and Recovery Act, 42 U.S.C. § 6924(y)(1) (1988 & Supp. V 1993).

n158 See 62 *Fed. Reg.* at 6636; see also Bell I, *supra* note 35, at 49.

n159 See Bell I, *supra* note 35, at 49.

n160 40 C.F.R. § 266.203(a) (West 2000); see 62 *Fed. Reg.* at 6634.

n161 See 40 C.F.R. § 266.203(a); 62 *Fed. Reg.* at 6634.

n162 See 40 C.F.R. § 266.203(a); 62 *Fed. Reg.* at 6634. Munitions shipments must comply with existing DOD shipping administrative requirements such as the use of a Government Bill of Lading (GSF SF 1109), Requisition Tracking Form (DD Form 1348), Signature and Talley Record (DD Form 1907), Special Instructions for Motor Vehicle Drivers (DD Form 836), and Motor Vehicle Inspection Report (DD Form 626). See Bell I, *supra* note 35, at 51.

n163 See 40 C.F.R. § 266.203(a).

n164 See *id.* § 266.205.

n165 See *id.*; Bell I, *supra* note 35, at 51.

n166 See 40 C.F.R. § 266.205.

n167 See Resource Conservation and Recovery Act, 42 U.S.C. § 6926 (1988 & Supp. V 1993); 62 Fed. Reg. at 6648.

n168 See 42 U.S.C. § § 6928, 6933, 7003; 62 Fed. Reg. at 6648.

n169 See 42 U.S.C. § 6929; 62 Fed. Reg. at 6648.

n170 See 42 U.S.C. § 6929; 62 Fed. Reg. at 6648.

n171 See 42 U.S.C. § 6929; 62 Fed. Reg. at 6648; Major Richard M. Lattimer, Jr., *Myopic Federalism: the Public Trust Doctrine and Regulation of Military Activities*, 150 MIL. L. REV. 79, 140 (1995).

n172 See 62 Fed. Reg. at 6648.

n173 See 40 C.F.R. § 266.202(d) (West 2000); 62 Fed. Reg. at 6648.

n174 See 40 C.F.R. § § 264.1(g)(8)(iv), 265.1(c)(11)(iv), 270.1(c)(3)(iii); 62 Fed. Reg. at 6648.

n175 See 62 Fed. Reg. at 6649.

n176 See *id.*; Bell I, *supra* note 35, at 52; Lattimer, *supra* note 168, at 140.

n177 See 40 C.F.R. § § 260-270.

n178 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n179 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287.

n180 See Federal Facilities Compliance Act § 107; H.R. Rep. No. 102-111; H.R. Rep. No. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n181 See Federal Facilities Compliance Act § 107; H.R. Rep. No. 102-111; H.R. Rep. No. 102-886.

n182 See generally *Military Toxics Project v. EPA*, 146 F.3d 948 (D.C. Cir. 1998). The MTP, represented by two law students from the University of Maryland, describes itself as "a coalition of grassroots community groups, veterans, active military personnel, environmental justice networks, and labor, all working together toward preventative solutions to the Department of Defense pollution." See *MTP Press Conference*, *supra* note 33.

n183 See *Military Toxics Project*, 146 F.3d at 948; *MTP Press Conference*, *supra* note 33.

n184 See *Military Toxics Project*, 146 F.3d at 953; Lieutenant Colonel David Bell, *Court Reviews EPA's Munitions Rule*, available at <<http://aecwww.apgea.army.mil:8080/prod/usaec/op/update/sum98/epa-rule.htm>> (hereinafter Bell III).

n185 *Military Toxics Project*, 146 F.3d at 954.

n186 *Id.* See generally *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984). Step one of the *Chevron* two-step analysis gives the court a great deal of latitude in determining whether Congress has "directly spoken" to the "precise question at issue." PLATER ET AL., *supra* note 69, at 429. Further, much of this analysis depends upon the extent of the court's review of congressional intent. See *id.* For example, will courts look only to the statutory language of the provision at issue, or will they consider the full legislative history? See *id.*

n187 See *Military Toxics Project*, 146 F.3d at 954.

n188 See *id.*; see also PLATER ET AL., *supra* note 69, at 429-30.

n189 See *Military Toxics Project*, 146 F.3d at 953; Bell II, *supra* note 184.

n190 See *Military Toxics Project*, 146 F.3d at 953; Bell II, *supra* note 184.

n191 See *Military Toxics Project*, 146 F.3d at 955.

n192 *Id.*

n193 See *id.* at 953; Bell II, *supra* note 184.

n194 See Resource Conservation and Recovery Act, 42 U.S.C. § 6921(a) (1988 & Supp. V 1993).

n195 See *id.* § 6924(y).

n196 See *Military Toxics Project*, 146 F.3d at 957.

n197 See *id.*

n198 See *id.* at 955.

n199 *Id.*

n200 See *id.*

n201 *Military Toxics Project*, 146 F.3d at 955.

n202 See *id.*

n203 See *id.*

n204 See *id.*

n205 See *id.* at 956.

n206 See *Military Toxics Project*, 146 F.3d at 956.

n207 *Id.*

n208 See *id.*

n209 See *id.*

n210 See *id.*

n211 *Military Toxics Project*, 146 F.3d at 956.

n212 *Id.* at 957.

n213 See *id.* at 958.

n214 See *id.*

n215 See *id.*

n216 See *Military Toxics Project*, 146 F.3d at 958.

n217 See *id.*

n218 See *id.* at 959.

n219 *Id.*

n220 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n221 See Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 Fed. Reg. 6622, 6632 (1997).

n222 See Bell I, *supra* note 35, at 52.

n223 See *id.*

n224 See Lieutenant Colonel David Bell, *Regulators Publish Rule to Identify, Manage Munitions Waste, available at* <<http://aecwww.apgea.army.mil:8080/prod/usaec/op/update/spr97/munition.htm>> [hereinafter Bell III].

n225 See Federal Facilities Compliance Act § 107; 62 *Fed. Reg.* at 6626.

n226 See Bell III, *supra* note 224.

n227 See 62 *Fed. Reg.* at 6635.

n228 See *id.*

n229 See *id.*; Bell I, *supra* note 35, at 49.

n230 See *MTP Press Conference, supra* note 33. Cathy Hinds, Executive Director of the Military Toxics Project, has opined that due to "eleventh hour" political pressures from the DOD, the EPA reworked the Munitions Rule, stating "the EPA has, with a gun to its head, violated their own mission to protect human health and the environment and the fingerprints all over that smoking gun belong to the Pentagon." *Id.*

n231 See generally *Military Toxics Project v. EPA*, 146 F.3d 948 (D.C. Cir. 1998).

n232 See *infra* notes 233-240 and accompanying text.

n233 See generally *Military Toxics Project*, 146 F.3d at 948.

n234 See *id.* at 953; PLATER ET AL., *supra* note 69, at 768-69.

n235 See *MTP Press Conference, supra* note 33.

n236 See 40 C.F.R. § 266.202(a)(1) (West 2000); Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 *Fed. Reg.* 6622, 6628-6632 (1997). The MTP has called this situation a "fox guarding the henhouse scenario." *MTP Press Conference, supra* note 33.

n237 See *Military Toxics Project*, 146 F.3d at 954-56; 62 *Fed. Reg.* at 6631.

n238 See 40 C.F.R. §§ 266.203(a)(1), 266.205(a)(1); 62 *Fed. Reg.* at 6635.

n239 The MTP has argued that "the Defense Department has not done a good job of protecting health and the environment leaving a legacy of pollution for future generations to come. With external oversight at its industrial facilities, it's improved its record. Without external oversight at its munitions facilities, [the Defense Department] will continue to endanger public health and the environment." *MTP Press Conference, supra* note 33.

n240 See 40 C.F.R. §§ 266.203(a)(1)(i)-(iv); 266.205(a)(1)(i)-(vii).

n241 See Scott Allen, *Guard will offer plan to protect Cape water*, BOSTON GLOBE, Nov. 11, 1998, at A1.

n242 See Massachusetts Military Reservation, *Base History* (visited Dec. 4, 1998) <<http://www.mmr.org/mmr1/bashist.htm>> [hereinafter *Base History*].

n243 See *EPA Order I, supra* note 148; *EPA Order II, supra* note 148.

n244 See *Base History, supra* note 242.

n245 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287; H.R. Rep. No. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n246 See *MTP Press Conference*, *supra* note 33. Cf. Bell I, *supra* note 35, at 52.

n247 See generally H.R. Rep. No. 102-111; H.R. Rep. No. 102-886; *MTP Press Conference*, *supra* note 33.

n248 See Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 *Fed. Reg.* 6622, 6649 (1997); Bell I, *supra* note 35, at 52.

n249 See generally H.R. Rep. No. 102-111. "RCRA regulation must clearly be modified so that the military can conduct training exercises that fulfill their fundamental purpose of training soldiers." *Id.*

n250 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n251 See generally H.R. Rep. No. 102-111; H.R. Rep. No. 102-886.

n252 See generally H.R. Rep. No. 102-111; H.R. Rep. No. 102-886.

n253 The EPA stated that the final Munitions Rule ensures that EPA oversight of the military under RCRA will involve "a minimum of interference" with the military's established system, and will "not conflict with the Service's logistical needs or constraints." 62 *Fed. Reg.* at 6627. Further, the EPA concluded that in order to "minimize the chances for confusion or error, military training should duplicate to the maximum extent possible the conditions encountered by military personnel in combat." *Id.*

n254 Federal Facilities Compliance Act § 107; see Resource Conservation and Recovery Act, 42 U.S.C. § 6924(y) (1988 & Supp. V 1993).

n255 See 40 C.F.R. § 266.202 (West 2000).

n256 See *id.* § 266.202(a)(1).

n257 See 62 *Fed. Reg.* at 6630. The EPA has used the intended-use principle for pesticides and the use of explosives, such as dynamite, that involve application of the product to the land in the ordinary manner of use. See *id.* Even if the function of the material ends with application to the land, as in the explosion of dynamite, the EPA does not consider the residuals of the material to constitute waste. See *id.*

n258 See 40 C.F.R. § 266.202(a)(1); 62 *Fed. Reg.* at 6628. Only when the element of abandonment is present, and the material is deemed "discarded," does the material then come under RCRA regulation as a solid waste. See 62 *Fed. Reg.* at 6628.

n259 See generally 989 F.2d 1305 (2d Cir. 1993).

n260 See *id.*; 62 *Fed. Reg.* at 6630.

n261 See 62 *Fed. Reg.* at 6630; Bell I, *supra* note 35, at 50.

n262 See Lattimer, *supra* note 171, at 140.

n263 See *id.* at 140-41.

n264 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287; H.R. Rep. No. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n265 See Bell I, *supra* note 35, at 52.

n266 See 62 Fed. Reg. at 6636.

n267 See Resource Conservation and Recovery Act, 42 U.S.C. § 6972(a)(1)(B), 6973 (1988 & Supp. V 1993); 40 C.F.R. § 261.1(b)(2) (West 2000); *Military Toxics Project v. EPA*, 146 F.3d 948, 951 (D.C. Cir. 1998). "Material not defined as solid waste for purposes of Subtitle C 'is still a solid waste' if 'in the case of section 7003, the statutory elements are established.'" *Military Toxics Project*, 146 F.3d at 951.

n268 See *id.*

n269 See 62 Fed. Reg. at 6632.

n270 See EPA Region 1, *EPA Orders Further Training Restrictions and Cleanup at Camp Edwards* (visited Feb. 26, 1999) <<http://www.epa.gov.htm>> [hereinafter EPA Press Release I]; Department of Environmental Protection, *DEP Orders Military to Treat Contaminated Well at MMR, Develop Long-Term Water Source* (visited Nov. 20, 1998) <<http://www.magnet.state.ma.us/dep/pao/files/mmr.htm>> [hereinafter DEP Order].

n271 See Letter from John P. DeVillars, EPA Region 1 Administrator, "EPA Urging Massachusetts National Guard to Withdraw Draft Environmental Impact Statement (EIS) at Massachusetts Military Reservation (MMR) and Delay Proposed Expansion Pending Results of Ongoing Impact Area Studies," (Jan. 24, 1997), available at <<http://www.epa.gov.htm>> [hereinafter DeVillars Letter]. Within this letter, the EPA stated that its authority to intervene at Camp Edwards was grounded not within the Munitions Rule regulations, but in RCRA's "imminent and substantial danger" provision. See *id.*



n272 See EPA Press Release I, *supra* note 270; DEP Order, *supra* note 270.

n273 See 62 Fed. Reg. at 6636.

n274 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924); H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287; H.R. Rep. No. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n275 See H.R. Rep. No. 102-111; H.R. Rep. No. 102-886; 62 Fed. Reg. at 6636.

n276 H.R. Rep. No. 102-111.

n277 See Federal Facilities Compliance Act § 107; 40 C.F.R. § 266.202 (West 2000); Bell I, *supra* note 35, at 49.

n278 See Bell I, *supra* note 35, at 49.

n279 See *generally* H.R. Rep. No. 102-111. Congress noted that "it is irresponsible to report out a bill that forces bomb disposal units to consider the complexities of complying with RCRA requirements when deciding whether to move or detonate an unexploded shell in place. RCRA was never intended to apply to such life and death situations. No one intends that environmental compliance should magnify the safety hazards associated with explosives." *Id.*

n280 See *generally id.* The EPA also exempted emergency response activities from RCRA's generator, transporter, and permitting requirements. See 62 Fed. Reg. at 6636. Therefore activities in response to munitions and explosives-related emergencies need not be distracted by RCRA's complicated administrative and substantive requirements. See Bell I, *supra* note 35, at 52.

n281 See 62 Fed. Reg. at 6636.

n282 See *id.* The EPA stated, "given the protective nature of the DDESB standards, and the Service's record in providing for the safe storage of military munitions, the Agency believes that RCRA subtitle C regulation is not necessary for waste military munitions managed in compliance

with these standards." *Id.*

n283 See *id.* at 6633, 6635. "Features of the DOD transportation system include pre-trip routing plans, safe havens and secure holding areas for vehicles experiencing difficulties or for overnight storage, safe haven hotline, satellite motor surveillance and tracking, shipper seals, dual driver protective and escort services, firefighting instructions, and electronic notifications/communications between shipper, carrier and receiver." *Id.* at 6634. The DOD mandatory standards for transportation of munitions also address packaging, labeling, marking, placarding, emergency response, training, and shipping documentation. See *id.*

In order to qualify for the conditional storage exemption, waste non-chemical munitions must be subject to the jurisdiction of the DDESB, managed in accordance with the DDESB's published standards (no waivers allowed), stored in units identified to regulators, inventoried annually, and inspected quarterly. See Bell, *supra* note 35, at 51. "The EPA found that the DDESB standards provide design and operating standards that . . . minimize the potential for explosions and minimize the impact should an explosion occur, based on four factors that relate to the physical and chemical characteristics of these materials: (1) compatibility groupings, (2) hazardous class, (3) net explosive weight (NEW), and (4) quantity distance formulae." 62 Fed. Reg. at 6637.

n284 *Id.* at 6634.

n285 See Resource Conservation and Recovery Act, 42 U.S.C. § 6921 (1988 & Supp. V 1993); 62 Fed. Reg. at 6636.

n286 See 62 Fed. Reg. at 6636.

n287 42 U.S.C. § 6921; see 62 Fed. Reg. at 6636.

n288 See 62 Fed. Reg. at 6636.

n289 42 U.S.C. § § 6922-6924; 62 Fed. Reg. at 6636.

n290 62 Fed. Reg. at 6636; see 42 U.S.C. § § 6922-6924.

n291 See 62 Fed. Reg. at 6636. The D.C. Circuit has twice upheld the EPA's interpretation that the agency may consider the existence of other regulatory programs in determining whether RCRA regulation is necessary to protect human health and the environment. In *Edison Electric Institute v. EPA*, a temporary exemption was upheld for petroleum-contaminated media because the potential hazards of the material were already regulated by the underground storage tank regulations of RCRA Subtitle I. See generally 2 F.3d 438 (D.C. Cir. 1993). Similarly, in *NRDC v. EPA*, the court upheld an EPA finding that alternative management standards for used oil promulgated under RCRA section 3014 reduced the risks of mismanagement for such oil, and therefore it was not necessary to list the waste again under Subtitle C. See generally 25 F.3d 1063 (D.C. Cir. 1994). You may note, however, that neither of these cases involved management standards outside the scope of EPA authority, as the DOD regulations are.

n292 See 62 Fed. Reg. at 6636.

n293 See *id.*

n294 See *id.*

n295 See *id.*

n296 See *id.* at 6635, 6637.

n297 See 62 Fed. Reg. at 6634.

n298 See *id.*

n299 See *id.*

n300 See *id.* at 6637.

n301 See *id.*

n302 See 62 Fed. Reg. at 6637.

n303 See *id.* at 6630.

n304 See *Military Toxics Project v. EPA*, 146 F.3d 948, 955 (D.C. Cir. 1998); 62 Fed. Reg. at 6630.

n305 62 Fed. Reg. at 6630. The EPA pointed out that in the case of dynamite used for construction, mining, and road-clearing, RCRA was not triggered despite the fact that the residuals no longer served a function on the land. See *id.*

n306 See *Military Toxics Project*, 146 F.3d at 955.

n307 *Id.*

n308 See 40 C.F.R. § 266.202(a)(1) (West 2000); 62 Fed. Reg. at 6630.

n309 See *MTP Press Conference*, *supra* note 33.

n310 See *Military Toxics Project*, 146 F.3d at 954.

n311 See 62 Fed. Reg. at 6630. "The bulk of reports that EPA has reviewed, including those cited by commenters, do not provide enough information to conclude that ground or surface water contamination does or does not result from fired munitions on ranges. This is partly because the studies or reports do not adequately document . . . or that the source was, indeed, fired munitions; or whether it might be some other source on or off range." *Id.*; Cf. EPA Press Release I, *supra* note 270; EPA Order I, *supra* note 148; EPA Order II, *supra* note 148. The EPA suspended the use of munitions at Camp Edwards due to the potential contamination of the Upper Cape's drinking water supply from munitions-related contaminants. See EPA Order I, *supra* note 148; EPA Order II, *supra* note 148.

n312 See Massachusetts Department of Environmental Protection, *Contaminants Found in MMR Drinking Water Well* (visited Nov. 20, 1998) <<http://www.magnet.state.ma.us/dep/pao/files/jwell.htm>>. At Camp Edwards, munitions-related contaminants include: dinitrotoluene (DNT), a propellant used in both live and non-live artillery firing; hexachloroethane (HCE), a chemical used in pyrotechnics; Royal Dutch Explosive (RDX), TNT, and Her Majesty's Explosive (HMX), explosives compounds; and lead. See *id.* All are considered potential human carcinogens, and lead is a toxic metal. See EPA Press Release I, *supra* note 270. Also consider that Massachusetts has banned the use of lead shot in waterfowl hunting since 1990 due to the known risk of lead poisoning from release into the environment. See MASS. GEN. LAWS c. 131, § 66 (West 1999); MASS. REGS. CODE tit. 321, § 2.03 (West 1999); see also *Smoking Gun*, CAPE COD TIMES, Jan. 10, 1997.

n313 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107(1), 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924) ("Any such regulations shall assure protection of human health and the environment."). Cathy Hinds of the MTP has protested that, "the Defense Department is thumbing their nose at the very law that mandated external oversight of the Pentagon in the Federal Facilities Compliance Act." *MTP Press Conference*, *supra* note 33.

n314 See 62 Fed. Reg. at 6628, 6629-6632.

n315 See 40 C.F.R. § 266.202(a)(1)(i) (West 2000); 62 Fed. Reg. at 6628.

n316 See 40 C.F.R. § 266.202(a)(1)(ii); 62 Fed. Reg. at 6628.

n317 See 40 C.F.R. § 266.202(a)(1)(ii); 62 Fed. Reg. at 6628.

n318 See 62 Fed. Reg. at 6630.

n319 See *id.* at 6631.

n320 See *Military Toxics Project v. EPA*, 146 F.3d 948, 954-55 (D.C. Cir. 1998).

n321 See *id.*; 62 Fed. Reg. at 6631.

n322 See 40 C.F.R. § 266.202(a)(1)(ii).

n323 See *id.*

n324 See *id.* § 266.202(a)(1)(i). For a discussion of the controversy surrounding the burning of propellant for training purposes at Camp Edwards, see generally *Mission of Folly*, CAPE COD TIMES, Jan. 5, 1997.

n325 See 62 Fed. Reg. at 6631.

n326 See *MTP Press Conference*, *supra* note 33.

n327 See *id.*; see also 62 Fed. Reg. at 6631.

n328 See 62 Fed. Reg. at 6631.

n329 See generally *Military Toxics Project v. EPA*, 146 F.3d 948 (D.C. Cir. 1998).

n330 See 62 Fed. Reg. at 6634, 6637.

n331 See *Military Toxics Project*, 146 F.3d at 959.

n332 *Id.* at 958.

n333 See generally H.R. Rep. No. 102-111 (1991), reprinted in 1991 U.S.C.C.A.N. 1287.

n334 H.R. Rep. No. 102-111.

n335 See generally H.R. Rep. No. 102-111. Cf. 62 Fed. Reg. at 6634, 6636.

n336 See 62 Fed. Reg. at 6632-6639; *Military Toxics Project*, 146 F.3d at 958.

n337 See PLATER ET AL., *supra* note 69, at 764.

n338 See Resource Conservation and Recovery Act, 42 U.S.C. § 6921 (1988 & Supp. V 1993).

n339 Letter from Senator John Kerry to Carol Browner, EPA Administrator, *quoted in Smoking Gun*, *supra* note 312.

n340 See 40 C.F.R. § 266.203(a)(iv) (West 2000).

n341 See *id.* § 266.203(a)(iv); 62 Fed. Reg. at 6635.

n342 See 62 Fed. Reg. at 6631; *MTP Press Conference*, *supra* note 33.

n343 See 42 U.S.C. § 6921. Cf. 40 C.F.R. § 361.

n344 See 62 Fed. Reg. at 6631.

n345 See *id.* The EPA recommends that regulators look for the existence and use of training manuals, the presence of military trainees, and documentation of training activities as evidence of legitimate training. See *id.*

n346 See *id.*

n347 See *Mission of Folly*, *supra* note 324.

n348 See EPA Press Release I, *supra* note 270. In a precedent-setting precautionary step, however, the Adjutant General of the Massachusetts National Guard put an end to the practice of burning unused propellant bags in 1993, well before the EPA's 1997 order. See Massachusetts Military Reservation, *A Message from the General* (visited Feb. 26, 1999) <<http://www.state.ma.us/guard/pao/mmr.htm>>. The National Guard has implemented a program to recycle the unused propellant bags. See *id.*

n349 See *MTP Press Conference*, *supra* note 33.

n350 See generally H.R. Rep. No. 102-111 (1991), *reprinted in* 1991 U.S.C.C.A.N. 1287.

n351 See Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n352 See generally H.R. Rep. No. 102-111; H.R. Rep. 102-886 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1317.

n353 See generally H.R. Rep. No. 102-111. "This provision is necessary to restore the faith of the American people that protection of human health and the environment will not give way either to bureaucratic recalcitrance, the lack of funding, or simple inactivity." *Id.*

n354 See H.R. Rep. No. 102-111; Military Munitions Rule: Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Right-of-Ways on Contiguous Properties, 62 *Fed. Reg.* 6622, 6623 (1997).

n355 United States Congress, Office of Technology Assessment, *Complex Cleanup: The Environmental Legacy of Nuclear Weapons Production*, quoted in H.R. Rep. No. 102-111 (emphasis added).

n356 See generally H.R. Rep. No. 102-111.

n357 See 40 C.F.R. § 266.20 (West 2000).

n358 See generally H.R. Rep. No. 102-111; see also *MTP Press Conference*, *supra* note 33.

n359 See generally H.R. Rep. No. 102-111. The report documents EPA and state enforcement agency frustration with attempts to obtain military compliance with hazardous waste regulations at the Portsmouth Naval Shipyard, Maine; Picatinny Army Arsenal, New Jersey; and the U.S. Coast Guard Support Center, North Carolina. See *id.* Specifically, at the Picatinny Army Arsenal, EPA reports noted that the military's practices led to "the unauthorized operation of many RCRA treatment and storage units, and extensive soil and ground-water contamination." *Id.*

n360 See generally H.R. Rep. No. 102-111. For example, J. Joseph Curran, Jr., Attorney General of Maryland, stated that the FFCA would "begin to restore public confidence that the federal government is facing up to its obligations *and being regulated in a credible manner.*" *Id.* (emphasis added). Michael Steiner, Assistant Director, Pennsylvania Department of Environmental Resources, argued that "absent clear state environmental authority, the military has been inflexible and extremely slow to deal with their environmental problems." *Id.*

n361 See generally H.R. Rep. No. 102-111. *Cf.* Federal Facilities Compliance Act, Pub. L. No. 102-386, § 107, 106 Stat. 1513 (1992) (amending RCRA § 3004, 42 U.S.C. § 6924).

n362 See generally 146 *F.3d* 948 (*D.C. Cir.* 1998); H.R. Rep. No. 102-111; see also PLATER ET AL., *supra* note 69, at 429.

n363 For example, President Clinton recently imposed a moratorium on live-fire training at Vieques Island, Puerto Rico in the face of overwhelming public opposition. See Elizabeth Becker, *President Halts Target Practice by Navy on Puerto Rican Island*, N.Y. TIMES, Dec. 4, 1999, available

at <<http://archives.nytimes.com>>. According to Brigadier General James Boddie Jr., commander of Picatinny Arsenal in New Jersey, 700 of 16,000 military firing ranges have been closed nationwide due to lead contamination. See *Smoking Gun*, *supra* note 312.

n364 See *Base History*, *supra* note 242.

n365 See *id.* Those involved include, for example, on the federal level: John DeVillars, Region 1 Administrator, EPA; the Pentagon's National Guard Bureau (NGB); and U.S. Senators John Kerry and Edward Kennedy. On the state level, Governor Paul Cellucci; Massachusetts DEP; Massachusetts Army National Guard; and State Representative William Delahunt. Locally: the Town of Falmouth; Citizens United for the Massachusetts Military Reservation Watershed and Wildlife Refuge; Friends of the Massachusetts Military Reservation; and the Alliance for Base Cleanup. See *id.*

n366 See *id.*

n367 See *id.*

n368 See *id.*

n369 See *Base History*, *supra* note 242.

n370 See *Mission of Folly*, *supra* note 324; see also *EPA Order I*, *supra* note 148; *EPA Order II*, *supra* note 148. Prior to the 1997 EPA ban on live-fire training, Camp Edwards supported heavy gun use fifteen to twenty-one days a year. See *Mission of Folly*, *supra* note 324; see also *EPA Order I*, *supra* note 148; *EPA Order II*, *supra* note 148.

n371 See *Base History*, *supra* note 242.

n372 See *Smoking Gun*, *supra* note 312.

n373 See EPA Administrative Order SDWA-1-2000-0014 (hereinafter *EPA Order III*); Scott Allen, *EPA to Order Guard to Clean Up Cape Base*, BOSTON GLOBE, Jan. 7, 2000, available at <http://commerce.boston.com/bg_archives/newarch.cgi>.

n374 See *EPA Order III*, *supra* note 373; see also *Cape Cod Aquifer Determination*, 47 Fed. Reg. 30282, 30282 (1982).

n375 See *EPA Order III*, *supra* note 373.

n376 See *EPA Orders Extensive Cleanup of Mass. Military Reservation on Cape Cod*, EPA Press Release # 00-01-05, Jan. 7, 2000, available at <<http://www.epa.gov/region01.htm>> (hereinafter *EPA Press Release III*).

n377 See *id.*; see also 47 Fed. Reg. at 30283.

n378 The NGB is an agency of the Pentagon that oversees the various state National Guards. See Allen, *EPA to Order Guard to Clean Up Base*, *supra* note 373.

n379 See *EPA Order I*, *supra* note 148; see also *EPA Order III*, *supra* note 373.

n380 See *EPA Order II*, *supra* note 148; see also *EPA Order III*, *supra* note 373.

n381 See *EPA Order III*, *supra* note 373. The effects of lead exposure are well documented. Lead can adversely affect the brain and central nervous systems, and is associated with anemia, kidney damage, impaired reproductive function, interference with vitamin D metabolism, impaired cognitive performance, delayed physical development, and elevations in blood pressure. See *id.* Lead also has the potential to bioaccumulate, which means that lead in prey organisms (plant or animal) is passed into those of predator organisms. See *id.*

n382 See *EPA Press Release II*, *supra* note 376; *EPA Order III*, *supra* note 373. RDX is "a highly

hazardous constituent used in explosives and rat poison" that targets the nervous system and is a possible human carcinogen. EPA Press Release II, *supra* note 376; EPA Order III, *supra* note 373. To date, RDX has been found in twenty monitoring wells, exceeding federal health advisory limits in eighteen of those twenty. See EPA Press Release II, *supra* note 376. TNT is also a possible human carcinogen, associated with skin irritation and cataracts, as well as disorders of the blood, liver, spleen, immune system, and reproductive system. See EPA Order III, *supra* note 373. HDX may be harmful to humans, and is potentially associated with liver damage and central nervous system damage. See *id.*

n383 See *id.* Exposure to relatively small amounts of nitroglycerin can produce intense headaches, often associated with nausea and abdominal pain, while exposure to larger amounts may result in hypotension, depression, confusion, occasional delirium, and cyanosis. See *id.*

n384 See *id.* Accordingly, the EPA could have issued the Administrative Order under the authority of RCRA Subtitle G for "imminent and substantial endangerment to . . . the environment." See *supra* notes 83-90 and accompanying text.

n385 See EPA Order III, *supra* note 373; Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Jeffrey Burt, *EPA Will Require Cleanup of Water, Ordnance on Base*, CAPE COD TIMES, Jan. 7, 2000, available at <<http://www.capecodonline.com/cctimes/archive/2000/jan/7/epawill7.htm>>.

n386 See Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Burt, *supra* note 385. The unprecedented administrative order was John DeVillars's final act in office after six years as the Regional Administrator. See Burt, *supra* note 385.

n387 Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Burt, *supra* note 385.

n388 See Safe Drinking Water Act, 42 U.S.C. § 300(f) (West 1999). The SDWA sole source aquifer program authorizes the EPA to designate and protect any aquifer which is the "sole or principal drinking water source for [an] area and which, if contaminated, would create a significant hazard to public health." *Id.* § 300h-3(a)(1); DYCUS, *supra* note 2, at 56; see EPA Order III, *supra* note 373. The SDWA further provides the EPA with special authority in emergency situations, such as if it is discovered that a contaminant has entered, or is likely to enter, a public water supply. See 42 U.S.C. § 300i(a); DYCUS, *supra* note 2, at 57. The SDWA explicitly applies to federal facilities. See 42 U.S.C. § 300j-6(b); DYCUS, *supra* note 2, at 57.

n389 See Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Burt, *supra* note 385.

n390 See Burt, *supra* note 385. EPA Region 1 Administrator DeVillars stated, "my job is to use the strongest tools I have to get this work done, and that's why I am using the Safe Drinking Water Act." *Id.* This ambitious decision may indeed render the Munitions Rule's broad deferential policy moot, as the EPA might avoid the RCRA quagmire altogether by regulating munitions under the guise of alternative statutes. See *id.*

n391 See Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Burt, *supra* note 385.

n392 See Allen, *EPA to Order Guard to Clean Up Cape Base*, *supra* note 373; Burt, *supra* note 385. It is also estimated that the acreage of all active and inactive artillery ranges across the United States totals 65 million. See Burt, *supra* note 385.

n393 See H.B. 4085, 181st General Court, Reg. Sess. (Mass. 1999); see also Dan Ring, *Base Bill Gets Vital OK from Panel*, CAPE COD TIMES, Oct. 26, 1999, available at <<http://www.capecodonline.com/cctimes/archives/1999/oct/26/basebill26.htm>>. On October 25, 1999, Governor Cellucci testified before the state legislature's Committee on Natural Resources and Agriculture endorsing the bill, which the Committee unanimously approved. See Ring, *supra*.

n394 See H.B. 4085; Ring, *supra* note 393.

n395 See Exec. Order No. 414 (Oct. 8, 1999); see also Ring, *supra* note 393.

n396 See Exec. Order No. 414 (Oct. 8, 1999); see also Ring, *supra* note 393. There are several alternatives being developed to promote environmentally friendly combat training. For example, the DOD recently approved the use of "green bullets" by troops. "Green bullets" are made of tungsten rather than lead, and therefore do not contaminate the environment.

n397 See Exec. Order No. 414 (Oct. 8, 1999).

n398 See Ring, *supra* note 393.

n399 See *id.*

n400 See 146 F.3d 948, 951 (D.C. Cir. 1998).

n401 See generally DYCUS, *supra* note 2.