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ALL THE INFORMATION THE SECURITY OF THE NATION PERMITS: INFORMATION LAW AND THE DISSEMINATION OF AIR FORCE ENVIRONMENTAL DOCUMENTS

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I. INTRODUCTION

The Freedom of Information Act "springs from one of our most essential principles: [a] democracy works best when the people have all the information that the security of the Nation permits."[1]

The terrorist attacks of September 11, 2001 prompted the most substantial changes in the United States government since World War II.[2] One small but significant aspect of these changes has been the United States exercising more caution on what information is released under the Freedom of Information Act (FOIA).[3] This article focuses specifically on the release and management of Air Force environmental documents. These documents often deal with dangerous substances (such as Resource Conservation and Recovery Act (RCRA)[4] hazardous wastes) and installation critical infrastructure (such as wastewater treatment plants, which may be covered under the Clean Water Act (CWA)[5]). Because of this, many environmental documents can be deemed to contain "sensitive" information which could be used by terrorists to assist in the targeting of military personnel or property. In addition to information that falls squarely within the environmental area, information related to land use (such as information related to a base's Air Installation Compatibility Use Zone (AICUZ)) may also be sensitive and require withholding from release.

Air Force organizations generate myriad environmental documents, but only a small number of these are written for public release. Some are specifically prohibited by statute from being released, while others are required by statute or regulation to be released to certain state and local entities. Given the sensitive information that is included in many of these documents, they must be properly marked at the time of their creation in a manner that protects them from

[1] Paul M. Schoenhard, *Disclosure of Government Information Online: A New Approach from an Existing Framework*, 15 HARV. J.L. & TECH 497, 499 (Spring 2002) (quoting Lyndon B. Johnson, on signing the Freedom of Information Act into law on Jul. 4, 1966).

[2] Passage of the Homeland Security Bill, which merged together twenty-two agencies with a total of 170,000 employees, was "the largest government reorganization since the Defense Department was created in 1947." Helen Dewar, *Senate Passes Homeland Security Bill*, WASH. POST, Nov. 20, 2002, at A1.

[3] 5 U.S.C. § 552 (Lexis 2006).

[4] 42 U.S.C. §§ 6901–6992k (Lexis 2006) (Subchapter III, §§ 6921–6939e, governs hazardous waste management).

[5] 33 U.S.C. §§ 1251–1387 (Lexis 2006).

inadvertent release and anticipates whether the documents will be provided to a state or local entity or released to the public at large.

Section II highlights the importance of appropriately marking documents at the time of their creation. The brief history and background on freedom of information issues provided in Section III is followed by a general overview of the FOIA in Section IV. Section V explains the three categories of Department of Defense (DoD) information and how they relate to FOIA, with specific guidance regarding "For Official Use Only" (FOUO) information[6] provided. Section VI highlights the exemptions most likely to apply to environmental documents, and Section VII focuses on information from the environmental audit, addressing the releasability of Environmental Compliance Assessment and Management Program (ECAMP) /Environmental, Safety, and Occupational Health Compliance Assessment and Management Program (ESOHCAMP) documents and findings of non-compliance. Section VIII covers electronic FOIA issues related to e-mail messages and web sites, and Section IX covers non-FOIA releases—such as releases to the Department of Justice (DoJ), third parties incident to litigation, the Environmental Protection Agency (EPA), and state and local regulators. The final section highlights miscellaneous issues that may affect the protection of information, including issues surrounding contractor-generated documents, legal comments that are combined with other comments in a document, and metadata—data that is hidden in documents but can be retrieved.

To provide a baseline for properly marking documents, several appendices are included. Appendix A provides a practical checklist for protecting environmental information. Appendix B contains suggested FOUO markings. Finally, Appendix C provides sample language for a transmittal letter to a non-Air Force entity to maximize the likelihood that the non-Air Force entity will properly safeguard the document.

II. THE IMPORTANCE OF MARKING DOCUMENTS

The importance of protecting sensitive, critical information from unauthorized release cannot be overstated. Protection of such information starts at the moment a document is created and requires that the document include appropriate markings in the header and/or footer. These markings inform readers about the status of the document (e.g., draft), its purpose/content (e.g., intended for official use only or to provide legal advice), and restrictions on further dissemination.

The responsibility for properly marking the document rests with the individual who creates the document. At a minimum, the individual

[6] *See infra* notes 59-70 (definition and markings policy).

should accomplish each of the following initial steps when the document is created:

- *Determine the purpose of the document*. In defining the purpose of the document, numerous questions implicitly will be answered. Is the document intended for internal use only[7] (e.g., provides legal advice or makes recommendations to a decision maker)? Will it be released to the public[8] or submitted to a regulatory agency?[9]
- *Identify which exemptions under the Freedom of Information Act may apply to the information in the document*. Identify whether the document contains any personal information that may be protected by the Privacy Act.
- *Properly mark the document in the header and/or footer* (e.g., DRAFT, attorney work product or attorney-client privilege).[10]

Air Force attorneys, as well as all other Air Force personnel, should ensure that documents are properly marked. This should be done whenever a draft document is reviewed or a final document is read. Although the inclusion or omission of markings are not dispositive as to the exemptions that may protect a document from release to the public, appropriate markings serve three purposes: "1) to draw attention to the possible FOIA exemptions if the information is the subject of a FOIA request, 2) to highlight the need to protect the information, and 3) to have the record sent back to the originator for a release determination in response to a FOIA request."[11]

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[7] Internal use can be limited to use within the Air Force, the DoD, or the federal government. The key issue is whether the creator of the document intends at that time to make the document available to the public.

[8] The public release may be voluntary (such as a press release) or required. *E.g.,* 42 U.S.C. § 9617(b) (Lexis 2006) (requiring final remedial action plan to be made available to the public before commencement of any remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act).

[9] As with a public release, the Air Force may voluntarily provide documents to regulators in furtherance of our partnering efforts, or the submission may be required by statute or regulation. *E.g.,* 40 C.F.R. § 63.7550 (Lexis 2006) (requiring submission of compliance report to EPA).

[10] Suggested or required markings are provided in the relevant sections. For example, electronic message markings are covered in Section VIII.A.

[11] Memorandum from AF/ILC: E-Mail Disclosure Statements (Feb. 9, 2005) (distributed to ALMAJCOM/DRU/FOA/SC and signed by Brigadier General Ronnie D. Hawkins, DCS/Installations and Logistics) (on file with author).

III. FOIA HISTORY AND BACKGROUND

The belief that there should be some degree of freedom of information in our society goes back to our founding fathers. As James Madison wrote, "A popular government without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy, or perhaps both . . . a people which mean to be their own governors must arm themselves with the power which knowledge gives."[12] According to one commentator,[13]

> Prior to the passage of the FOIA, the prevailing public access law was Section 3 of the Administrative Procedure Act of 1947 (APA).[14] This section was interpreted to *limit* the amount of information the Government needed to disclose to the public. In 1955, [a House subcommittee was established to deal with the issue of freedom of information]. This subcommittee produced a 1958 amendment to the APA which stated that it "does not authorize withholding information from the public or limiting the availability of records to the public."[15] This trend towards openness continued. In 1966, Congress passed the FOIA as an amendment to the APA.[16]

Despite the improvements over the APA, there were several loopholes in FOIA that allowed government agencies to circumvent compliance. In particular, FOIA contained no time limits and no limitations on fees, which allowed agencies to take extremely long periods of time to respond and charge unreasonably high fees.[17] Also, in 1973 the Supreme Court held that the test for Exemption 1 coverage is simply whether the President has determined by Executive Order that particular documents are to be kept secret,[18] thus providing a broad basis to withhold documents from release.

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[12] Letter from James Madison to W.T. Barry (Aug 4, 1822) *in* 9 THE WRITINGS OF JAMES MADISON 103 (Gaillard Hunt ed. 1910), *cited in* Schoenhard, *supra* note 1, at 498.
[13] Schoenhard, *supra* note 1, at 498-99.
[14] Pub. L. No. 79-404, 60 Stat. 237 (1946) (codified in scattered sections of 5 U.S.C.), *cited in* Schoenhard, *supra* note 1, n.2.
[15] Pub. L. No. 85-619, 72 Stat. 547 (1958) (codified as amended at 5 U.S.C. § 301), *cited in* Schoenhard, *supra* note 1, n.3.
[16] Pub. L. No. 89-554, § 1, 80 Stat. 383 (1966) (codified as amended at 5 U.S.C. § 552).
[17] OFFICE OF INFORMATION AND PRIVACY, UNITED STATES DEPARTMENT OF JUSTICE, FREEDOM OF INFORMATION ACT GUIDE 6-19 (May 2004), *available at* http://www.usdoj.gov/04foia/foi-act.htm [hereinafter FOIA GUIDE]; Ava Barbour, *Ready . . . Aim . . . FOIA! A Survey of the Freedom of Information Act in the Post-9/11 United States*, 13 B.U. PUB. INT. L.J. 203, 206 (Spring 2004).
[18] Envtl. Prot. Agency v. Mink, 410 U.S. 73, 82 & n.8 (1973).

Of the amendments to FOIA since its enactment, five most notably changed its procedures and/or substance.[19] The first amendment to FOIA was in 1974, resulting in part from a post-Watergate general increase in distrust of government and the perceived need for increased transparency.[20] This amendment was substantial and included provisions which narrowed the scope of the law enforcement and national security exemptions as well as broadened several procedural provisions (i.e., fees, time limits, and judicial review of classified documents).[21] The amendment in 1976, which narrowed Exemption 3 (that is, the incorporation of nondisclosure prohibitions contained in other federal statutes),[22] was followed by extensive changes in 1986. Specifically, the Freedom of Information Reform Act of 1986 provided broader exemption and exclusion coverage for law enforcement information and created a new fee structure.[23]

The 1996 amendment, known as the Electronic FOIA, specifically applied FOIA to the Internet.[24] This amendment requires agencies to post FOIA guides on their web pages, requires agencies to make certain information available in electronic form ("electronic reading rooms"), and expands the definition of "record" specifically to include e-mails.[25]

The Intelligence Authorization Act of 2003[26] most recently amended FOIA to prohibit agencies of the intelligence community from making any record available to a foreign governmental entity.[27] Two bills have been introduced which would further amend FOIA; both focus on information about critical infrastructure.[28]

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[19] This section provides a brief overview of the major FOIA amendments. See FOIA GUIDE, *supra* note 17, at 6-19, for greater detail.

[20] *Id.* at 6.

[21] *Id.* (citing Pub. L. No. 93-502, 88 Stat. 1561 (1974)). The FOIA Guide highlights the virtually simultaneous passage of the Privacy Act of 1974, which provides privacy protections and supplements the FOIA when individuals request records about themselves. *Id.*

[22] *Id.* (citing Pub. L. No. 94-409, 90 Stat. 1241, 1247 (1976)).

[23] *Id.* (citing Pub. L. No. 99-570, 100 Stat. 3207 (1986)).

[24] Pub. L. No. 104-231, § 1, 110 Stat. 3048 (1996) (providing that the act amending 5 U.S.C. § 552 may be cited as the "Electronic Freedom of Information Act Amendments of 1996").

[25] Schoenhard, *supra* note 1, at 501.

[26] Pub. L. No. 107-306, § 312, 116 Stat. 2383 (2002) (codified at 5 U.S.C. § 552(a)(3)(A), (E)).

[27] FOIA GUIDE, *supra* note 17, at 6.

[28] On February 16, 2005, Senator John Cornyn (R-Texas) introduced a bill which would, in addition to amending several procedural provisions, address the accessibility of critical infrastructure information by requiring a report on the implementation and use of section 214 of the Homeland Security Act of 2002. Openness Promotes Effectiveness in our National Government Act of 2005, S. 394, 109th Cong. § 12 (2005). In addition, on March 15, 2005 Senator Patrick Leahy (D-Vermont) introduced a bill to amend the Homeland Security Act (Public Law 107-296) to provide for the protection of a voluntarily furnished record pertaining to the vulnerability of and threats to critical

The FOIA has been described as necessary for ensuring an "informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to hold the governors accountable to the governed."[29] Since its enactment, FOIA has had many beneficial effects, including the "disclosure of waste, fraud, abuse, and wrongdoing"[30] as well as "the identification of unsafe consumer products, harmful drugs, and serious health hazards."[31] The democratic goals and benefits of FOIA, however, are not absolute; occasionally they conflict with other societal needs. Examples of such societal needs include "the public's interests in the effective and efficient operations of government; in the prudent governmental use of limited fiscal resources; and in the preservation of the confidentiality of sensitive personal, commercial, and governmental information."[32]

While there are a number of conflicts between FOIA interests and other societal interests, this article focuses almost exclusively on the conflict between "free information" and the need to protect sensitive government information related to national security. This conflict has always been present, but it has received increased attention since the terrorist attacks of September 11, 2001 (9/11). Prior to 9/11, the Clinton Administration had "embarked on a campaign to release unprecedented quantities of information to the public."[33] Attorney General Janet Reno circulated a memorandum informing all federal agencies that there was a "presumption of disclosure" under FOIA.[34] This memo also established that the standard for release was "foreseeable harm," whereby DoJ would defend an agency's decision to withhold information "only in those cases where the agency reasonably foresees that disclosure would be harmful to an interest protected by that

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infrastructure (such as attacks, response, and recovery efforts). Restoration of Freedom of Information Act of 2005, S. 622, 109th Cong. (2005).

[29] Nat'l Labor Relations Bd. v. Robbins Tire & Rubber Co., 437 U.S. 214, 242 (1978); *see also* Exec. Order No. 13392, 70 Fed. Reg. 75373 (December 19, 2005) (George W. Bush) ("The effective functioning of our constitutional democracy depends upon the participation in public life of a citizenry that is well informed"). This executive order deals with improving agency disclosure of information and underscores the importance that FOIA has come to have in our democracy.

[30] EFOIA of 1996, Pub. L. No. 104-231, 110 Stat. 3048 (1996) (codified at 5 U.S.C. § 552).

[31] *Id.*

[32] FOIA GUIDE, *supra* note 17, at 5.

[33] Schoenhard, *supra* note 1, at 500.

[34] Memorandum from Janet Reno, Attorney General, to Heads of Departments and Agencies (Oct. 4, 1993) ("[The exemptions to the FOIA] are best applied with *specific reference* to such harm [to Government and private interests], and only after consideration of the reasonably expected consequences of disclosure in each particular case. . . . Where an item of information might technically or arguably fall within an exemption, it ought not to be withheld from a FOIA requestor unless it need be." (emphasis added)), *cited in* Schoenhard, *supra* note 1, at 500.

exemption."[35] This emphasis on making information "freer" continued until 9/11.[36]

Although the threat of terrorist attacks against the U.S. homeland had been present before 9/11,[37] it was these events that forced a major reevaluation of the importance of national security.[38] Part of

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[35] Kristen Elizabeth Uhl, *The Freedom of Information Act Post-9/11: Balancing the Public's Right to Know, Critical Infrastructure Protection, and Homeland Security*, 53 AM. U.L. REV. 261, 271 (Oct. 2003) (citing the Reno memorandum).

[36] In these attacks, airplanes struck the North and South Towers of the World Trade Center in Lower Manhattan. A third airliner slammed into the western face of the Pentagon, and a fourth crashed in a field in southern Pennsylvania. "More than 2,600 people died at the World Trade Center; 125 died at the Pentagon; 256 died on the four planes. The death toll surpassed that at Pearl Harbor in December 1941." NATIONAL COMMISSION ON TERRORIST ATTACKS UPON THE UNITED STATES, THE 9/11 COMMISSION REPORT EXECUTIVE SUMMARY 1-2, *available at* http://www.9-11commission.gov/report/911Report_Exec.pdf (last visited June 28, 2006).

[37] The 1993 bombing of the World Trade Center was the first contemporary example of radical Islamic terrorism striking on the American homeland. While in prison for this bombing, Sheik Omar Abdul Rahman (the "blind shiek") issued a *fatwa*, which included the religious order to "sink [U.S.] ships, bring their planes down. Slay [Americans] in the air, on land, on water . . . kill them wherever you find them." Paul K. Davis & Brian Michael Jenkins, *Defense Advanced Research Projects Agency, Deterrence & Influence in Counterterrorism: A Component in the War on al Qaeda* 7-8 (RAND ed. 2002), *available at* http://www.rand.org/pubs/monograph_reports/2005/MR1619.pdf. Another example of a call for unrestrained violence against Americans is Osama bin Laden's October 12, 1996 jihad against the United States, as well as his 1998 *fatwa*:

> We—with God's help—call on every Muslim who believes in God and wishes to be rewarded to comply with God's order to kill the Americans and plunder their money wherever and whenever they find it . . . . The ruling to kill the Americans and their allies—civilians and military—is an individual duty for every Muslim who can do it in any country in which it is possible to do it.

Id. at 7.

[38] The following provides an explanation for the country's vulnerability to terrorist attacks:

> Before [9/11], we, as Americans, considered ourselves relatively immune to a massive physical attack on our homeland. Our victory in the Cold War left us with few significant conventional military threats, and the world of terrorism seemed more the concern of troubled regions like the Middle East than Middle America. As a nation, we were generally unfamiliar with the motivations of terrorists and the deep hatred behind their agendas. Furthermore, we underestimated the depth and scope of their capabilities and did not fully appreciate the extent to which they would go to carry out their destructive acts. The September 11 attacks changed these misconceptions.

PRESIDENT'S CRITICAL INFRASTRUCTURE PROTECTION BOARD, U.S. DEP'T OF HOMELAND SECURITY, NATIONAL STRATEGY FOR PHYSICAL PROTECTION OF CRITICAL INFRASTRUCTURES AND KEY ASSETS 5 (2003) (This document sets forth goals, objectives and guiding principles to further efforts to secure the infrastructures and assets vital to

this reevaluation was the realization that an almost unchecked release and publication of environmental information was, according to some critics, the equivalent of "painting a giant bull's eye" on certain facilities and, in essence, creating "Terrorism for Dummies" handbooks.[39] One professor summarizes the effects of the 9/11 attacks on disclosure laws as follows:

> The events of September 11th have met with several historically significant responses. First, the federal policy on FOIA disclosures was shifted in favor of withholding and away from comprehensive web-based disclosure. Second, the extent of web posting of releasable data was changed, in a belated attempt to reduce terrorists' access to data that could be used for another attack. Third, the cycle of specific exemption language was accelerated. FOIA exemption 3 allows Congress to create exclusions from FOIA by specifying them in other statutes. This movement will insulate some new sets of data from public disclosure, making the so-called (b)(3) amendments more acceptable than ever before.[40]

In response to the new focus on the importance of national security, Attorney General John Ashcroft, on October 12, 2001, revoked the Reno "foreseeable harm" standard for the release of information and imposed a less stringent "sound legal basis" standard that must be met for DoJ to defend an agency's FOIA decision.[41] As stated in the memorandum:

> It is only through a well-informed citizenry that the leaders of our nation remain accountable to the governed and the American people can be assured that neither fraud nor government waste is concealed.

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public health and safety, national security, and public confidence), *available at* http://www.whitehouse.gov/ pcipb/physical.html.

[39] *See* Joseph D. Jacobson, *Safeguarding National Security Through Public Release of Environmental Information: Moving the Debate to the Next Level*, 9 ENVTL. LAW. 327, 330 (2003).

[40] James T. O'Reilly, *Information Disclosures by Government: Data Quality and Security Concerns Symposium: "Access to Records" Versus "Access to Evil:" Should Disclosure Laws Consider Motives as a Barrier to Records Release?*, 12 KAN. J.L. & PUB. POL'Y 559, 568 (Spring 2003).

[41] Memorandum from John Ashcroft, Attorney General, to Heads of all Federal Departments and Agencies (Oct. 12, 2001), *available at* http://www.usdoj.gov/04foia/ 011012.htm.

> The [DoJ] and this Administration are equally committed to protecting other fundamental values that are held by our society. Among them are safeguarding our national security, enhancing the effectiveness of our law enforcement agencies, protecting sensitive business information and, not least, preserving personal privacy.
>
> . . . .
>
> When you carefully consider FOIA requests and decide to withhold records, in whole or in part, you can be assured that the Department of Justice will defend your decisions unless they lack a sound legal basis or present an unwarranted risk of adverse impact on the ability of other agencies to protect other important records.[42]

The Ashcroft memo remains the current guidance for defending decisions regarding the release of information under FOIA, although "foreseeable harm" remains the standard within DoD for FOUO markings.[43] Although Alberto Gonzales has succeeded John Ashcroft as Attorney General, he has not made any significant changes in DoJ's stance on the release of sensitive information, and there is no indication that he will in the future.[44]

IV. FREEDOM OF INFORMATION ACT[45]

The FOIA generally provides to the public an enforceable right of access to federal records held by agencies of the executive branch of the Federal Government, except when such records or portions thereof

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[42] *Id.*

[43] U.S. DEP'T OF DEFENSE, REG. 5400.7-R, FREEDOM OF INFORMATION ACT PROGRAM ¶ C4.1.1 (4 Sept. 1998) [hereinafter DoD FOIA PROGRAM], *available at* http://www.dtic.mil/ whs/directives/corres/pdf/ 54007r_0998/p54007r.pdf.

[44] FOIA was mentioned twice, and only in passing, during Mr. Gonzales's confirmation hearing, and he did not make any substantive comments on FOIA. *See* Transcript of Senate Judiciary Committee Confirmation Hearing on the Nomination of Alberto R. Gonzales to be U.S. Attorney General (Jan. 6, 2005), *available at* http://www.washingtonpost.com/wp-dyn/articles/A53883-2005Jan6.html; *see, e.g.*, Alex Johnson, *On the Team, Keeping Things Under Wraps: Gonzales Expected To Maintain Culture of Government Secrecy*, MSNBC, Nov. 18, 2004, *available at* http://msnbc.msn.com/id/6494526 (examining Mr. Gonzales's White House counsel positions supporting strict regulation of access to government information and quoting a commentator as saying Gonzales has "a penchant for strictly regulating access to government and executive-branch information").

[45] The Air Force FOIA program is set forth in U.S. DEP'T OF AIR FORCE, SUPPLEMENT, DoD FREEDOM OF INFORMATION ACT PROGRAM, DoD REG. 5400.7-R (24 June 2002) [hereinafter AF FOIA PROGRAM], *available at* http://www.e-publishing.af.mil/pubfiles/ af/dod/ dodr5400.7_afsup1/dodr5400.7_afsup1.pdf.

are protected from disclosure by one of nine exemptions or by one of three special law enforcement record exclusions.[46] The nine exemptions and three exclusions are summarized in the following table:[47]

Exemption 1	Classified Documents	Protects national security information concerning the national defense or foreign policy, provided that it has been currently and properly classified under an Executive Order.[48]
Exemption 2 (Two categories)	Internal Personnel Rules and Practices	Protects "low 2" information (internal matters of a relatively trivial nature), and "high 2" information (more substantial internal matters, where disclosure would risk circumvention of a legal requirement).
Exemption 3	Information Exempt Under Other Laws	Protects information prohibited from disclosure by another statute.
Exemption 4	Trade Secrets and Commercial Information	Protects (1) trade secrets, and (2) commercial or financial information that is obtained from a person and is privileged or confidential.
Exemption 5	Inter or Intra Agency Memos Not Available to a Party in Civil Litigation	Protects inter-agency or intra-agency memorandums or letters that would not be available by law to a party in litigation with the agency. The three most common Exemption 5 privileges are the deliberative process privilege, the attorney work-product privilege, and the attorney-client privilege.
Exemption 6	Information in Which there are Personal Privacy Interests	Protects information about individuals in personnel and medical files and similar files when disclosure would constitute a clearly unwarranted invasion of personal privacy.

[46] *See* FOIA GUIDE, *supra* note 17, at 5-21 (differentiating exemptions—where existence of withheld information is acknowledged, from exclusions—where federal law enforcement agencies inform the FOIA requester that no records responsive to the FOIA request exist). For general information on FOIA, see Air Force Administrative Law Division (JAA) Information Law webpage, https://aflsa.jag.af.mil/AF/lynx/tolls/content.php?qrylvl=3&lvl2id=90&lvl2folder=yes (password required for access). For law review articles that provide a more expansive discussion of environmental law FOIA issues, see Jacobson, *supra* note 39, at 377-84; Stephen Gidiere & Jason Forrester, *Balancing Homeland Security and Freedom of Information*, 16 NAT. RESOURCES & ENV'T 139 (2002).

[47] Information in the table is summarized from FOIA GUIDE, *supra* note 17, and H.R. Rep. No. 109-226 (2005) ("A Citizen's Guide on Using the Freedom of Information Act and the Privacy Act of 1974 to Request Government Records"), *available at* http://www.fas.org/ sgp/foia/citizen.html. The exemptions are set forth at 5 U.S.C. § 552(b)(1)-(9) (Lexis 2006).

[48] Exec. Order No. 12,958, 60 Fed. Reg. 19,825 (Apr. 17, 1995) (prescribing system for classifying, safeguarding and declassifying national security information), *amended by* Exec. Order No. 13,292, 68 Fed. Reg. 15,315 (Mar. 28, 2003).

Exemption 7	Law Enforcement Records	Protects information compiled for law enforcement purposes, but only to the extent that the production of such information satisfies one of six possible outcomes (*e.g.*, could reasonably be expected to interfere with enforcement proceedings).
Exemption 8	Financial Institutions	Protects information that is contained in or related to examination, operating, or condition reports prepared by or for a bank supervisory agency.
Exemption 9	Geological Information	Protects geological and geophysical information, data and maps about wells.
Exclusions	Sensitive Law Enforcement Matters	(c)(1): Prevents disclosure of the existence of certain records that could reasonably be expected to interfere with enforcement proceedings; (c)(2): Protects the identification of confidential informants in criminal proceedings; (c)(3): Protects certain law enforcement records that are maintained by the FBI.

The disclosure of agency information under FOIA takes place in one of three distinct ways. One requires agencies to publish agency contact information, procedural requirements, and substantive rules of general applicability in the Federal Register.[49] Another requires agencies to make certain records available in "reading rooms," which includes the posting of information in "electronic reading rooms" on public web pages.[50] Air Force guidance states, "Normally, if the FOIA office or OPR receives, or anticipates receiving, three or more requests for the same record in a quarter, they will consider it a frequently requested record . . . and make it publicly available in hard copy and electronically . . . ."[51] Under these two types of disclosure, agencies must proactively make certain information public, regardless of whether a FOIA request is received. It is only under the third type of disclosure that a request is required. Under these provisions of the FOIA, a person can request any non-exempt documents, and the agency must provide them.[52] If the agency does not, the person or entity seeking the documents can file suit in the appropriate federal district court.[53] While all three types of FOIA releases are important, it is the third type

[49] 5 U.S.C. § 552(a)(1) (Lexis 2006).
[50] *Id.* § 552(a)(2).
[51] AF FOIA PROGRAM, *supra* note 45, ¶ C2.1.2.4.2.1.
[52] 5 U.S.C. § 552(a)(3) (Lexis 2006).
[53] "On complaint, the district court of the United States in the district in which the complainant resides, or has his principal place of business, or in which the agency records are situated, or in the District of Columbia, has jurisdiction to enjoin the agency from withholding agency records and to order the production of any agency records improperly withheld." *Id.* § 552(a)(4)(B).

("FOIA requests") that causes the most legal problems; consequently, the majority of this article addresses FOIA request issues.

V. DoD Categories of Information

Within DoD, there are three broad categories of information: (1) classified (exempt from release); (2) controlled unclassified information (exempt from release); and (3) everything else (not exempt from release).[54]

Classified information refers to information the unauthorized disclosure of which could reasonably be expected to result in damage to national security.[55] It is the most carefully protected type of information,[56] and in general, classified information will be exempted from release under Exemption 1.

Like classified information, controlled unclassified information is protected from release.[57] While there are many examples of controlled unclassified information,[58] this section will specifically discuss FOUO information. FOUO is defined as "[i]nformation that has not been given a security classification pursuant to the criteria of an Executive Order, but which may be withheld from the public *because disclosure would cause a foreseeable harm to an interest protected by* one or more FOIA exemptions 2 through 9."[59]

FOUO information can be disseminated "within DoD Components and between officials of DoD Components and DoD contractors, consultants, and grantees to conduct official business for the DoD."[60] For the release of information outside of DoD, the published policy is:

> to make records publicly available, unless the record qualifies for exemption under one or more of the nine

[54] *See* DoD FOIA Program, *supra* note 43, ¶ C4.1.1.
[55] See discussion of exemption 1 at *infra* Section VI-A.
[56] The following publications contain guidance on the creation, handling and distribution of classified information: U.S. Dep't of Defense, Dir. 5200.1, DoD Information Security Program (13 Dec. 1996); Assistant Secretary of Defense for Command, Control, Communications and Intelligence, DoD Guide to Marking Classified Documents (Apr. 1997); U.S. Dep't of Air Force, Policy Dir. 31-4, Information Security (1 Sept. 1998); U.S. Dep't of Air Force, Instr. 31-401, Information Security Program Management (1 Nov. 2001).
[57] *See* DoD FOIA Program, *supra* note 43, ¶ C4.1.1.
[58] Examples are: "Sensitive But Unclassified" (formerly "Limited Official Use") information; "DEA Sensitive Information;" "DoD Unclassified Controlled Nuclear Information;" "Sensitive Information;" and information contained in technical documents. U.S. Dep't of Defense, Dir. 5200.1, DoD Information Security Program ¶ AP3.1.1.2 (13 Dec. 1996).
[59] DoD FOIA Program, *supra* note 43, ¶ C4.1.1.
[60] *Id.* ¶ C4.3.1.1.

> exemptions. It is DoD policy that DoD Components shall make discretionary releases whenever possible; however, a discretionary release is normally not appropriate for records clearly exempt under exemptions 1, 3, 4, 6, 7(C) and 7(F) . . . . Exemptions 2, 5, and 7(A)(B)(D) and (E) . . . are discretionary in nature, and DoD Components are encouraged to exercise discretionary releases whenever possible. Exemptions 4, 6 and 7(C) cannot be claimed when the requester is the submitter of the information.[61]

In addition to dissemination rules, the DoD and Air Force regulations address proper markings. Specifically, an FOUO document must be marked "For Official Use Only" at the bottom on the outside of the front cover (if any); on each page containing such information, with each paragraph containing such information also marked as such; and on the outside of the back cover (if any)[62] at the time of its creation,[63] "and transmission shall be by means that preclude unauthorized public disclosure."[64] In addition, transmittal documents must specifically call attention to the presence of any FOUO attachments.[65] If the document is being transmitted outside DoD, it must contain an expanded marking that explains the significance of any FOUO marking, such as the following:

> This document contains information
> EXEMPT FROM MANDATORY DISCLOSURE
> under the FOIA. Exemption(s)____ applies/apply.[66]
> Further distribution is prohibited without the approval of
> (owner's organization, office symbol, phone).[67]

Additional guidance on protecting environmental documents that are required to be released outside DoD is provided in Section IX.B of this article.

The absence of FOUO markings does not, however, mean that the information must be released. Instead, DoD guidance states that requested records without FOUO markings "shall not be assumed to be

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[61] *Id.* ¶ C1.5.5. (references to internal regulation chapters omitted).
[62] *Id.* ¶ C4.2.1.1.
[63] "The marking of records at the time of their creation provides notice of FOUO content and facilitates review when a record is requested under the FOIA." AF FOIA PROGRAM, *supra* note 45, ¶ C4.1.4.
[64] DoD FOIA PROGRAM, *supra* note 43, ¶ C4.3.1.1.
[65] *Id.*
[66] *Id.* ¶ C4.2.1.5.
[67] The Air Force supplement suggests the use of this additional statement; its use is optional. *Id.*

releasable without examination for the presence of information that requires continued protection and qualifies as exempt from public release."[68] Also, markings on a document do not make the document automatically exempt from release. "The prior application of FOUO markings is not a conclusive basis for withholding a record,"[69] and an independent review must still be done. Even if there are portions of the record that are exempt from release, "the remaining reasonably segregable portions must be released to the requester when it reasonably can be assumed that a skillful and knowledgeable person could not reconstruct the excised information."[70]

VI. FOIA EXEMPTIONS & ENVIRONMENTAL DOCUMENTS

While each of the FOIA exemptions should be evaluated to determine whether it protects an environmental document from release, the FOIA exemptions that are most likely to apply to environmental documents are Exemptions 1, 2 ("high 2"), 3, 5, 6, and 9, each of which is discussed below.

A. Exemption 1

Environmental information will be exempt from release under Exemption 1 if the information is "(A) specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and (B) [is] in fact properly classified pursuant to such Executive order."[71] There are many instances in which Air Force environmental documents will be classified. For example, Environmental Assessments or Environmental Impact Statements that are conducted for a classified weapon system or project may be safeguarded in accordance with an agency's regulations applicable to classified information.[72] While the Air Force, as part of

[68] DoD FOIA PROGRAM, *supra* note 43, ¶ C4.1.4.
[69] *Id.* ¶ C4.1.2.
[70] *Id.* ¶ C5.2.4.
[71] 5 U.S.C. § 552(b)(1) (Lexis 2006).
[72] More specifically, a provision in the regulations implementing the National Environmental Policy Act provides the following procedural guidance:

> Agency procedures may include specific criteria for providing limited exceptions to the provisions of these regulations for classified proposals. They are proposed actions which are specifically authorized under criteria established by an Executive Order or statute to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive Order or statute. Environmental assessments and environmental impact statements which address classified proposals may be safeguarded and restricted from public dissemination in accordance with agencies'

the DoD, has always had the authority to classify information, the EPA recently was granted such authority,[73] indicating that post-9/11, environmental documents are now considered more important to national security.

The executive branch, via an executive order, sets forth the requirements for classifying information.[74] The executive order that must be followed to classify a particular record is the one in effect when the responsible agency official takes final classification action on the record.[75] The executive order currently in effect is Executive Order 12,958,[76] as amended by Executive Order 13,292.[77]

The current executive order recognizes the right of the public to be informed, as well as the need to protect national security information.[78] Accordingly, information may not be classified unless "the unauthorized disclosure of the information reasonably could be expected to result in damage to the national security, which includes defense against transnational terrorism."[79] Information categories that may be considered for classification include "vulnerabilities or capabilities of systems, installations, projects, or plans relating to national security," and "military plans, weapons, or operations."[80] Either of these categories could encompass environmental documents.

The current executive order provides for three levels of classification—confidential, secret, and top secret. In addition to classification categories, various terms relating to national security have

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> own regulations applicable to classified information. These documents may be organized so that classified portions can be included as annexes, in order that the unclassified portions can be made available to the public.

40 C.F.R. § 1507.3(c) (Lexis 2006).

[73] INFORMATION SECURITY OVERSIGHT OFFICE, REPORT TO THE PRESIDENT 18 (2002), http://www.fas.org/sgp/isoo/2002rpt.pdf. (The Department of Health and Human Services and the Department of Agriculture also received such authority.).

[74] This practice began with Harry S. Truman in 1951 with Exec. Order No. 10,290, 16 Fed. Reg. 9,795 (Sept 24, 1951). Even before this, however, Franklin Delano Roosevelt issued Exec. Order No. 8,381, 5 Fed. Reg. 1,147 (Mar. 22, 1940), establishing initial classification structure within the military to protect information related to "vital military installations and equipment." FOIA GUIDE, *supra* note 17, at 142. Subsequent executive orders have been the following: Exec. Order No. 10,501, 3 C.F.R. § 398 (1949-53) (Eisenhower); Exec. Order No. 10,985, 27 Fed. Reg. 439 (Jan. 2, 1962) (Kennedy); Exec. Order No. 11,652, 3 C.F.R. § 678 (1971-75) (Nixon); Exec. Order No. 11,862, 40 Fed. Reg. 25,197 (June 11, 1975) (Ford); Exec. Order No. 12,065, 3 C.F.R. § 190 (1978) (Carter); Exec. Order No. 12,356, 3 C.F.R. § 166 (1983) (Reagan). FOIA GUIDE, *supra* note 17, at 142.

[75] FOIA GUIDE, *supra* note 17, at 143.

[76] Exec. Order No. 12,958, 60 Fed. Reg. 19,825 (Apr. 17, 1995) (prescribing system for classifying, safeguarding and declassifying national security information).

[77] Exec. Order No. 13,292, 68 Fed. Reg. 15,315 (Mar. 25, 2003).

[78] Exec. Order No. 12,958, 60 Fed. Reg. 19,825 (Apr. 17, 1995).

[79] *Id.* § 1.1(a)(4).

[80] *Id.* § 1.4.

been applied post-9/11 to documents, such as "Sensitive Homeland Security Information" (SHSI), "Sensitive But Unclassified Information" (SBUI), and "Critical Infrastructure Information" (CII).[81] None of these labels are equivalent to classification pursuant to executive order; consequently, a document marked only with such a label would not qualify for Exemption 1 protection.[82] Nevertheless, other exemptions may apply to such documents. For example, a document marked CII may fall under Exemption 3 based on a statutory provision.[83]

In 1973, the Supreme Court ruled that records classified under proper procedures were exempt from disclosure per se, without any further judicial review.[84] In response, Congress amended FOIA in 1974 to provide specifically for *de novo* review and *in camera* review of documents, including classified documents.[85] This amendment provided courts with clear statutory authority to review the correctness of agency classification determinations. Although the standard of review in such cases has been expressed in different ways, "courts generally have heavily deferred to agency expertise in national security cases."[86]

Two important additional issues concerning FOIA and classified documents are the "Glomar" response and the "mosaic" approach. The "Glomar" response[87] is explicitly incorporated in the current executive order and is explained as follows: "An agency may refuse to confirm or deny the existence or nonexistence of requested records whenever the very fact of their existence or nonexistence is itself classified under this order."[88] The "mosaic" or "compilation" approach is also recognized in the current executive order.[89] Under this approach, compilations of otherwise unclassified information may be classified if the "compiled information reveals an additional association or relationship that . . . meets the [classification] standards."[90]

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[81] FOIA GUIDE, *supra* note 17, at 190-91.
[82] *Id*.
[83] More specifically, 6 U.S.C. § 133 (Lexis 2006) (outlining the protection of voluntarily shared critical infrastructure information) may apply.
[84] Envtl. Prot. Agency v. Mink, 410 U.S. 73, 84 (1973) (precluding even in camera review of withheld information).
[85] 5 U.S.C. § 552(a)(4)(B) (Lexis 2006).
[86] FOIA GUIDE, *supra* note 17, at 151.
[87] Phillippi v. CIA, 546 F.2d 1009 (D.C. Cir. 1976) (The government's response to a FOIA request for records regarding the Glomar Explorer, a submarine-retrieval ship, was that it could "neither confirm nor deny" the existence of any such requested records. This response subsequently became known as a "Glomar" response.).
[88] Exec. Order No. 12,958 § 3.6(a), 60 Fed. Reg. 19,825 (Apr. 17, 1995), *amended by* Exec. Order No. 13,292, 68 Fed. Reg. 15,315 (Mar. 25, 2003).
[89] *Id.* § 1.7(e).
[90] *Id.*

B. Exemption 2 ("High 2")

Exemption 2 exempts disclosure of records that are "related solely to the internal personnel rules and practices of an agency."[91] The courts have divided this exemption into two separate subcategories, which are generally referred to as "low 2" and "high 2."[92] Exemption "low 2" applies to internal matters of a relatively trivial nature[93] and is not particularly relevant to environmental documents. Exemption "high 2," however, has become one of the most used exemptions to protect sensitive but unclassified documents and is one of the most important for environmental documents. It applies to internal matters of a more substantial nature than "low 2" documents—namely, those the disclosure of which would risk the circumvention of a statute or agency regulation.[94] In particular, the release of environmental information could risk the circumvention of environmental requirements[95] and statutes and regulations requiring secure military installations.[96]

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[91] 5 U.S.C. § 552(b)(2) (Lexis 2006).

[92] *See, e.g.*, Schiller v. Nat'l Labor Relations Bd., 964 F.2d 1205, 1207 (D.C. Cir. 1992) (describing "low 2" and "high 2" categories). Use of Exemption 2 is entirely discretionary; as a matter of policy, DoD Components do not assert "low 2." DoD FOIA PROGRAM, *supra* note 43, ¶ C3.2.1.2. "Records qualifying under the low (b)(2) profile are those that are trivial and housekeeping in nature for which there is no legitimate public interest or benefit to be gained by release." *Id.* ¶ C3.2.1.2.2. "Records qualifying under high (b)(2) are those containing or constituting statutes, rules, regulations, orders, manuals, directives, instructions, and security classification guides, the release of which would allow circumvention of these records thereby substantially hindering the effective performance of a significant function of the DoD." *Id.* ¶ C3. 2.1.2.1.

[93] *See, e.g.*, Dep't of the Air Force v. Rose, 425 U.S. 352, 369-70 (1976); Schiller, 964 F.2d at 1207 (describing "low 2" and "high 2" categories); Lesar v. U.S. Dep't of Justice, 636 F.2d 472, 485 (D.C. Cir. 1980); DoD FOIA PROGRAM, *supra* note 43, ¶ C3.2.1.2.2 ("Records qualifying under the low (b)(2) profile are those that are trivial and housekeeping in nature for which there is no legitimate public interest or benefit to be gained by release . . . .").

[94] *See generally* FOIA GUIDE, *supra* note 17, at 204-23. DoD guidance specifically defines "high 2" documents as "those containing or constituting statutes, rules, regulations, orders, manuals, directives, instructions, and security classification guides, the release of which would allow circumvention of these records thereby substantially hindering the effective performance of a significant function of the Department of Defense." DoD FOIA PROGRAM, *supra* note 43, ¶ C3.2.1.2.1.

[95] Although a terrorist attack on the Air Force that causes environmental harm would not necessarily mean the Air Force violated its legal obligations, the Air Force might be negligent under 33 U.S.C. § 1319(c)(1) (Lexis 2006). Also, even though the Air Force would probably not be liable, there are numerous environmental statutes and regulations that the terrorist or criminal would likely be violating (*e.g.*, 33 U.S.C. §§ 1319(c)(1), (2), and (3) (Lexis 2006); 42 U.S.C. § 6928(e) (Lexis 2006); 42 U.S.C. § 7413(c) (Lexis 2006)).

[96] *See, e.g.*, 10 U.S.C. § 8062 (Lexis 2006); 42 U.S.C. § 5195c (Lexis 2006); 50 U.S.C. § 797 (Lexis 2006); U.S. DEP'T OF DEFENSE, DIR. 5200.8, SECURITY OF INSTALLATIONS & RESOURCES (25 Apr. 1991); U.S. DEP'T OF AIR FORCE, POLICY DIR. 31-1, PHYSICAL

Examples of environmental information that may fall under "high 2" are: (1) locations of hazardous or toxic materials; (2) vulnerability assessments; (3) emergency response plans; and (4) procedures/plans governing the transportation of hazardous substances.[97] In addition to certain information that falls squarely within the environmental area, the "high 2" exemption is also likely to apply to information relating to an installation's land use, such as the AICUZ.[98] For example, several bases and major commands (MAJCOMs) have received requests for Military Training Routes, Military Operating Areas, or airfield take-off and landing utilization data, some of which have been determined to have fallen within the "high 2" exemption.

The DoJ FOIA Guide provides the following guidance concerning Homeland Security-Related Information and the applicability of Exemption 2:

> Since the horrific events of September 11, 2001, and given the possibilities for further terrorist activity in their aftermath, all federal agencies are concerned with the need to protect critical systems, facilities, stockpiles, and other assets (often referred to as "critical infrastructure") from security breaches and harm—and in some instances from their potential use as weapons of mass destruction in and of themselves. Such protection efforts, of course, necessarily must include the protection of agency information that reasonably could be expected to enable someone to succeed in causing the feared harm, not all of which can appropriately be accorded national security classification as a practical matter. In addressing these heightened homeland security concerns, all agencies should be aware of the protection that is available under Exemption 2, perhaps foremost among all other FOIA exemptions, for such sensitive information.
>
> The types of information that may warrant Exemption 2 protection for homeland security-related reasons include, for example, agency vulnerability assessments and evaluations of items of critical infrastructure that are internal to the government. Since September 11, 2001, all courts that have considered nonclassified but nonetheless highly sensitive information, such as container-inspection data from a

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SECURITY (1 Aug. 1995); U.S. DEP'T OF AIR FORCE, JOINT INSTR. 31-102, PHYSICAL SECURITY (31 May 1991).

[97] *See* AF FOIA PROGRAM, *supra* note 45, ¶ C3.2.1.2 (providing examples of records that may qualify for Exemption 2 protection).

[98] See 32 C.F.R. Part 256 for information about the AICUZ Program.

> particular port or maps of the downstream flooding consequences of dam failure, have justifiably determined—either under Exemption 2 or, upon a finding of a law enforcement connection, under Exemptions 7(E) or 7(F)—that such information must be protected from disclosure in order to avoid the harms described both in the recent Presidential Directive concerning Homeland Security and by Congress in the exemptions to the Freedom of Information Act. (See also the discussions of related exemptions under Exemption 7, Exemption 7(E), and Exemption 7(F), below.) Agencies should be sure to avail themselves of the full measure of Exemption 2's protection for their critical infrastructure information as they continue to generate more of it, and assess its heightened sensitivity, in the wake of the September 2001 terrorist attacks.
>
> Lastly, whatever the safeguarding label that an agency might (or might not) use for the information maintained by it that has special sensitivity—e.g., "for official use only" (FOUO), "restricted data" (a Department of Energy designation), or "sensitive homeland security information" (SHSI)—whenever predominantly internal agency records may reveal information the disclosure of which could reasonably be expected to cause any of the harms described above, responsible federal officials should carefully consider the propriety of protecting such information under Exemption 2.[99]

It should be noted that although DoJ encourages broad use of "high 2," there are not many cases that flesh out the extent of its reach. There were some early cases that would seem to limit its application.[100] However, the majority approach has been to use the *Crooker*[101] test to determine when sensitive materials are exempt from disclosure under "high 2." According to this test, the requested information (1) must be "predominately internal,"[102] and (2) its disclosure must "significantly risk circumvention of agency regulations or statutes."[103] As stated above, the limits of this test when applied to environmental documents

[99] FOIA GUIDE, *supra* note 17, at 223-26 (covering Exemption 2—"Homeland Security-Related Information") (footnotes omitted).
[100] *See* Cox v. Levi, 592 F.2d 460, 462-63 (8th Cir. 1979); Cox v. U.S. Dep't of Justice, 576 F.2d 1302, 1306-09 (8th Cir. 1978); Hawkes v. IRS, 467 F.2d 787, 795 (6th Cir. 1972); Sladek v. Bensinger, 605 F.2d 899, 902 (5th Cir. 1979).
[101] Crooker v. ATF, 670 F.2d 1051 (D.C. Cir. 1981) (en banc).
[102] *Id.* at 1074.
[103] *Id.* at 1073-74.

(or other documents with security implications) have not been fully examined.

The DoJ FOIA Guide states, "Since September 11, 2001, all courts that have considered nonclassified but nonetheless highly sensitive information . . . have justifiably determined . . . that such information must be protected."[104] This is slightly misleading, however, since not many courts have addressed the issue. The guide provides only two cases.[105] In the end, it seems likely that most if not all courts would apply "high 2" to sensitive, internal information such as the exact location of toxic and dangerous materials or truly critical infrastructure (such as a drinking water treatment facility), but Air Force attorneys should be careful not to abuse "high 2." Even extremely sensitive documents should be reviewed for "reasonably segregable" portions that can be released.[106] Although it is true that "where the stakes are high," courts will likely hold the information exempt,[107] the contrary is also true. The more trivial the information and potential harm posed by its release, the more likely a court will be to rule against the United States and hold that information should be disclosed.

C. Exemption 3

There are several statutory prohibitions under FOIA on the release of certain environmental information, the two most important of which are the Safe Drinking Water Act (SDWA)[108] and the Clean Air Act (CAA),[109] which will be covered in greater detail below. It should be noted that there are several other statutory prohibitions that may provide a basis to withhold environmental information.[110]

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[104] FOIA GUIDE, *supra* note 17, at 224.

[105] Coastal Delivery Corp. v. U.S. Customs Serv., 272 F. Supp. 2d 958 (C.D. Cal. 2003), *reconsideration denied*, No. 02-3838, 2002 WL 21507775 (C.D. Cal. June 13, 2003), *appeal dismissed voluntarily*, No. 03-55833 (9th Cir. Aug. 26, 2003) (finding that container-inspection data at a port is exempt under "high 2"); Living Rivers, Inc. v. U.S. Bureau of Reclamation, 272 F. Supp. 2d 1313 (D. Utah 2003) (finding that maps of downstream flooding consequences of dam failure were exempt under Exemption 7(F) because release could reasonably be expected to endanger life or physical safety of many people).

[106] Schreibman v. U.S. Dep't of Commerce, 785 F. Supp. 164, 166 (D.D.C. 1991).

[107] Schwaner v. Dep't of Air Force, 898 F.2d 793, 796 (D.C. Cir. 1990).

[108] 42 U.S.C. §§ 300f to 300j-26 (Lexis 2006).

[109] 42 U.S.C. §§ 7401–7671q (Lexis 2006).

[110] A table of Exemption 3 statutes applicable to the DoD is available at http://www.foia.af.mil/b3.pdf. Critical infrastructure information that is voluntarily submitted to a covered Federal agency for use by that agency regarding the security of critical infrastructure is also protected from release under Exemption 3. Critical Infrastructure Information Act (in the Homeland Security Act of 2002), Pub. L. No. 107-296, §§ 211-15, 116 Stat. 2153 (2002) (codified at 6 U.S.C. § 133).

1. *Safe Drinking Water Act*

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (the Bioterrorism Act)[111] amended the SDWA to require community water systems, including those on Air Force bases,[112] serving populations of greater than 3,300 persons to conduct antiterrorism water vulnerability assessments[113] and develop a water system Emergency Response Plan (ERP), incorporating the results of the vulnerability assessments.[114] According to the DoD Policy on Drinking Water Vulnerability Assessments and ERPs:

> DoD has many water systems that are not specifically addressed by [the Bioterrorism Act's amendments to the SDWA]. Nevertheless, the unquestionable threats and unique missions executed at DoD facilities warrant additional efforts to protect our people, our critical assets, and our mission. . . . To adequately assess drinking water systems, all facilities having a public water system serving greater than 25 DoD consumers shall, at a minimum, address the assessment areas established by Section 401 [of the Bioterrorism Act]. [115]

The Air Force Policy on Potable Water Vulnerability Assessments and Emergency Response Plans also requires all drinking water systems serving more than twenty-five people to comply with the Bioterrorism Act requirements.[116] Consequently, based on the Bioterrorism Act and DoD and Air Force policies, Air Force water systems serving more than twenty-five persons must conduct vulnerability assessments, certify to the EPA that they have conducted vulnerability assessments, and submit their vulnerability assessments to the EPA.[117] Although these assessments must be provided to the EPA,

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[111] Pub. L. No. 107-188, 116 Stat. 594 (2002).
[112] 42 U.S.C. § 300j-6 (Lexis 2006) (waiver of sovereign immunity provision).
[113] *Id.* § 300i-2(a).
[114] *Id*. § 300i-2(b). In the Air Force draft guide for addressing the requirements of the Bioterrorism Act, the Air Force uses "Water Contingency Response Plan" (WCRP) to refer to the ERP.
[115] Memorandum from John Paul Woodley, Jr., Assistant Deputy Under Secretary of Defense (Environment, Safety and Occupational Health): DoD Policy on Drinking Water Vulnerability Assessments and Emergency Response Plans (3 July 2003) (on file with author).
[116] Memorandum from Major General Joseph E. Kelley, Assistant Surgeon General, Healthcare Operations: Air Force Policy on Potable Water Vulnerability Assessments and Emergency Response Plans (6 Oct. 2003) (on file with author).
[117] For systems serving between 3,301 and 49,999 people, the Vulnerability Assessment was due by June 30, 2004; for those serving between 50,000 and 99,999, it was due

the Act exempts vulnerability assessments and "all information derived therefrom" from release under the FOIA.[118] As required by the Act, the EPA developed a protocol for the protection of the assessments from unauthorized disclosure.[119]

Although the SDWA exempts vulnerability assessments from release under FOIA, the SDWA does not address releasability under state FOIA laws.[120] Before the Air Force provides a document to an entity that is subject to the state FOIA law, the Air Force should take all appropriate steps to maintain control of the document.[121] To minimize the likelihood that the entity inappropriately releases an Air Force document, the Air Force must mark documents and obtain from the entity an agreement that addresses document protection.

Once the Air Force has developed a vulnerability assessment and provided a copy to the EPA in accordance with the statute, a state entity may request from the Air Force a copy for its review. The SDWA specifically addresses this issue, stating that "[n]o community water system shall be required under State or local law to provide a [vulnerability assessment] to any State, regional, or local governmental entity *solel*y by reason of the requirement set forth in paragraph (2) that the system submit such assessment to the Administrator."[122] If the entity specifies a reason other than the SDWA requirement, then the Air Force will need to evaluate the state requirement and consider ways to protect the document from further release. In such cases, the installation staff judge advocate should consult the MAJCOM, Regional Counsel, the Environmental Law and Litigation Division (AFLOA/JACE), and AFLOA/JAA.

December 31, 2003; and for those serving 100,000 or greater, it was due Mar. 31, 2003. 42 U.S.C. § 300j-2(a)(2) (Lexis 2006).

[118] 42 U.S.C. § 300i-2(a)(3) (Lexis 2006).

[119] *Id.* § 300i-2(a)(5). The Protocol to Secure Vulnerability Assessments Submitted by Community Water Systems to EPA is available at http://www.epa.gov/safewater/watersecurity/pubs/info_protect_11-30-02.pdf.

[120] Generally, however, the federal laws do not limit state FOIA laws, as the following excerpt explains:

> State FOIA laws are not generally superseded or limited by Federal law [although there are notable exceptions, such as in New York's Pub. Off. Law § 87(2)(a), which carves out exclusions for records exempt under Federal statute]. As a result, drinking water and wastewater utilities will likely <u>not</u> be able to rely on [the FOIA exemption in the Bioterrorism Act] for protecting access to information at state levels.

ASSOCIATION OF METROPOLITAN WATER AGENCIES, STATE FOIA LAWS: A GUIDE TO PROTECTING SENSITIVE WATER SECURITY INFORMATION 2 (2002), http://www.amwa.net/isac/StateFOIA.pdf (footnotes omitted).

[121] See *infra* Part VII and IX-B for more detail about precautions that should be taken whenever submitting a document to a non-federal entity.

[122] 42 U.S.C. § 300i-2(a)(4) (Lexis 2006) (emphasis added).

2. *Clean Air Act*

The Clean Air Act also contains a prohibition on releasing environmental information under FOIA.[123] Specifically, this provision applies to stationary sources that process more than the threshold amount of listed chemicals that are "known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment."[124] Covered facilities, which include federal facilities,[125] must develop risk management plans (RMPs) that include a hazard assessment. The statute refers to this assessment as an off-site consequence analysis (OCA).[126] Congress passed the Chemical Safety Information, Site Security, and Fuels Regulatory Relief Act (CSISSFRRA),[127] which exempted OCA from FOIA for one year.[128]

The promulgation of regulations[129] on August 4, 2000, kept the exemption in place without a sunset provision,[130] thus continuing to protect OCAs from disclosure under FOIA. Files containing "OCA data are only available to 'covered persons' as defined by CSISSFRRA."[131] Covered persons include United States, state, or local government officers, employees, agents, and contractors.[132] With the exception of OCA information that an owner or operator makes available to the public, Federal, State, and local government officials, as well as qualified researchers are prohibited from releasing OCA information

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[123] 42 U.S.C. § 7412(r) (CAA § 112(r) (Lexis 2006)).
[124] *Id.* § 7412(r)(1), (3).
[125] *Id.* § 7418 (CAA § 118).
[126] *Id.* § 7412(r)(7)(H)(i)(III) (defining OCA to mean "those portions of a risk management plan, excluding the executive summary of the plan, consisting of an evaluation of 1 or more worst-case release scenarios or alternative release scenarios, and any electronic data base created by the Administrator from those portions").
[127] Pub. L. No. 106-40, 113 Stat. 207 (1999). In addition to addressing OCA, Congress exempted flammable substances from § 112(r). *Id.* § 2(4) (codified at 42 U.S.C. § 7412(r)(4)(B)).
[128] 42 U.S.C. § 7412(r)(7)(H)(iii) (Lexis 2006).
[129] Accidental Release Prevention Requirements; Risk Management Programs Under the Clean Air Act Section 112(r)(7); Distribution of Off-Site Consequence Analysis Information, 65 Fed. Reg. 48,108, 48,126 (Aug. 4, 2000) (codified at 40 C.F.R. ch. IV).
[130] 42 U.S.C. § 7412(r)(7)(H)(iii)(II) (Lexis 2006).
[131] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, CHEMICAL EMERGENCY PREPAREDNESS AND PREVENTION, RMP*REVIEW, http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/rmp_review.htm (last visited Mar. 2, 2006) ("RMP*Review is a free software program designed for reviewing and analyzing Risk Management Plans submitted under the Clean Air Act, Section 112(r)."). The implementing regulations set forth rules governing the access to OCA information by government officials and the public. 40 C.F.R. §§ 1400.3–1400.9 (Lexis 2006).
[132] 42 U.S.C. § 7412(r)(7)(H)(i)(I)(aa)–(gg) (Lexis 2006).

and OCA rankings to the public.[133] Violation of this prohibition subjects the violator to criminal liability.[134]

D. Exemption 5

Exemption 5 exempts from release those documents that are normally privileged in the civil discovery context.[135] The most often used privileges under Exemption 5 are the deliberative process privilege, attorney-client privilege, and attorney work-product privilege. Many environmental documents will be protected from release under Exemption 5, including draft documents, pre-decisional documents, and documents authored by attorneys—all of which are explained in greater detail below.

The deliberative process privilege covers documents that are predecisional[136] and a direct part of the deliberative process (i.e., those that make recommendations or express opinions on legal or policy matters).[137] The courts have suggested three policy reasons for this privilege and exemption: "(1) to encourage open, frank discussions on matters of policy between subordinates and superiors; (2) to protect against premature disclosure of proposed policies before they are finally adopted; and (3) to protect against public confusion that might result from disclosure of reasons and rationales that were not in fact ultimately the grounds for an agency's action."[138] This exemption generally protects opinions rather than facts,[139] though facts may be protected when their release would disclose the subjective deliberations of subordinates.[140] Generally, draft reports and memoranda will fall under this privilege. Draft documents should contain "**DRAFT**" as a header or footer on every page. Additionally, the following marking should be included at least on the first page:

> This document is a draft and exempt from release under the Freedom of Information Act (FOIA), P.L. 93-502 (5 U.S.C. § 552), by Exemption 5, 5 U.S.C. 552(b)(5). Do

[133] *Id.* § 7412(r)(7)(H)(v)(III); 40 C.F.R. § 1400.10.
[134] *Id*. § 7412(r)(7)(H)(v)(II); 40 C.F.R. § 1400.10.
[135] FOIA GUIDE, *supra* note 17, at Exemption 5 discussion.
[136] Predecisional means "antecedent to the adoption of agency policy." Jordan v. U.S. Dep't of Justice, 591 F.2d 753, 774 (D.C. Cir. 1978).
[137] FOIA GUIDE, *supra* note 17, at Deliberative Process Privilege discussion under Exemption 5; Carter v. United States Dep't of Commerce, 307 F.3d 1084 (9th Cir. 2002) (providing a thorough discussion of deliberative process privilege).
[138] FOIA GUIDE, *supra* note 17, at 370-71 (footnotes omitted).
[139] *See, e.g.,* Inderjit Badhwar v. United States Dep't of the Air Force, 622 F. Supp. 1364 (D.D.C. 1985) (explaining Exemption 5's protection for "subjective documents which reflect the personal opinions of the writer rather than the policy of the agency").
[140] Judicial Watch, Inc. v. United States Dep't of Commerce, No. 95-0133 (RCL), 1996 U.S. Dist. LEXIS 22470, at *15 (citing Brinton v. Dep't of State, 636 F.2d 600, 604-06 (D.C. Cir. 1980)).

> not release without prior specific approval of the originator or higher authority.

Finalized "predecisional" documents, such as reports to the wing commander making recommendations for commander action, should contain the following marking on at least the first page:

> This document is predecisional and at least partially exempt from release under the Freedom of Information Act (FOIA), P.L. 93-502 (5 U.S.C. § 552), by Exemption 5, 5 U.S.C. 552(b)(5). Do not release without prior specific approval of the originator or higher authority.

Documents prepared by or for an attorney in contemplation of litigation are protected from release by the attorney work-product privilege.[141] To invoke this privilege, "some articulable claim, likely to lead to litigation" must have arisen.[142] The privilege is not limited to civil proceedings, but extends to administrative proceedings as well.[143] Given the almost universal reach of environmental regulation today (and, consequently, the broad potential for civil or administrative action), it is safe to say that many official documents that an Air Force environmental attorney prepares would fall under the scope of the work-product privilege.

The third common Exemption 5 privilege is the attorney-client privilege, which covers "confidential communications between an attorney and his client relating to a legal matter for which the client has sought professional advice."[144] Keep in mind that this privilege does not necessarily exempt a whole document, but it will exempt from disclosure only the portions that actually contain confidential communications (although the overlapping work-product privilege will probably exempt all non-factual portions). In the end, all Air Force legal documents should be marked with a joint attorney work-product and attorney-client privilege marking, such as the following:

> This document contains confidential attorney work-product and/or information protected under the attorney-client privilege, both of which are protected from

[141] Nat'l Labor Relations Bd. v. Sears, Roebuck & Co., 421 U.S. 132, 154 (1975).
[142] Coastal States Gas Corp. v. Dep't of Energy, 617 F.2d 854, 865 (D.C. Cir. 1980). For more information on the attorney work-product privilege, see FOIA GUIDE, *supra* note 17, at 397-410.
[143] Public Citizen Inc., v. Dep't of State, 100 F. Supp. 2d 10, 29-30 (D.D.C. 2000).
[144] Mead Data Cent., Inc., v. United States Dep't of the Air Force, 566 F.2d 242, 252 (D.C. Cir. 1977). See FOIA GUIDE, *supra* note 17, for a discussion about the attorney-client privilege.

> disclosure under the Freedom of Information Act, P.L. 93-502 (5 U.S.C. § 552). Do not release without prior specific approval of the originator or higher authority.[145]

While the above explanation of these three common privileges is easy to understand, experience with asserting these privileges demonstrates that the protection is more restrictive than one might otherwise conclude, in that some courts might find large portions (i.e., those dealing with "facts") segregable and require their release.[146] The "Vaughn Index," which is generated in response to a person's challenge of an agency's decision to withhold information, must provide a particularized explanation of how disclosure of the specified document would damage the interest protected by the claimed exemption.[147]

E. Exemption 6

Exemption 6 protects from release those portions of environmental documents that contain information about a specific individual, where release of the information would be a clearly unwarranted invasion of his or her personal privacy.[148] As the FOIA Guide states, "The relevant inquiry is whether public access to the information at issue would violate a viable privacy interest of the subject of such information."[149] This exemption would most likely apply to documents relating to an environmental tort claim because such documents often contain personal information, such as an individual's medical information, social security number, home address and home phone number.[150]

Prior to 9/11, the DoD "as a matter of policy, in most circumstances disclosed the name, rank, gross salary, duty assignments,

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[145] If release to individuals within the DoD is authorized, the last sentence could state, "Do not release outside of DoD channels without prior authorization from the originator or higher authority."

[146] While this situation may occur when the deliberative process privilege or attorney-client privilege is asserted, a document which is determined to be "attorney work product" would be exempt in its entirety, including facts. *See* FOIA GUIDE, *supra* note 17, at 406-7.

[147] Vaughn v. Rosen, 484 F.2d 820, 826-28 (D.C. Cir. 1973); *see* Elec. Privacy Info. Ctr. v. Dep't of Homeland Sec., 384 F. Supp. 2d 100 (D.D.C. 2005) (ordering Department of Homeland Security and Transportation Security Administration to submit a revised *Vaughn* index with respect to the specified withholdings); Favish v. Office of Indep. Counsel, 217 F.3d 1168, 1175 (9th Cir. 2000) (Pregerson, J., concurring in part and dissenting in part).

[148] 5 U.S.C. § 552(b)(6) (Lexis 2006).

[149] FOIA GUIDE, *supra* note 17, at 430.

[150] A request from an individual for his or her own records (first party request) must be analyzed under the Freedom of Information Act and under the Privacy Act. The government may only withhold information protected from disclosure under both Acts. *See* AF FOIA PROGRAM, *supra* note 45, ¶ C1.5.13.

duty phone numbers, source of commission, promotion sequence number, awards and decorations, professional military education, duty status, and other nonsensitive details of individual military personnel, as well as comparable information concerning individual civilian employees."[151] One exception to this was the statutory prohibition on the disclosure under FOIA of personally identifying information of military and civilian personnel assigned overseas, on board ship, or to sensitive or routinely deployable units.[152] However, after 9/11, guidance was put forth providing the following:

> All DoD components shall ordinarily withhold lists of names and other personally identifying information of personnel currently or recently assigned within a particular component, unit, organization or office with the Department of Defense in response to requests under the FOIA . . . .
>
> DoD components may determine that release of personal identifying information about an individual is appropriate only if the release would not raise security or privacy concerns and has been routinely released to the public.
>
> Ordinarily names of DoD personnel, other than lists of names, mentioned in documents that are releasable under the FOIA should not be withheld, but in special circumstances where the release of a particular name would raise substantial security or privacy concerns, such a name may be withheld.[153]

As to environmental documents, it would appear that "official" or work-related information of Air Force personnel (either active duty or civilian), such as name, job title, duty location, or work phone number, should not normally be redacted. In general, Air Force personnel do not have sufficient privacy interests in their work-related information. It would seem, though, that there are sufficient "high 2" considerations (e.g., possibility of targeted attacks on Air Force information infrastructure) to support redacting work e-mail addresses. As to names and other work-related information (such as duty titles, duty locations and phone numbers), unless 10 U.S.C. § 130b applies or there are other

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[151] FOIA GUIDE, *supra* note 17, at 434.

[152] 10 U.S.C. § 130b (Lexis 2006). The AF FOIA PROGRAM, *supra* note 45, ¶ C3.2.1.6.2.2 provides additional guidance on how to determine when this exemption applies.

[153] Memorandum from DoD Director for Administration and Management to DoD FOIA Offices: Withholding of Personally Identifying Information Under the Freedom of Information Act (FOIA) (9 Nov. 2001), *available at* http://www.defenselink.mil/pubs/foi/withhold.pdf.

articulable security or privacy concerns, the information is likely releaseable.

F. Exemption 9

Exemption 9 covers "geological and geophysical information and data, including maps, concerning wells."[154] Although Congress seemingly intended the exemption to protect the oil and gas exploration industries from the unfair competition of "speculators,"[155] courts have found Exemption 9 to support the nondisclosure of information regarding various types of wells.[156] While this exemption is rarely invoked and has received few judicial interpretations,[157] it has applicability in the environmental arena because military facilities generate and maintain documents that include information about wells, such as drinking water wells and monitoring wells. Consequently, Air Force personnel responding to a request under FOIA for a document containing well information should evaluate the applicability of Exemption 9, in addition to the other exemptions—particularly Exemption "high 2."

The Air Force generally digs one or more monitoring wells to determine the existence and extent of contamination, particularly of groundwater. Generally, this is an initial step regardless of the clean-up regime that ultimately is followed (i.e., CERCLA, RCRA corrective action, Underground Storage Tank (UST) corrective action, etc.). Furthermore, monitoring wells are used to take samples once cleanup is complete to ensure that the clean-up objectives have been achieved.

In addition to each installation's documents containing well information, the Air Force maintains databases that contain well information. For example, the Air Force Center for Environmental Excellence (AFCEE) maintains the Environmental Resources Program Information Management System (ERPIMS) database "for validation and management of data from environmental projects at all Air Force bases."[158] This database contains the locations of monitoring wells, additional site/location descriptions, hydrogeological information, monitoring well characteristics, and background information and test

[154] 5 U.S.C. § 552(b)(9) (Lexis 2006).
[155] Black Hills Alliance v. U.S. Forest Serv., 603 F. Supp. 117, 122 (D.S.D. 1984) (The court looked at the legislative history and cited H.R. Rep. No. 89-1497, at 9 (1966).).
[156] *See, e.g.*, Superior Oil Co. v. Fed. Energy Regulatory Comm'n, 563 F.2d 191, 197 (5th Cir. 1977); Pennzoil Co. v. Fed. Power Comm'n, 534 F.2d 627, 629 (5th Cir. 1976); Starkey v. U.S. Dep't of the Interior, 238 F. Supp. 2d 1188, 1195 (S.D. Cal. 2002); Black Hills Alliance v. U.S. Forest Serv., 603 F. Supp. 117, 122 (D.S.D. 1984).
[157] FOIA GUIDE, *supra* note 17, at 666.
[158] ERPIMS Homepage, http://www.afcee.brooks.af.mil/ms/msc_irp.asp (last visited Mar. 3, 2006).

results on samples taken from the wells.[159] This database also contains data unrelated to monitoring wells that would likely be exempt under "high 2."

Even if Exemption 9 would otherwise protect from release certain well information, the information may have been made public pursuant to public notice and comment requirements that must be satisfied during certain cleanup activities.[160] It could be argued that, if this information has been previously disclosed to the public, the Air Force has waived any potential exemption. The concept of "waiver" in FOIA law is relatively complicated and seems to be driven by the specific facts at hand.[161] In general, the previous release to the public (even if done pursuant to environmental regulations) will cut against arguments that the information must be protected from release under the FOIA.

While certain well information may be publicly released during a specific cleanup activity, and it may be difficult to prevent the release of discrete and specifically requested information that has already been released, there remains a valid argument that the entire ERPIMS database is not releasable in response to a request under FOIA. While, in theory, an individual could gather most of the information that is in ERPIMS, this is not practical and it would be virtually impossible for an individual to recreate the database. Such a task would be time-consuming and expensive, and an individual would need to obtain many pieces of information (such as location of a cleanup site, status of the cleanup, etc.) before being able to identify those documents that should be reviewed.

ERPIMS distills important information that would be of interest to a person intent on circumventing the law (e.g., a terrorist). Examples of sensitive information include, but are not limited to, an installation's access to groundwater and hydrological explanations of the location of drinking water. Consequently, there may be a valid "mosaic"-type argument that release of the information as a whole would reveal information that is exempt from release based on a FOIA exemption, such as Exemption 2 ("high 2").[162]

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[159] *Id.*

[160] For example, CERCLA requires public participation in the formulation of remedial action plans. 42 U.S.C. § 9617 (CERCLA § 117) (Lexis 2006). "The notice and analysis [of the plan] shall include sufficient information as may be necessary to provide a reasonable explanation of the proposed plan and alternative proposals." *Id.* § 9617(a). The National Contingency Plan requires the creation of an administrative record that must be made public. 40 C.F.R. § 300.800 (Lexis 2006). The documents in this file must be made available at or near the site at issue (usually a local library or other public building) and must include sampling and testing data. *Id.* § 300.805(a), (a)(1).

[161] For more information on the concept of waiver, see FOIA GUIDE, *supra* note 17, at 691-713.

[162] For a discussion about Exemption 2, see notes 91–107 and accompanying text.

As the FOIA Guide states, "It is also reasonable to assume that both agencies and courts may apply Exemption 9 to protect well data in other compelling circumstances, such as when Exemption 9 protection is necessary to guard against an attack upon pooled natural resources intended to cause harm to the public."[163] In the case of the ERPIMS database, the benefit of public release, if any, of thousands of precise Global Positioning Satellite coordinates of groundwater locations on military installations seems to be clearly outweighed by the danger of this information being misused. Arguably, there may be discrete pieces of information in the database that could legitimately be released, such as the total number of Air Force monitoring wells, the types of tests that are conducted, and the results of the tests. None of this information seems to jeopardize military security, but could benefit the public with release.

VII. RELEASABILITY OF ECAMP/ESOHCAMP DOCUMENTS AND FINDINGS

By executive order,[164] Air Force facilities were required to comply with all applicable federal, state, and local environmental regulations. In order to comply with these, the Air Force set up its Environmental Compliance Assessment and Management Program (ECAMP). In 2000, the President required each agency to have compliance audit programs.[165] In addition, it is DoD policy to "conduct internal and external compliance self assessments at installations."[166]

The Air Force environmental audit program[167] is in the initial process of transitioning to the broader scope of environmental, as well as safety and occupational health requirements (that is, ESOHCAMP versus ECAMP).[168]

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[163] FOIA GUIDE, *supra* note 17, at 668 (citing Living Rivers, Inc. v. U.S. Bureau of Reclamation, 272 F. Supp. 2d 1313, 1321-22 (D. Utah 2003), which found that disclosure of "inundation maps" could reasonably be expected to place at risk lives of individuals in downstream areas that would be flooded by breach of dams through increasing risk of terrorist attack on dams).

[164] Exec. Order No. 12088, 43 Fed. Reg. 47,707 (Oct. 13, 1978) (Federal Compliance and Pollution Control Standards), *amended by* Exec. Order No. 12,580, 52 Fed. Reg. 2,923 (Jan. 23, 1987) (Superfund Implementation), and *partially revoked by* Exec. Order No. 13,148, 65 Fed. Reg. 24,595 (Apr. 21, 2000) (Greening the Government Through Leadership in Environmental Management).

[165] Exec. Order No. 13,148, 65 Fed. Reg. 24,595 (Apr. 21, 2000).

[166] U.S. DEP'T OF DEFENSE, INSTR. 4715.6, ENVIRONMENTAL COMPLIANCE ¶ 4.9 (24 Apr. 1996).

[167] U.S. DEP'T OF AIR FORCE, INSTR. 32-7045, ENVIRONMENTAL COMPLIANCE ASSESSMENT AND MANAGEMENT PROGRAM (ECAMP) [hereinafter AFI 32-7045] (1 July 1998).

[168] Some bases have already transitioned to the new program and are calling it the Environmental, Safety, and Occupational Health Compliance and Management Program (ESOHCAMP). The new Air Force instruction is still in the early stages of being

The current Air Force instruction requires "major installations"[169] to conduct internal compliance assessments at least annually, and external assessments at least once every three years.[170] An installation conducts its own "internal" assessment, whereas its MAJCOM is responsible for setting up and conducting external assessments.[171] During the year in which an external assessment occurs, installations are not required to conduct an internal assessment.[172]

Throughout the process of conducting an ECAMP/ ESOHCAMP, the team will create numerous documents and collect various data, some of which will not be releasable and some of which should be released. In discussing the releasability of these documents and data, it is helpful to break the documents and data down into three categories: (1) pre-finalized data and documents, (2) the final assessment report, and (3) finalized data in the MAJCOM or headquarters database.

A. Pre-Finalized Data and Documents

The Air Force does not provide much guidance on finalizing reports or data aside from stating that the ECAMP team is required to complete a final assessment report and file it with the installation within 180 days of an external assessment and 120 days of an internal assessment.[173] In the absence of specific MAJCOM rules or policy, these timelines govern, with the "trigger" for finalization being the completion of a Final Assessment and its being provided to the installation. MAJCOMs must also provide the final report to HQ AFCEE/EQ.[174] Furthermore, the AFI provides guidance on the general format for the final report and what information it should contain.[175] Aside from these general provisions, however, there is no other centralized guidance for MAJCOMs regarding how reports and data must be finalized.

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drafted, but at this point it appears the name will be "Environmental, Safety, and Occupational Health Capabilities and Management Process" (the acronym still being ESOHCAMP), with the "Capabilities" reflecting compliance, conformance, and capacities, and "Process" reflecting that the assessments and management are continual and constantly changing.

[169] A "major installation" is defined as "a self-supporting center of operations for actions of importance . . . . It is operated by an active, Reserve, or Guard unit of group size or larger with all land, facilities and organizational support needed to accomplish the unit mission." AFI 32-7045, *supra* note 167, at 12 attch. 1.

[170] *Id.* ¶ 1.1.1.

[171] *Id.* ¶¶ 1.1.1, 1.3.3.

[172] *Id.* ¶ 1.1.1.

[173] *Id.* ¶ 3.1.

[174] *Id.* ¶ 1.3.3.3.

[175] *Id.* at attch. 2 (Environmental Compliance Assessment Report Format).

Since MAJCOMs typically use their databases for tracking purposes on a "running basis" and are constantly updating and changing data even after reports are finalized, there could be some confusion as to what "finalized" data is. Again, in the absence of MAJCOM guidance to the contrary, the Air Force instruction seems to require using the finalized report as the "trigger," in which case all data related to that report would be considered final—even if it is likely later to be changed or updated in the database. Of course, if changes are made in the database after the finalized report and information from the database is requested, the most current information should be given if it is releaseable.

Regardless of how "finalization" is determined, all non-finalized documentation or data is exempt from release under Exemption 5. Non-finalized data or documentation should be clearly marked "Pre-decisional Document" or "Draft Document." It also should be marked to state that it is exempt from release under Exemption 5 to ensure that it is managed appropriately and not inadvertently released.

B. The Final Assessment Report

1. *Current Policy/Guidance*

Air Force policy requires the Final Assessment Report to have a minimum of three chapters with the first containing the Executive Summary, the second providing background and scope, and the third covering "compliance status," which includes both positive and negative findings.[176] Each of the MAJCOMs may have additional guidance regarding the report content.

It is also current Air Force policy that the final report "once approved by MAJCOM, is releasable under the FOIA."[177] The MAJCOM release authority is the MAJCOM/CEV. Prior to release of any ECAMP/ESOHCAMP documentation or data, however, the Air Force requires a MAJCOM legal review to be accomplished.[178]

Even though the report is in general releasable, it must be reviewed to ensure that all sensitive, protected information is redacted. The Air Force Environmental Law and Litigation Division issued detailed guidance on how to respond to FOIA requests for

[176] *Id.* at attch. 2.
[177] AFI 32-7045, *supra* note 167, ¶ 3.4. This seems to apply to both internal and external ECAMPs. MAJCOMs must "[a]pprove, with legal review, disclosure of individual findings or the entire Final Compliance Assessment Report (internal and external) to federal, state, or local regulatory authorities." *Id.* ¶ 1.3.3.8. Presumably, the guidance on FOIA releases also applies to both internal and external assessments.
[178] *Id.* ¶ 3.4.

environmental documents, which should be consulted by Air Force practitioners prior to release of Air Force environmental documents.[179]

In general, Exemption "high 2" will protect from release the following types of information in ECAMP/ESOHCAMP documents:

- specific locations, including location descriptions, of dangerous chemicals/materials;
- specific locations of vulnerabilities, such as critical infrastructure; and
- descriptions or explanations of vulnerabilities dealing with environmental issues or critical infrastructure.[180]

Furthermore, Exemption 5's deliberative process privilege will protect from release the following types of information:

- characterizations of findings into categories (such Minor, Major, and Significant);
- team assessments on potential risk for regulator enforcement, including "enforcement vulnerability ratings";
- characterization of program areas (such as "exemplary," "healthy," or "needs improvement); and
- root cause analyses.

2. *Findings—Exemption 5*

One of the most important jobs of the ECAMP/ESOHCAMP team is to track and document environmental noncompliance. Each point of noncompliance is called a "finding" and is detailed in the final report (and the MAJCOM database). Under current policy, findings generally have been treated as releasable. However, one concern is that release of these findings could have a "chilling effect" on future assessments because an individual may be less likely to put potentially adverse information in writing which, in turn, would hamper the flow of

[179] Memorandum from Air Force Environmental Law and Litigation Division for All Staff Judge Advocates: Release of Environmental Information under the FOIA (27 Sep. 2005) (signed by Colonel Dawn E.B. Scholz, Chief), https://aflsa.jag.af.mil/AF/ENVLAW/ EnvironmentalFOIA.pdf (footnotes omitted) (password required).

[180] Note that if the "descriptions or explanations of vulnerabilities" in question qualify as vulnerability assessments under 42 U.S.C. § 300i-2(a)(3) or off-site consequence analyses under 42 U.S.C. § 7412(r)(7)(H)(iii)(II), then Exemption 3 also should be invoked.

information to the commander and potentially affect the ability of the commander to assess the health of the environmental program.[181]

If it is determined that FOIA releases likely will inhibit the flow of candid information from an assessor to the commander and, consequently, cause a chilling effect, the current policy of free release should be reevaluated. Of course, negative consequences of release (such as the possibility of adverse publicity or imposition of a fine or penalty by a regulator) are not necessarily sufficient justification for non-release, and the Air Force must continue to release all documents that are not exempted or excluded under the FOIA. However, there appears to be two reasonable arguments as to why ECAMP/ ESOHCAMP findings are exempt from release.

Exemption 5, as stated above, applies to those documents that are "normally privileged in the civil discovery context,"[182] including both statutory privileges and those commonly recognized by case law.[183] As regards ECAMP/ESOHCAMPs, the predecisional documents privilege discussed above would apply to many audit documents, as would the critical self-analysis privilege (also known as the self-critical analysis or self-evaluation privilege).[184] Although there is little case law under either theory firmly establishing the application of this privilege or exemption specifically to environmental self-audits, there is no case law which clearly contradicts its applicability.

a. The "Deliberative Process Privilege" Argument

There are two requirements for the deliberative process privilege. The first is that the communication be predecisional, i.e., "antecedent to the adoption of an agency policy."[185] Second, the

[181] The release of findings could have two negative consequences, leading to a chilling effect on future assessments. First, a FOIA release could lead to the regulator identifying noncompliance it otherwise would not have known about and for which there is no legal requirement for self-disclosure. The regulator could use this information to issue an enforcement action or to increase the gravity-based fine of another enforcement action to the same facility. As explained below, the EPA has recognized that it is good policy to encourage self-audits by treating them as confidential and most, but not all, state regulators have followed suit. The extent to which regulators without such policies might "abuse" FOIA to get this type of information is difficult to predict. In any event, this information would be subject to discovery in any administrative hearing or lawsuit. Another result of release of findings that could lead to a chilling effect is "bad press," where an installation commander or MAJCOM must handle media inquiries or protests that he or she otherwise would not encounter.

[182] Nat'l Labor Relations Bd. v. Sears, Roebuck & Co., 421 U.S. 132, 149 (1975).

[183] U.S. v. Weber Aircraft Corp., 465 U.S. 792, 800 (1984).

[184] *See* Greenberg v. U.S. Dep't of Treasury, 10 F. Supp. 2d 3, 17 (D.D.C. 1998) (stating that "documents which reveal an agency's "'internal self-evaluation'" of negotiations fall within Exemption 5): *see infra* notes 202-207 and accompanying text for further discussion.

[185] Jordan v. U.S. Dep't of Justice, 591 F.2d 753, 774 (D.C. Cir. 1978).

communication must be deliberative, i.e., "a direct part of the deliberative process in that it makes recommendations or expresses opinions on legal or policy matters."[186]

Of the factors which courts consider to determine whether information is predecisional, two are applicable to ECAMP/ESOCAMP findings. The first is the nature of the decision-making authority of the person issuing the document. If the author lacks "legal decision authority," the document is likely to be deemed predecisional. As one court explained: "What matters is that the person who issues the document has authority to speak finally and officially for the agency."[187] In applying this factor, the conclusion is that the head of the ECAMP/ESOHCAMP team has minimal final decision-making authority. Ultimately, the installation and MAJCOM commanders will use the information in the report to make the base more compliant with applicable environmental requirements. In other words, the finalization of the report is not an end in itself but, instead, is intended to notify those of higher authority about the health of the installation's environmental program. Thus, the installation and MAJCOM commanders act on the report and make final decisions.

Another factor is how the document is staffed. In general a document that is staffed "from a subordinate to a superior official is more likely to be predecisional"[188] than one that is staffed in the opposite direction. "ECAMP is one of the processes to help commanders assess the status of their Environmental Management Systems (EMS), and to identify and track solutions to environmental problems."[189] Thus, the report flows from the ECAMP/ESOHCAMP team to the installation and MAJCOM commanders, i.e., from a subordinate entity to superior officials.

Based upon these two factors, it is reasonable to conclude that ECAMP/ESOHCAMP findings are predecisional. There are, however, more questions about whether they meet the second limitation on the scope of the deliberative process privilege—that is, whether the information is "deliberative." Generally, to be deliberative means that information contains some degree of opinion, analysis, or recommendation and not be merely "factual." As the Supreme Court explained, the privilege would not automatically extend to "factual material otherwise available on discovery merely because it was placed in a memorandum with matters of law, policy, or opinion."[190]

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[186] Vaughn v. Rosen, 523 F.2d 1136, 1143-44 (D.C. Cir. 1975).
[187] Pfeiffer v. Cent. Intelligence Agency, 721 F. Supp. 337, 340 (D.D.C. 1989).
[188] Coastal States Gas Corp. v. Dep't of Energy, 617 F.2d 854, 868 (D.C. Cir. 1980); *see* Nadler v. U.S. Dep't of Justice, 955 F.2d 1479, 1491 (11th Cir. 1992) (stating, "a recommendation to a supervisor on how to proceed is predecisional by its nature").
[189] AFI 32-7045, *supra* note 167, ¶ 1.2.
[190] Envtl. Protection Agency v. Mink, 410 U.S. 73, 91 (1973).

However, it is also well-established that:

> [The] scope of the deliberative process privilege should not turn on whether we label the contents of a document "factual" as opposed to "deliberative." A legal standard that ties our judgment solely to the type of information allegedly secreted in a document transforms our inquiry into a semantics debate that ignores that the ultimate objective of exemption 5 is to safeguard the deliberative *process* of agencies, not the paperwork generated in the course of that process. Documents need not themselves be "deliberative," in the sense that they make nonbinding recommendations on law or policy, in order to qualify for the deliberative process privilege.[191]

There are two circumstances in particular where courts allow the withholding of factual material: (1) "where factual information is so inextricably connected to the deliberative material that its disclosure would expose or cause harm to the agency's deliberations,"[192] and (2) "where the author of a document selects specific facts out of a larger group of facts and this very act is deliberative in nature."[193]

Although there is some overlap between the categories, the first category (facts and deliberations inextricably linked) generally applies to situations where facts are also in part opinions. Examples of this link are cost estimates or other "elastic facts,"[194] statistical information that expresses deliberative communications,[195] and the interpretation of technical data.[196]

Certain aspects of an ECAMP/ESOHCAMP report would fall under this category (e.g., cost estimates and rating of the severity of noncompliance), but arguably even the findings themselves should be exempt from release. The second category (selection of facts) seems to provide some support for this argument. As one court has said,

> Policies are formulated to address concrete problems. Which of several competing policies to adopt is a question that requires the policymaker to assess facts and their anticipated consequences. Opinions on facts and the consequences of those facts form the grist for the

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[191] Nat'l Wildlife Fed'n v. U.S. Forest Serv., 861 F.2d 1114, 1119 (9th Cir. 1988) (citations omitted).
[192] FOIA GUIDE, *supra* note 17, at 387.
[193] *Id.* at 385.
[194] Quarles v. Dep't of the Navy, 893 F.2d 390, 392-93 (D.C. Cir. 1990).
[195] *See* FOIA GUIDE, *supra* note 17, at 388 n.134.
[196] *See id.* at 389.

> policymaker's mill. Each opinion as to which of the great constellation of facts are relevant and important and each assessment of the implications of those facts suggests a different course of action by the agency.[197]

In another case, a court found that summaries of facts were exempt from release under Exemption 5.[198] According to the court, the people creating the summaries

> were making an evaluation of the relative significance of the facts . . . ; separating the pertinent from the impertinent is a judgmental process, sometimes of the highest order; no one can make a selection of evidence without exercising some kind of judgment, unless he is simply making a random selection.[199]

The court stated the case was decided in part based upon the fact that the factual material from which the summary was made was already in the public domain and that if it was not, "a different result might be reached."[200] Needless to say, despite this line of cases, ECAMP/ ESOHCAMP findings are not otherwise in the public domain. Although the ECAMP/ESOHCAMP team sifts through an enormous amount of data and information to develop its findings, there is not any judgment about including a finding in the report (in other words, once noncompliance is found, it must be included in the report).

If ECAMP/ESOHCAMP teams had discretion about including some findings and not including others, there would be a stronger argument that the listed findings were included based upon deliberation. As it stands, there really is no significant deliberation about including a finding in the final report. An argument could still be made, however, that the listing of findings is itself deliberative. After all, the team distinguishes compliance from non-compliance and, in doing so, often applies judgment and opinion.

In the end, though, a typical finding (for example, an uncovered storage drum of hazardous material in a satellite accumulation point) may seem to be more of a fact than an opinion. Nevertheless, the argument remains that it takes some amount of judgment to distill such facts from the innumerable other environmentally relevant facts on a

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[197] Wildlife Fed'n v. U.S. Forest Serv., 861 F.2d 1114, 1120 (9th Cir. 1988).
[198] Montrose Chem. Corp. of Cal. v. Train, 491 F.2d 63 (D.C. Cir. 1974) (EPA officials created summaries of a large volume of public testimony in order to facilitate the Administrator's decision as to whether particular registrations where in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act.).
[199] *Id.* at 68.
[200] *Id*. at 71.

typical Air Force base. In the future, this line of argument, along with the critical self-analysis privilege which follows, may provide the Air Force legal justification for changing its policy on releasing ECAMP/ESOHCAMP final reports and data.

b. The "Critical Self-Analysis Privilege" Argument

There is an argument that environmental self-audits, such as ECAMP/ESOHCAMPs, should fall under a critical self-analysis privilege. Although there are district court cases establishing this privilege, "[t]he Supreme Court and the circuit courts have neither definitively denied the existence of such a privilege, nor accepted it and defined its scope. Rather, when confronted with a claim of the privilege, they have refused on narrow grounds to apply it to the facts before them."[201] According to the Supreme Court, however, privileges "are not lightly created nor expansively construed, for they are in derogation of the search for truth,"[202] so any argument made by the Air Force under this theory has a high burden.

The privilege is generally considered to have originated in *Bredice v. Doctors Hospital, Inc*.[203] in which the court held that minutes from hospital staff meetings regarding procedures to improve patient care were protected from discovery in a malpractice suit. The court based its decision on the public interest in having hospitals critically evaluate the quality of care they provide. The value of the privilege has been debated by academics.[204] Courts have also been divided or ambivalent about it. According to one commentator,

> Some courts have specifically rejected it, while others have questioned its existence or applied it narrowly. Indeed, courts have reached opposite results on factually indistinguishable cases. These opinions have contained only conclusory analysis, providing little guidance for courts confronted with assertions of the privilege in a variety of new situations.[205]

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[201] Dowling v. American Hawaii Cruises, 971 F.2d 423, 426 n.1 (9th Cir. 1992) (footnotes omitted). Since this 1992 decision, no opinion could be found which would affect the currency of this statement.
[202] United States v. Nixon, 418 U.S. 683, 710 (1974).
[203] 50 F.R.D. 249, 250-51 (D.D.C. 1970), *aff'd,* 479 F.2d 920 (D.C. Cir. 1973).
[204] *See* Note*, The Privilege of Self-Critical Analysis*, 96 HARV. L. REV. 1083 (1983) (arguing that the privilege is needed); *but see* James F. Flanagan, *Rejecting a General Privilege for Self-Critical Analyses*, 51 GEO. WASH. L. REV. 551 (1983) (arguing for courts to reject the privilege).
[205] Flanagan, *supra* note 204, at 553-54 (citations omitted). Although this article was written in 1983, its summary remains accurate.

A few cases have dealt specifically with environmental self-inspections, with one case finding that they are privileged.[206] As stated in the quotation above, however, all of these cases are conclusory and none give a detailed description of the documents in question nor provide a thorough analysis of the issue.

In any event, the test that has evolved in jurisdictions acknowledging the privilege is a four part test: (1) the information must result from self-critical analysis undertaken by the party seeking protection; (2) the public must have a strong interest in preserving the free flow of the type of information sought; (3) the information must be of the type whose flow would be curtailed if discovery were allowed; and (4) no document should be accorded the privilege unless it was prepared with the expectation that it would be kept confidential.[207]

ECAMP/ESOHCAMPs meet the first prong, in that they are self-critical analyses. They also arguably meet the second prong, since the public has a strong interest in regulated entities performing rigorous environmental self-audits and bringing themselves into compliance. The EPA's self-audit policy is evidence of the strong policy interests in protecting these types of audits.[208] The third prong is also arguably met because the release of information related to environmental noncompliance could have a chilling effect on the future documentation of environmental noncompliance.

In any event, the fact that ECAMP/ESOHCAMPs do not currently meet the fourth prong overshadows any arguments concerning the first three prongs. It is Air Force policy to release final reports, making it difficult to argue that they are created "under the expectation that they will be kept confidential." In any event, if the Air Force attempts to change its "free release" policy, it will need to change the Air Force instruction or otherwise express that ECAMP/ESOHCAMP reports and findings should be created with the intent they generally be kept confidential and that it is Air Force policy that they be kept confidential.

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[206] Reichhold Chems., Inc v. Textron, Inc., 157 F.R.D. 522 (1994) (holding that environmental self-evaluations of past pollution are privileged); *but see* Koppers Co., Inc. v. Aetna Casualty and Surety Co., 847 F. Supp. 360, 364 (1994) ("[T]he self-evaluation privilege does not apply a fortiori to environmental reports, records, and memoranda."); United States v. The Dexter Corp., 132 F.R.D. 8 (D.C. Conn 1990); CPC Int'l, Inc. v. Hartford Accident and Indemnity Co., 262 N.J. Super. 191 (1992).

[207] United States ex rel. Roger L. Sanders v. Allison Engine Co., 196 F.R.D. 310, 312 (S.D. Ohio 2000).

[208] *See infra* notes 212-18 and accompanying text for a discussion about EPA's audit policy.

C. ECAMP Data

The ECAMP team, in addition to completing a report, must also collect certain data (called "ECAMP core data") in a specified format.[209] The MAJCOM must manage the ECAMP core data in a MAJCOM-selected database.[210]

Although the Air Force instruction only provides guidance on the releasability of Final Assessment Reports and does not specifically mention the data in the databases, presumably such data—once finalized and approved by MAJCOM—is also releasable. As with the final reports, this information should be sanitized to remove anything that is otherwise not releasable (e.g., locations of critical infrastructure which would be exempt under "high 2" or Exemption 3 based on a statutory prohibition).

D. Release to Regulators

During the site assessment, the ECAMP/ESOHCAMP team must "conduct record searches, interviews, and site surveys to determine the compliance status of the installation. The team compares applicable standards to site operations and writes up any deficiencies as findings."[211] The discovery of noncompliance raises the question of when, if ever, should the Air Force voluntarily disclose its findings since absent a specific legal requirement, there is no duty to self-report environmental violations.

The EPA's audit policy,[212] which was issued in December 1995 and updated in May 2000, [213] is that it will not routinely request audit reports to trigger enforcement investigations.[214] "The purpose of this

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[209] AFI 32-7045, *supra* note 167, at attch. 5.
[210] *Id.* ¶ 3.2.
[211] *Id.* ¶ 2.3.
[212] ENVIRONMENTAL PROTECTION AGENCY, INCENTIVES FOR SELF-POLICING: DISCOVERY, DISCLOSURE, CORRECTION AND PREVENTION OF VIOLATIONS (May 11, 2000) (revising the 1995 policy, 60 Fed. Reg. 66,706 (Dec. 22, 1995)) [hereinafter EPA AUDIT POLICY], *available at* http://www.epa.gov/compliance/resources/policies/incentives/auditing/auditpolicy.pdf.
[213] The 2000 revisions

> maintain the basic structure and terms of the 1995 Audit Policy while clarifying some of its language, broadening its availability, and conforming the provisions of the Policy to actual Agency practice. The revisions . . . lengthen the prompt disclosure period to 21 days, clarify that the independent discovery condition does not automatically preclude penalty mitigation for multi-facility entities, and clarify how the prompt disclosure and repeat violation conditions apply to newly acquired companies.

Id. at 1.
[214] *Id.* at 15-16.

Policy is to enhance protection of human health and the environment by encouraging regulated entities to voluntarily discover,[215] promptly disclose[216] and expeditiously correct violations of Federal environmental requirements."[217] The EPA recognizes that if self-audits are used against regulated entities, they may stop doing them or conduct them in a less thorough manner that will be less damaging.

Incentives that the EPA makes available for those who meet the conditions of the Audit Policy include the elimination or substantial reduction of the gravity component of civil penalties and a determination not to recommend criminal prosecution of the disclosing entity.[218]

In general, regulated entities are not required to self-report noncompliance. However, there are two occasions where Air Force personnel should self-report. First, numerous environmental statutes and regulations require reporting of non-compliance to regulators.[219] If these statutes or regulations require the Air Force to report noncompliance to a regulator, the information must be reported, even if it was discovered incident to an ECAMP/ESOHCAMP. Second, it is Air Force policy also to self-report where the circumstances surrounding the violation indicate a bona fide imminent and substantial endangerment to public health and safety or the environment.[220] Before reporting the information, however, the installation should coordinate with the MAJCOM environmental office, and the MAJCOM legal office should do a legal review. Because disclosure of non-compliance may lead to an enforcement action, fines and/or litigation, the MAJCOM should further coordinate with the appropriate regional environmental attorney[221] or JACE prior to release of any such information. However,

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[215] A violation is not discovered voluntarily if it is discovered "through a legally mandated monitoring or sampling requirement prescribed by statute, regulation, permit, judicial or administrative order, or consent agreement." *Id.* at 41-42.

[216] To benefit from the policy, an entity must disclose the violation in writing to EPA within twenty-one calendar days after it discovers that the violation has, or may have, occurred. *Id.* at 19-20, 42.

[217] EPA AUDIT POLICY, supra note 212, at 1.

[218] *Id.* at 12-15.

[219] The Clean Water Act (CWA), 33 U.S.C. § 1321(b)(5), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9603(a), require reporting of certain releases. Also, most CWA and Clean Air Act permits require monitoring and reporting the results to the regulator. The Safe Drinking Water Act and regulations also require monitoring and reporting.

[220] Memorandum from AFLSA/JACE to All Staff Judge Advocates, Guidance on Non-FOIA Releases of Environmental Information 2 (16 May 2005) [hereinafter Guidance on Non-FOIA Releases], *available at* https://aflsa.jag.af.mil/AF/ENVLAW/LYNX/env_release_non-foia.pdf (password required).

[221] The Air Force has three regional environmental offices (REOs)—Eastern, Central and Western—that fall under the Air Force Center for Environmental Excellence (AFCEE) at Brooks Air Force Base. There are several environmental attorneys that are co-located with the REOs but fall under AFLOA/JACE. The Regional Environmental

if the situation requires immediate notification of the authorities to protect the public or the environment, common sense should be used and notification be made as soon as possible, even if full coordination could not be made.

When there is no legal requirement to report the violation and the circumstances surrounding the violation do not indicate a *bona fide* imminent and substantial endangerment to public health and safety or the environment, Air Force practitioners should consult the JACE memorandum for guidance on how to determine whether to self-report the violation.[222] Furthermore, the incentives provided by the EPA's audit policy should be considered.

If the installation decides to self-report, it should strive to satisfy the conditions set forth in the EPA's Audit Policy, to include promptly disclosing the violation (within 21 days of discovery).[223] While this article has addressed only the EPA's policy, many state regulators have also instituted similar policies.[224] Consequently, before self-reporting, all attorneys involved should ensure they know the requirements and boundaries of the applicable regulator's audit policy.

VIII. ELECTRONIC FOIA ISSUES

A. Electronic Messages (E-Mail)

E-mails are considered "agency records" under FOIA and must be managed and released as any other covered document.[225] Under FOIA, "an agency shall make reasonable efforts to search for the records in electronic form or format, except when such efforts would significantly interfere with the operation of the agency's automated information system."[226] The records that are maintained in electronic form "must be managed, stored, and deleted from the E-mail system after copying to a record keeping system according to Air Force Manual

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Counsel assist installations and MAJCOMs with environmental issues within their region, in addition to the unique mission of tracking and reporting state and local legislative and regulatory activity that may impact the Air Force. A link to each REO is available on the main AFCEE web site, at https://www.afceeprivweb.brooks.af.mil/products.asp.

[222] Guidance on Non-FOIA Releases, *supra* note 220.

[223] EPA AUDIT POLICY, *supra* note 212, at 19-21, 42.

[224] In general, the EPA is given initial authority to regulate under many environmental statutes. However, most of these statutes authorize the EPA to delegate authority to states for implementation of a media-specific program. Upon approval of a state program, the state environmental agency manages and enforces its own program. Depending on the statute in question, the EPA or the state, or in some instances both under different portions of the statute, might be the primary regulating authority.

[225] 5 U.S.C. § 552(f)(2) (Lexis 2006).

[226] *Id.* § (a)(3)(C).

(AFMAN) 37-123."[227] The Air Force provides the following guidance concerning the filing, marking and protection of electronic documents:

- In determining whether a message is a record or not, focus on the content of the information and not on the method used to send it. If the information (content) in the message would have been filed if it had been created on paper, then the message should also be filed or archived.[228]

- Do not send information normally exempt under FOIA across the Internet without an appropriate level of protection to prevent unintentional or unauthorized disclosure.[229]

- When transmitting personal information over E-mail, add For Official Use Only ("FOUO") to the beginning of the subject line, followed by the subject, and apply the following statement at the beginning of the E-mail: "This E-mail contains For Official Use Only (FOUO) information which must be protected under *The Privacy A*ct and AFI 33-332." Do not indiscriminately apply this statement to E-mails.[230]

The Air Force FOIA instruction also addresses the marking of E-mails, providing that "[e]ach part of electronically and facsimile transmitted messages containing FOUO information shall be marked appropriately. Unclassified messages containing FOUO information shall contain the abbreviation 'FOUO' before the beginning of the text."[231]

If the e-mail contains legal-related information, the e-mail must contain the following statement:

> FOR OFFICIAL USE ONLY. This electronic transmission may contain work-product or information protected under the attorney-client privilege, both of which are protected from disclosure under the Freedom

[227] U.S. DEP'T OF AIR FORCE, INSTR. 33-119, AIR FORCE MESSAGING, ¶ 7.1 (24 Jan. 2005) (citing U.S. DEP'T OF AIR FORCE, MANUAL 37-123, MANAGEMENT OF RECORDS (31 Aug. 1994)).
[228] *Id.* ¶ 7.3.1.
[229] *Id.* ¶ 8.4.4.
[230] *Id.* ¶ 8.4.2.
[231] AF FOIA PROGRAM, *supra* note 45, ¶ C.4.3.3.

> of Information Act, 5 U.S.C. § 552. Do not release outside of Department of Defense channels without the consent of the originator's office. If you received this message in error, please notify the sender by reply e-mail and delete all copies of this message.[232]

If the e-mail contains other deliberate process-related information, it must contain the following statement:

> FOR OFFICIAL USE ONLY. This electronic transmission contains internal matters that are deliberative in nature and/or are part of the agency decision-making process, both of which are protected from disclosure under the Freedom of Information Act, 5 U.S.C. 552. Do not release outside of Department of Defense channels without advance approval from the sender. If you received this message in error, please notify the sender by reply e-mail and delete all copies of this message.[233]

B. Web Sites

The Air Force maintains public and private web sites. Public sites contain information of interest for the general public,[234] and each installation and MAJCOM is required to have only one public site.[235] Posting information on a public web page is the equivalent of a public release. Consequently, FOUO information is specifically prohibited from being posted on public web pages.[236] However, public web pages are the most appropriate location for an installation's electronic reading room.

Private sites are intended for a limited audience (specifically, military and government (.mil and .gov) users). Because private sites are encrypted and have higher levels of security, greater amounts of information can be posted on them. Names and e-mail addresses (e.g., directories, organization charts, and rosters) may be posted on sites with access controlled by Internet domain (e.g., .mil or .gov) or Internet

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[232] Memorandum from AF/ILC on E-Mail Disclosure Statements (9 Feb. 2005) (on file with author). The policies and guidance in this memorandum are expected to be incorporated within the Air Force FOIA Program via an interim change to DoD Regulation 5400.7-R.
[233] *Id.*
[234] U.S. DEP'T OF AIR FORCE, INSTR. 33-129, WEB MANAGEMENT AND INTERNET USE ¶ 5.1 [hereinafter AFI 33-129] (3 Feb. 2005).
[235] *Id.* ¶ 5.1.
[236] *Id.* ¶ 8.1.4.2.

Protocol (IP) Address (such as typical installation web sites).[237] When access to a private site is controlled by ID and password, FOUO information can be posted on the site.[238] The posting of classified information is limited to Secret Internet Protocol Router Network (SIPRNET) sites.[239]

The individual who submits information for posting on public or private web sites is responsible for the content, classification and coordination of the information, including compliance with the Privacy Act.[240] Many Air Force environmental documents are likely to be sensitive and not publicly releasable. Unless a document is required by a law or regulation to be released to the public, individuals are encouraged to coordinate with the base legal office prior to posting an environmental document created for internal use. Also, a legal review is required before certain documents or information can be posted on a public or private site.[241]

IX. NON-FOIA RELEASES OF ENVIRONMENTAL DOCUMENTS

An Air Force document provided to another federal agency or to state or local agencies pursuant to an environmental statute or regulation should generally not be considered a FOIA release, or a waiver of any otherwise applicable exemption. However, once the documents are provided to another entity, the Air Force loses control over how that entity will handle them. Also, it is possible that any release, if done sloppily enough, may be interpreted as either a public release or a waiver of an otherwise applicable exemption. In order to preclude this, Air Force personnel should follow the guidance provided in this section. This section addresses in particular the distribution of documents during litigation and the release of documents to federal, state and/or local authorities.

A. Litigation

The Air Force is continuously involved in environmental litigation, including environmental tort suits under the Federal Tort Claims Act (FTCA)[242] against the Air Force, third-party site litigation where the Air Force is a potentially responsible party (PRP) in a cost

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[237] *Id.* at tbl.2 (Vulnerability of Information Placed on the Internet/World Wide Web).
[238] *Id.*
[239] *Id.* ¶ 8.3.
[240] AFI 33-129, *supra* note 234, ¶ 3.15.
[241] *See id.* tbl.1, attach. 6.
[242] 28 U.S.C. § 1346(b) (Lexis 2006). Under the FTCA, the claimant must first file a claim and allow the agency a chance to settle before filing suit. If the claim is not resolved within six months, the claimant may then bring suit in federal court. 28 U.S.C. § 2675(a) (Lexis 2006).

recovery action,[243] affirmative cost recovery cases where the Air Force seeks response costs or to recover for natural resource damages,[244] and myriad other types of issues. In all such cases, the DoJ has the statutory responsibility to represent the Air Force[245] and AFLOA/JACE directly assists DoJ with environmental cases involving the FTCA.[246]

During litigation, there may be three different scenarios involving the Air Force's release of information: (1) release to DoJ; (2) release to a third party incident to an environmental suit; and (3) release to a third party incident to a FOIA suit concerning environmental documents. Each scenario is covered below.

1. *Release to DoJ*

Since DoJ and its U.S. Attorneys represent the government's interests in judicial proceedings, SJAs may release unclassified official information that is not privileged to DoJ or the U.S. Attorney on request.[247] "SJAs must send DoJ or US Attorney requests for classified information that cannot be declassified at lower levels, or for other privileged official information, to the responsible [AFLOA] civil litigation division [JACE for environmental cases]."[248]

As with its response to a FOIA request, Air Force personnel must ensure that sensitive information is protected from inappropriate release during litigation. Air Force personnel interacting with DoJ must take all appropriate precautions, which includes appropriately marking documents and may include obtaining a non-disclosure or protective order. At a minimum, the Air Force or DoJ should request a judicial warning to counsel, parties, juries, witnesses, experts and all others involved, emphasizing that the documents are FOUO, are prohibited from further dissemination, and must be safeguarded and then destroyed or returned to the Air Force at the completion of the case.

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[243] *See* Comprehensive Environmental Response, Compensation and Liability Act, 42 USC § 9607 (Lexis 2006) (imposing liability for cleanup of hazardous substance releases and injury to, destruction of, or loss of natural resources).
[244] *Id.*
[245] 28 U.S.C. §§ 516-19 (Lexis 2006). "DoJ, through the local U.S. Attorney or the Civil Division at DoJ, handles tort litigation involving the U.S. as a plaintiff or a defendant." U.S. DEP'T OF AIR FORCE, INSTR. 51-301, CIVIL LITIGATION ¶ 2.1.1 [hereinafter AFI 51-301] (1 July 2002). However, DoJ can delegate the handling of litigation to The Judge Advocate General (TJAG). *Id.* ¶ 1.2.1.
[246] *Id.* ¶ 2.1.2 (AFLOA/JACT assists DoJ with non-environmental tort cases.).
[247] *Id.* ¶ 9.8.1.
[248] *Id.* ¶ 9.8.2.

2. *Release to a Third Party During Environmental Litigation*

The release authority for all official, unclassified information in environmental cases where the United States is a party or has a direct or indirect interest is the Chief of the Air Force Environmental Law and Litigation Division (AFLOA/JACE).[249] This division chief is also the release authority for official, unclassified information in cases for which a claim or suit has not been filed, but where the information in question could be used in a claim or litigation.[250] Before releasing official information, AFLOA/JACE is required to consider the following questions:

- Is the request unduly burdensome or otherwise irrelevant?
- Does the request specify remedial information that is inadmissible under the rules of evidence, or is the information otherwise inappropriate under the applicable court rules?
- Would disclosing this information be appropriate under the rules of procedure governing the case and under the relevant substantive law concerning the appropriate privilege?
- Would disclosing the information violate any statute, executive order, regulation, or directive?
- Would disclosing the information, except in camera to assert a claim of privilege, reveal classified or other restricted information?
- Would disclosure interfere with ongoing enforcement proceedings, compromise constitutional rights, reveal the identify of an intelligence source or confidential informant, disclose trade secrets or similarly confidential commercial or financial information, or otherwise be inappropriate under the circumstances?[251]

If the information is classified, it is prohibited from being released unless the proper authority first declassifies the material.[252]

[249] AFI 51-301, *supra* note 245, ¶ 9.3.4.
[250] *Id.*
[251] *Id.* ¶ 9.5.
[252] *Id.* ¶ 9.6.

3. *Release of Environmental Documents During FOIA Litigation*

The General Litigation Division (AFLOA/JACL) Information Law (IL) Branch has subject matter responsibility for federal FOIA litigation.[253] In accordance with Air Force instruction, an installation must notify AFLOA/JACL on the duty day it receives a complaint.[254] The installation must send the summons and complaint via facsimile or express mail,[255] and the installation submits a litigation report soon thereafter.[256]

In FOIA litigation, the defendant government agency bears the burden of sustaining its withholding of records.[257] To support its decision, agencies most commonly use the "Vaughn Index"[258] which has the following basic requirements:

> [The Vaughn Index] identifies discrete portions of documents and identifies the exemption pertaining to each portion . . . . In most cases, such an index provides the date, source, recipient, subject matter and nature of each document in sufficient detail to permit the requesting party to argue effectively against the claimed exemptions and for the court to assess the applicability of the claimed exemptions.[259]

The installation or MAJCOM legal office may be tasked to create the "Vaughn Index" or assist AFLOA/JACL with other aspects of the case. If the FOIA litigation concerns environmental documents, environmental attorneys at the installation, MAJCOM and headquarters should be involved with the Department of Justice in the litigation. While this is not a requirement, the Air Force will be able to provide the most thorough analysis that addresses the complex environmental laws and overlapping regulatory scheme governing environmental requirements.

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[253] AFI 51-301, *supra* note 245, ¶ 3.1.5.2.

[254] *Id.* ¶ 3.12. In FOIA litigation, time is of the essence since the Government has only thirty days to answer a complaint rather than the sixty-day period that is allowed in other types of litigation. *Id.* ¶ 3.11.

[255] *Id.* ¶ 3.12.

[256] *Id.* ¶ 3.12.1. It is essential for installations and MAJCOMs to give DoJ, U.S. Attorneys, and AFLOA/JACL the support they need to properly represent the Air Force. *Id.* ¶ 3.1.

[257] 5 U.S.C. § 552(a)(4)(B) (Lexis 2006); *see* Natural Res. Def. Council v. NRC, 216 F.3d 1180 (D.C. Cir. 2000); Brady-Lunny v. Massey, 185 F. Supp. 2d 928 (C.D. Ill. 2002).

[258] FOIA GUIDE, *supra* note 17, at 777; Vaughn v. Rosen, 484 F.2d 820 (D.C. Cir. 1973).

[259] St. Andrews Park, Inc. v. U.S. Dep't of Army Corps of Eng'rs, 299 F. Supp. 2d 1264, 1271 (S.D. Fla. 2003).

B. Releases to the EPA, State, and Local Agencies

There are many statutory and regulatory provisions requiring the Air Force to submit documents to the EPA and to state and local environmental agencies. For example, the Air Force must submit a copy of its Facility Response Plan to the EPA,[260] and installation Clean Air Act,[261] Clean Water Act,[262] and RCRA permits, which may be issued by the EPA or the state regulatory agency, generally contain provisions requiring the submission of reports and monitoring data. Even in the absence of statutory, regulatory or permit provisions requiring reports, the regulator may interpret its authority to include the ability to require the Air Force to submit certain information. Furthermore, the Air Force may voluntarily submit documents or choose not to challenge the regulator in furtherance of the Air Force's efforts to "partner" with the regulatory community.

Releases to federal or state entities, such as EPA or local police or fire departments, are not technically FOIA releases or releases to the public. However, in handing documents over to outside agencies, the Air Force loses control over how that agency will in turn handle them. Release to other federal agencies, such as U.S. EPA, does not pose as serious an issue as release to state and local entities because all federal agencies must comply with the federal FOIA, which means that the documents should still be reviewed for releasability. However, releases to state and local entities are more troublesome because state and local entities are not bound by the federal FOIA but must obey their own applicable laws, which could be less protective than the federal FOIA and may even require release.

Because of the danger of release to a state or local entity leading to an unintended release to the public, Air Force personnel can take steps to ensure that unintended releases to the public do not occur.[263] First, as explained above, all FOUO documents should be appropriately marked at creation. Second, the nature of the forwarding of the document should be clearly spelled out in a transmittal or cover letter. The letter should state or address the following:

- The document is being forwarded to the entity for an official reason (with the reason(s) spelled out, such

[260] 33 U.S.C. § 1321(j)(5) (Lexis 2006); 40 C.F.R. § 112.20 (Lexis 2006).
[261] 42 U.S.C. §§ 7401–7671q (Lexis 2006).
[262] 33 U.S.C. §§ 1251–1387 (Lexis 2006).
[263] Memorandum from AFLSA/JACE for All Staff Judge Advocates on Guidance on Non-FOIA Releases of Environmental Information (16 May 2005), *available at* https://aflsa.jag.af.mil/AF/ENVLAW/LYNX/env_release_non-foia.pdf.

as by reference to the applicable statute or regulation).

- The document is being provided for official use only and remains the property of the U.S. Air Force;
- The forwarding of the document to the entity is not a release under FOIA;
- The document contains sensitive information and should be appropriately safeguarded.
- Direction that if the entity receives a request for the document, they should refer the request to the Air Force organization providing the document and notify the requester of the referral.

Specific recommended language is contained in JACE's Guidance Memorandum on Non-FOIA Releases of Environmental Information.[264]

The third way to protect Air Force sensitive environmental information from future release by state or local entities is by including protective language in memoranda of agreement (MOAs) or Cooperative Agreements with state and local entities that will be receiving environmental documents from the Air Force. Suggested language for these documents is also contained in the JACE's Guidance Memorandum.[265]

It should be noted that if the Air Force is required by statute or regulation to provide a document and there are doubts about the regulator adequately protecting it, the Air Force may be able to provide different information to the state or local entity that serves the same purpose. For example, the Air Force could identify the type of protective gear that would be needed to respond to a fire in a particular building without divulging the names and quantities of specific hazardous substances that are stored in the building.

X. MISCELLANEOUS ISSUES AFFECTING PROTECTION OF INFORMATION

A. Contractor-Generated Documents and Attorney Comments

There are two issues that are common in the Air Force and may affect the degree of protection that is afforded a document. One issue involves contractor-generated documents, and the other concerns comments from a legal office submitted as a part of the JA coordination on a document. Generally, documents created for the Air Force by a contractor that is working under an Air Force contract are Air Force

[264] *Id.*
[265] *Id.*

documents.[266] Consequently, the contractor should be instructed to mark the documents appropriately and properly safeguard information that requires protection.

Many Air Force organizations currently consolidate all comments submitted on a draft document into a spreadsheet. When a headquarters office consolidates comments from all functional groups, major commands, and other organizations, the spreadsheet is then disseminated throughout the Air Force to all organizations that have a need to see the collective comments. Legal comments, however, have often not been highlighted or identified with any markings about attorney-client privilege. The use of this process raises questions about the adequate protection of legal comments. There is sufficient legal support for the position that legal comments continue to have the Exemption 5 protection (attorney work product or attorney-client privilege) since the comments are submitted on behalf of the Air Force client and are not submitted outside of official channels. The effect of this process, however, requires further review. Until official guidance is released on this issue, we recommend that in the future these documents contain the following marking:

> This document is predecisional and contains confidential attorney work-product and/or information protected under the attorney-client privilege, all three categories of which are not subject to Discovery or Freedom of Information Act release under P.L. 93-502 (5 U.S.C. § 552). Do not release without prior specific approval of the originator or higher authority.

B. Metadata: The "Hidden Threat" of Inadvertent Disclosure

Although the use of e-mail messages and the internet to transmit documents is routine, Air Force individuals will not fully protect sensitive information if they are unaware of the disclosure perils involving electronically transmitted documents. Individuals must

[266] Ultimately the issue comes down to whether the document is an "agency record." The Supreme Court provided a two-part test for "agency records" in *United States Dep't of Justice v. Tax Analysts*, 492 U.S. 136, 144-45 (1989). Under this test, a document is an agency record so long as it is (1) created or obtained by an agency, and (2) under agency control at the time of the FOIA request. In *Hercules, Inc. v. Marsh*, 839 F.2d 1027, 1029 (4th Cir. 1988), the court held that an Army ammunition plant telephone directory prepared by a contractor at government expense was an agency record. *See also* Burka v. Dep't of Health and Human Servs., 87 F.3d 508, 515 (D.C. Cir. 1996) (data tapes created and possessed by contractor were agency records because of extensive supervision by agency, which evidenced "constructive control"); Los Alamos Study Group v. Dep't of Energy, No. 97-1412, slip op. at 4 (D.N.M. Jul. 22, 1988) (records created by contractor are agency records because contract established agency intent to retain control over records).

exercise caution when documents are transmitted electronically because software-created documents contain invisible text called metadata, which is transmitted along with the visible text.[267] All Air Force individuals are obligated to prevent the unauthorized release of information; however, an attorney that fails to exercise reasonable care to prevent the disclosure of confidential client information may be found to have violated the Air Force Rules of Professional Conduct or applicable state bar ethics professional conduct rules.[268]

While metadata is defined in various ways, the New York State Bar Association stated in a recent ethics opinion that metadata:

> may be loosely defined as data hidden in documents that is generated during the course of creating and editing such documents. It may include fragments of data from files that were previously deleted, overwritten or worked on simultaneously. Metadata may reveal the persons who worked on a document, the name of the organization in which it was created or worked on, information concerning prior versions of the document, recent revisions of the document, and comments inserted in the document in the drafting or editing process. The hidden text may reflect editorial comments, strategy considerations, legal issues raised by the client or the lawyer, legal advice provided by the lawyer, and other information. Not all of this information is a confidence or secret, but it may, in many circumstances, reveal information that is either privileged or the disclosure of which would be detrimental or embarrassing to the client. For example, a lawyer may transmit a document by e-mail to someone other than the client without realizing that the recipient is able to view prior edits and comments to the document that would be protected as privileged attorney-client. Or, more dramatically, a prosecutor using a cooperation agreement signed by one

[267] David Hricik & Robert R. Jueneman, *The Transmission and Receipt of Invisible Confidential Information*, 15 ABA PROF. LAW. 18 (Spring 2004); Nadine C. Warner, *Metadata 101: What Lies Beneath*, http://www.abanet.org/govpub/Metadata_ excerptsummer04.pdf (defining metadata as "data about data"); Catherine Sanders Reach, *Lemon Juice, Cornstarch, and Microsoft: Invisible Ink and Your Documents*, ABA Legal Technology Resource Center, http://www.abanet.org/tech/ltrc/ publications/metadata.html (noting that Microsoft refers to hidden text as "metadata," which others call "invisible ink").

[268] The New York State Bar Association recently issued an ethics opinion imposing a duty on attorneys to exercise reasonable care to prevent the disclosure of confidences and secrets contained in metadata. NYSBA COMM. ON PROF. ETHICS, FORMAL OP. 782 (Dec. 8, 2004), *available at* http://www.nysba.org/Content/NavigationMenu/Attorney_ Resources/Ethics_Opinions/Opinion_782.htm.

> confidential witness may use the agreement as a template in drafting the agreement for another confidential witness. The second document's metadata could contain the name of the original cooperating witness, and if e-mailed, could expose that witness to extreme risks.[269]

Metadata cannot be easily removed from a document,[270] but Air Force individuals can take steps to prevent unauthorized releases when documents are distributed outside of the Air Force. Options include: following the steps within the software program;[271] printing, scanning and transmitting the document in Portable Document Format (PDF);[272] or faxing or mailing the document.

XI. CONCLUSION

Environmental documents can be technical and confusing. By nature, they are also frequently sensitive, in that they deal with dangerous substances and/or critical infrastructure. Also, the environment is a highly regulated area, and environmental documents must occasionally be shared with other federal, state and local entities. All these factors must be considered when releasing environmental documents under FOIA or otherwise. Air Force personnel creating, working with, and considering release of, Air Force environmental documents must "walk the fine line" between releasing what should be non-releasable sensitive information on the one hand and inappropriately denying release or redacting what should properly be released under FOIA on the other hand. The first step in the process should take place at the creation of the document. The creator should carefully consider the applicable exemptions and determine whether the document is releasable and, if not, appropriately mark the document. In response to a request under FOIA, all information which is not protected by an exemption must be released. If the requested document contains

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[269] *Id.* (footnotes and citation omitted).
[270] Hricik & Jueneman, *supra* note 267.
[271] *Id.*; *see also* Dan Pinnington, *Managing the Security and Privacy of Electronic Data in a Law Office—Part II*, LAW PRACTICE TODAY (Feb. 2005), *available at* http://www.abanet.org/ lpm/lpt/articles/tch02055.html.
[272] Hricik & Jueneman, *supra* note 267. Although merely converting an MS Word Document to a PDF document does not remove all metadata automatically, steps can be followed to sanitize a Word document and then convert the document to a PDF document. ARCHITECTURES AND APPLICATIONS DIVISION OF THE SYSTEMS AND NETWORK ATTACK CENTER, NATIONAL SECURITY AGENCY, REPORT #I333-015R-2005, REDACTING WITH CONFIDENCE: HOW TO SAFELY PUBLISH SANITIZED REPORTS CONVERTED FROM WORD TO PDF (Feb. 2, 2006) (providing a step-by-step description for sanitizing a Word document for release), *available at* http://www.nsa.gov/ snac/vtechrep/I333-TR-015R-2005.PDF.

protected information, however, the protected information should be redacted before release or, if there is no reasonably segregable information, the FOIA request should be denied. If a document containing sensitive material will be forwarded outside the Air Force (e.g., to state environmental agency or local fire department), protective measures must be taken to ensure that the entity does not release that information to unauthorized persons.

ATTACHMENT 1 – CHECKLIST FOR PROTECTING ENVIRONMENTAL INFORMATION

1. What statute, regulation, DoD or AF regulation, or policy requires the creation of the document? Does the statute, regulation, or policy contain instructions on releasability? If yes, follow the instructions.

2. Does the document contain information that would be exempt from release under FOIA?

a. Does the document contain information which, if released, would enable someone to circumvent Air Force legal responsibilities (*e.g.*, requirement to provide safe drinking water or safely transport hazardous substances)? If yes, the information or document is exempt from release under Exemption 2, "high 2."
b. Does the document contain information that is exempt from release under other laws (e.g., vulnerability assessments under the SDWA Amendments, or OCA under the CAA § 112(r))? If yes, Exemption 3 prohibits its release.
c. Does the document contain information that normally would be privileged in the civil discovery context? Is it predecisional and a direct part of the deliberative process, or does it fall under the attorney work-product or attorney-client privilege? If yes, Exemption 5 likely applies.
d. Does the document contain information that, if released, would be an unwarranted invasion of a person's privacy (*e.g.*, home addresses and medical information included in an environmental tort claim)? If yes, the information or document is exempt under Exemption 6.
e. Does any other FOIA exemption apply?

3. If an exemption does apply or the document is For Official Use Only, is the document properly marked to address releasability and prevent an inadvertent disclosure?

4. Is the document required to be released to a state or local entity, such as a state regulatory agency or a local fire department? If yes, the release is not a release under FOIA, but the following items should be evaluated to ensure the documents are not further released.

a. Is there a Memorandum of Agreement or any other agreement between the base and the state or local entity? If yes, evaluate whether it contains, or should contain, a provision addressing the protection of sensitive Air Force documents.
b. Does the document contain a header or footer as suggested in Attachment 2?
c. Does the cover or transmittal letter contain the language suggested in Attachment 3?
d. Check the state law regarding release of information to the public. If the state law would require the release of Air Force documents that should be protected, consult with AFLOA/JACE (Air Force Environmental Law and Litigation Division) and AF/JAA.

5. Will the document or portions of the document be posted on a public web site? If the document contains any FOIA exempted information, it should at least be redacted to remove such information. Even if there is no FOIA exempted information in the document, does it contain sensitive information that could be used by a terrorist to target military bases or personnel? If yes and there is no legal requirement to post the information, then do not post it.

6. Will a computer-generated document be e-mailed to an address outside of the Air Force or DoD? Does the document contain or likely contain metadata? If yes, scan the document and e-mail a PDF version, fax it, or mail a hard copy.

ATTACHMENT 2 – SUGGESTED FOUO MARKINGS

General FOUO Marking:

> This document contains information that is EXEMPT FROM MANDATORY DISCLOSURE under the Freedom of Information Act, 5 U.S.C. § 552. Exemption(s)___ apply/applies. Further distribution is prohibited without the prior approval of (organization, office symbol, phone).
>
> In the blank insert the applicable exemption(s).
> -- For draft documents, Exemption 5 applies.
> -- Where there is statutory protection, Exemption 3 applies.
> -- If release of the information would permit the circumvention of a statute, regulation, an agency rule, or other legal requirement, consider application of Exemption 2 ("high 2")
> -- If the information is particular to an individual, Exemption 6 is likely applicable, in addition to the Privacy Act.

Marking for Draft Documents (In addition to "FOR OFFICIAL USE ONLY" and "DRAFT" in header:

> This document is a draft and exempt from release under the Freedom of Information Act (FOIA), P.L. 93-502 (5 U.S.C. § 552), by Exemption 5, 5 U.S.C. § 552(b)(5). Do not release without prior specific approval of the originator or higher authority.

Marking for "Predecisional" Documents:

> This document is predecisional and is, or portions are, exempt from release under the Freedom of Information Act (FOIA), P.L. 93-502 (5 U.S.C. § 552), by Exemption 5, 5 U.S.C. § 552(b)(5). Do not release without prior specific approval of the originator or higher authority.

Marking for Legal Documents:

> This document contains confidential attorney work-product and/or information protected under the attorney-client privilege, both of which are protected from disclosure under the Freedom of Information Act, P.L. 93-502 (5 U.S.C. § 552). Do not release without prior specific approval of the originator or higher authority.

Marking for Legal E-Mails:

> FOR OFFICIAL USE ONLY. This electronic transmission may contain work-product or information protected under the attorney-client privilege, both of which are protected from disclosure under the Freedom of Information Act, 5 U.S.C. § 552. Do not release outside of Department of Defense channels without the consent of the originator's office. If you received this message in error, please notify the sender by reply e-mail and delete all copies of this message.

Marking for Deliberate Process-Related Information Sent via E-Mail:

> FOR OFFICIAL USE ONLY. This electronic transmission contains internal matters that are deliberative in nature and/or are part of the agency decision-making process, both of which are protected from disclosure under the Freedom of Information Act, 5 U.S.C. § 552. Do not release outside of Department of Defense channels without advance approval from the sender. If you received this message in error, please notify the sender by reply e-mail and delete all copies of this message.

ATTACHMENT 3 – SUGGESTED TRANSMITTAL LETTER LANGUAGE

> This document is being provided to your organization for official use only and remains the property of the United States Air Force. Providing this document to you does not constitute a release under the Freedom of Information Act (5 U.S.C. § 552), and due to the sensitivity of the information, this document must be appropriately safeguarded. For example, you may not make the information publicly available, and you must limit disclosure to those who need the information to carry out their duties. Because this document is being provided for limited purposes, it must be returned to the appropriate Air Force organization or destroyed when it is no longer needed. Should you receive a request for this document or information contained in this document (whether under the Freedom of Information Act, a state version of that act, or any other type of request), you must: 1) refer the request to us at (AF organization contact information), and 2) notify the requestor of the referral.

FEDERAL ENVIRONMENTAL REMEDIATION CONTRACTUAL AND INSURANCE-BASED RISK ALLOCATION SCHEMES: ARE THEY GETTING THE JOB DONE?

MAJOR AMY L. MOMBER

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I. INTRODUCTION

Federal environmental remediation projects are laden with risks—risks that are often undetectable before remediation work begins. Recognizing they cannot specifically account for such unknown contingencies via contract, the government and remediation contractors employ contractual and insurance-based methods to shift or reduce their respective risks. This article examines and critiques the effectiveness of such risk-shifting measures as they pertain to the government, the remediation contractor, and, most importantly, getting the job done.

To provide a foundation for understanding federal environmental remediation contracts and risk allocation therein, Chapter II begins with an overview of the circumstances that make federal environmental remediation contracts unique. Those circumstances include the variant conditions of cleanup sites, complexity of relevant environmental and federal procurement laws, heightened community interest in project successes and failures, and contracting parties' potential exposure to staggering unanticipated expenses. Chapter II concludes with an analysis of government and contractor motivations for taking on such risky projects. This background is essential because some, if not all, of these factors frequently impact the way federal environmental remediation contracts are structured.

Federal environmental remediation contracts are generally structured in a manner that clearly assigns risks to one party or the other. With that in mind, Chapter III provides a detailed look at the contractual methods for reducing or shifting federal environmental remediation risks. The contract type, specifications, and clauses are the primary contractual risk-shifting measures examined in this section. Brief case studies are also provided to offer a glimpse into how courts and boards generally interpret these mechanisms.

Faced with limited success in employing such mechanisms, contractors often consider (and the government frequently even requires) purchasing environmental insurance to protect themselves against the risks inherent in federal environmental remediation projects. Therefore, Chapter IV explores the risk-shifting benefits of five types of environmental insurance coverage: Cleanup Cost Cap policies, Pollution Liability policies, Finite Risk policies, Contractor's Pollution Liability policies, and Errors and Omissions policies. To provide a complete picture of environmental insurance as a risk-shifting measure, the chapter also cautions against policy exclusions and highlights difficulties associated with acquiring sufficient coverage to effectively shift or reduce policyholder risks in any given case.

With an analysis of risk-shifting measures in place, Chapter V explores the contractual and insurance-based risk-shifting measures that were included in the subcontract for the Lockheed failed Pit 9 cleanup

and what impact, if any, such risk-shifting measures had on the project. In addition to illustrating these risk-shifting methods in action, this in-depth case study also introduces another type of risk-shifting clause: the Guarantee of Performance clause. In the end, the analysis of this case provides valuable insight into how courts apply and often strictly adhere to contractually agreed upon risk allocation schemes. Its also highlights the dangers involved when inexperienced remediation firms "buy in" to the field and underscores the notion that no one wins, least of all the public and the environment, when remediations fail.

The subcontract for the Lockheed failed Pit 9 cleanup is representative of the current government Performance-Based Contracting (PBC) initiative. Therefore, Chapter VI examines, in considerable detail, this quickly growing initiative and its risk allocation implications. Such an analysis provides the groundwork to forecast where the federal environmental remediation procurement program is headed next.

The article concludes in Chapter VII. The conclusion outlines the current status of risk-shifting/risk-sharing between the government and federal remediation contractors. Then, it identifies areas ripe for improvement and offers suggestions for both the government and government contractors regarding how to approach and improve such deficient areas. Ultimately, the conclusion ends with a call for action—a call designed to improve the federal environmental remediation procurement program, as a whole, and its government-contractor risk allocation component, in particular.

II. BACKGROUND

Government agencies enter into thousands of remediation services contracts with private firms each year to clean up contaminated federal sites. The remediation services procured may include preliminary assessments,[1] site inspections,[2] remedial investigations,[3]

[1] A preliminary assessment is a limited-scope investigation designed to distinguish, based on readily available information, between sites that pose little or no threat to human health and the environment and sites that require further investigation because they may pose a threat. ENVIRONMENTAL PROTECTION AGENCY, PRELIMINARY ASSESSMENT/SITE INSPECTION, http://www.epa.gov/superfund/whatissf/sfproces/pasi. htm (last visited Feb. 20, 2006).

[2] Site inspections typically involve the collection of environmental and waste samples to determine which, if any, hazardous substances are present at the site; whether those substances are reaching nearby targets; and how to rank the site according to the Hazard Ranking System (HRS). *Id.; see also* 42 U.S.C. § 9604(b)(1) (2000) (providing the authority for the EPA or other federal agencies to undertake such investigations).

[3] During the remedial investigation phase, data is collected to characterize site conditions, determine the nature of the waste, assess human health and environmental risks, and evaluate the effectiveness of treatment technologies under consideration. ENVIRONMENTAL PROTECTION AGENCY, REMEDIAL INVESTIGATION/FEASIBILITY STUDY, http://www.epa.gov/ superfund/whatissf/sfproces/rifs.htm (last visited Feb. 20, 2006).

feasibility studies,[4] remedial design,[5] and remedial actions[6]—among other things.[7] This article focuses, primarily, on government contracts (or portions of contracts) for remedial actions because the remedial action phase of a cleanup project is, arguably, the phase that puts both the government and the government contractor at the greatest risk for unanticipated costs and cost overruns.

To fully explore the nature of such contracts and how risks are allocated therein, it is helpful to understand some of the key factors that make environmental remediation contracts unique. Those factors include: variant conditions of cleanup sites, complex laws, increased community interest, potential for phenomenal expense involved in cleanup work, and the dynamics that motivate the government and government contractors to take on these projects. This section will examine each of these factors in turn.

A. Variant Cleanup Site Conditions

Government environmental remediation contracts have, by necessity, developed a character separate and distinct from all other government contracts. One such distinguishing characteristic of remediation contracts is their customization. These contracts must be highly customized because no two remediation sites are ever exactly the

[4] The feasibility study is conducted to develop, screen, and thoroughly evaluate a range of alternative remedial actions for consideration. *Id.*

[5] The objective of the remedial design phase is to design a cleanup remedy, including the technical drawings, specifications, and technologies required to implement the remedy. ENVIRONMENTAL PROTECTION AGENCY, REMEDIAL DESIGN/REMEDIAL ACTION, http://www.epa.gov/superfund/whatissf/sfproces/rdra.htm [hereinafter REMEDIAL DESIGN/REMEDIAL ACTION] (last visited Feb. 20, 2006); *see also* ENVIRONMENTAL PROTECTION AGENCY, REMEDIAL DESIGN/REMEDIAL ACTION HANDBOOK (1995), http://www.epa.gov/superfund/whatissf/ sfproces/rdrabook.htm (providing an overview of the remedial design and remedial action processes) (last visited Feb. 20, 2006).

[6] Remedial actions involve the actual construction, operation, and implementation of the final cleanup remedy. REMEDIAL DESIGN/REMEDIAL ACTION, *supra* note 5.

[7] *See, e.g.,* DEPARTMENT OF DEFENSE (DOD), DEFENSE ENVIRONMENTAL RESTORATION PROGRAMS ANNUAL REPORT TO CONGRESS FISCAL YEAR 2004 16 (2005) [hereinafter DERP REPORT FY2004] (indicating that the DoD uses the *CERCLA Environmental Restoration Process Phases and Milestones*, thereby requiring the following phases be conducted, in this order, for all Defense Environmental Response Program (DERP) sites: preliminary assessment, site inspection, remedial investigation, feasibility study, remedial design, remedial action construction, remedial action operation, and long-term maintenance); *see also* Danielle Conway-Jones, *Federal Procurement of Environmental Remediation Services: Feast or Famine for Small Business*, 41 HOW. L.J. 1, 2 (1997) (citing containment, transportation and disposal of waste materials, security, and site closeouts as additional functions performed under the guise of environmental remediation services).

same. Rather, a wide range of pollutants contaminate federal sites throughout the nation.[8]

Some of the contaminants, like petroleum, oil, and lubricants—generally associated with past operation and maintenance activities at military installations[9]—are similar to contaminants found on civilian sites.[10] However, others (including unexploded ordnance (UXO), nuclear materials, and chemical explosives) are typically only found on federal property.[11] Unfortunately, such federal contaminants tend to be particularly difficult and costly to remediate.[12] Regardless, each cleanup site—whether it is a contaminated storage area, landfill, lagoon, building, groundwater aquifer, or something else—is different from another, even if the type of site is similar.

In addition to the variant conditions of cleanup sites, several other aspects of federal environmental cleanup work make it unique. Three particularly influential aspects include the complexity of pertinent environmental laws, the community interest in environmental cleanup work, and the potential for phenomenal unanticipated expense. Some, or

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[8] *See* DEPARTMENT OF ENERGY (DOE), TOP-TO-BOTTOM REVIEW OF ENVIRONMENTAL MANAGEMENT PROGRAM: STATUS OF IMPLEMENTATION REPORT TO CONGRESS I-1 (2003) [hereinafter DOE TOP-TO-BOTTOM REVIEW] (reporting that DOE's program, alone, includes the remediation and processing of approximately 25 tons of plutonium, 108 tons of plutonium residues, 88 million gallons of radioactive liquid waste, 2,500 tons of spent nuclear fuel, 137,000 cubic meters of transuranic waste, 1.3 million cubic meters of low-level waste, 324 nuclear facilities, 3,300 industrial facilities, and hundreds of radiological facilities).

[9] *See* COUNCIL ON ENVIRONMENTAL QUALITY, IMPROVING FEDERAL FACILITIES CLEANUP: REPORT OF THE FEDERAL FACILITIES POLICY GROUP 10 (1995), http://clinton3.nara.gov/OMB/inforeg/iffc-2.html (last visited Feb. 20, 2006).

[10] *See* ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS (ASTSWMO), BASE CLOSURE FOCUS GROUP PERFORMANCE-BASED REMEDIATION CONTRACTS WHITE PAPER AND COMPENDIUM OF STATE LESSONS LEARNED, A GUIDE TO PERFORMANCE-BASED ENVIRONMENTAL REMEDIATION (2004) [hereinafter ASTSWMO GUIDE] (discussing the remediation of petroleum-contaminated sites at the Rio Vista Army Reserve Center in Rio Vista, California) (on file with author).

[11] *See id*. at 19, 20 (citing Fort McClellan, Alabama and Lowry Air Force Base, Colorado, as examples of federal sites contaminated with UXO); *see also* M.C. BRACKEN, ET AL., *Issues and Alternatives for Cleanup and Property Transfer of Base Realignment and Closure (BRAC) Sites, in* INSTITUTE FOR DEFENSE ANALYSES (IDA) PAPER P-3538 5 (2000) (referencing a DoD estimate that ordnance affects almost twenty-seven percent of all closed bases' acreage and fifty-seven percent of closed Army bases' acreage); *Environmental Management: Hearing Before the H. Subcomm. on Energy and Water Development and Related Agencies Comm. on Appropriations*, 109th Cong. 6, 12 (2005) (citing the Hanford Nuclear Reservation, Washington, and Rocky Flats Arsenal, Colorado, as DOE cleanup sites contaminated with nuclear materials).

[12] ASTSWMO GUIDE, *supra* note 10, at 19 (exploring the difficulties involved in calculating potential remediation costs for the UXO areas at Fort McClellan, Alabama); *see also DoD's Environmental Cleanup: Hearing Before the S. Subcomm. on Military Readiness and Defense Infrastructure Comm. on Armed Services*, 103rd Cong. (1994) (statement of Neil M. Singer, Acting Assistant Director, National Security Division, Congressional Budget Office).

all, of these components frequently affect the way federal remediation contracts are structured. Therefore, each warrants further discussion.

B. Complexity of Environmental Laws

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)[13] and the Resource Conservation and Recovery Act (RCRA)[14] are the two primary environmental laws generally applicable to federal remediation projects. Though one or the other may apply to any given project, many remediation projects are subject to both of these statutes at the same time. Similarly, the requirements of each statute apply, at least theoretically,[15] to both the government and government contractors because each statute contains a broad waiver of sovereign immunity.[16]

1. *CERCLA Overview*

In 1980, Congress passed CERCLA, sometimes touted as "the most prominent federal environmental statute,"[17] to address the

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[13] Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601-9675 (2000)).

[14] Resource Conservation Recovery Act (RCRA) of 1976, Pub. L. No. 94-580, 90 Stat. 2795 (1976). Since its passage into law, the RCRA has been amended many times. *See, e.g.*, Land Disposal Program Flexibility Act of 1996, Pub. L. No. 104-119, 110 Stat. 830 (1996); Federal Facilities Compliance Act, Pub. L. No. 102-386, 106 Stat. 1505 (1992); Hazardous and Solid Waste Amendments of 1984, Pub. L. No. 98-616, 98 Stat. 3221 (1984); Solid Waste Disposal Act Amendment of 1980, Pub. L. No. 96-482, 94 Stat. 2334 (1980); Quiet Communities Act, Pub. L. No. 95-609, 92 Stat. 3801 (1978).

[15] *See* John F. Seymour, *Liability of Government Contractors for Environmental Damage*, 21 PUB. CONT. L.J. 491, 495 (1992) (citing a statement of F. Henry Habicht II, the then-Assistant Att'y. Gen., Land and Natural Resources, and Dep't of Energy v. Ohio, 503 U.S. 607 (1992), as examples of the ways the government attempts to get around its promise to obey environmental laws by insulating agencies from EPA and state environmental enforcement suits); *but see* Crowley Marine Servs. v. FEDNAV, Ltd., 915 F. Supp. 218 (E.D. Wash. 1995) (finding *Dep't of Energy v. Ohio* superseded by the Federal Facility Compliance Act, which renders all actions of the Federal government, past and present, subject to the solid and hazardous waste laws).

[16] *See* 42 U.S.C. § 9620(a)(1) (Lexis 2006). CERCLA's sovereign immunity waiver provides: "Each department, agency, and instrumentality of the United States (including the executive, legislative, and judicial branches of government) shall be subject to, and comply with, this chapter in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 9607 of this title." *Id.; see also* 42 U.S.C. § 6961(a) (Lexis 2006); Federal Facilities Compliance Act §1004(15) (providing a sovereign immunity waiver under RCRA, similar to the one provided under CERCLA).

[17] Troyen A. Brennan, *Environmental Torts*, 46 VAND. L. REV. 1, 48 (1993).

detrimental effects of hazardous waste sites.[18] Six years later, Congress amended CERCLA to authorize additional monies to remediate Superfund sites and to establish national cleanup standards and new regulatory programs.[19] CERCLA's principal function as a remedial statute is to provide the federal government, state governments, and private citizens (when appropriate) with the authority to take action in response to the release or substantial threat of release of any hazardous substance which could imminently and substantially threaten public health or welfare.[20] To effectuate its remedial purposes, CERCLA utilizes common-law doctrines—like strict, joint and several, and retroactive liability—to shift the costs and burdens of site cleanups to "responsible" parties.[21]

2. *RCRA Overview*

While CERCLA establishes a framework for assessing "after-the-fact" cleanup liability, RCRA's primary purpose is "to reduce the generation of hazardous waste [in the first place] and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated."[22] Therefore, RCRA generally governs the management of hazardous waste from its creation ("cradle") to its final resting place ("grave"). Managing such waste from cradle-to-grave is designed to minimize present and future threats to human health and environment.[23] Although RCRA's predominant focus pertains to ongoing and future operations, it also authorizes the investigation and remediation of past waste sites—offering a corrective action program similar to CERCLA's with different, though sometimes overlapping, requirements.[24] RCRA also authorizes the Environmental Protection Agency (EPA) and citizens to enforce these and the other RCRA regulatory requirements by seeking

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[18] *See* H.R. REP. NO. 1016, 96th Cong., 2d Sess., pt. 1, at 18-19 (1980) (describing the "Valley of the Drums" and urging enactment of CERCLA to ameliorate improperly managed hazardous waste sites, particularly the 1200 to 2000 sites that were believed to pose serious risks to public health); Chris Amantea & Stephen C. Jones, *The Growth of Environmental Issues in Government Contracting*, 43 AM. U.L. REV. 1585, 1590 (1994).
[19] *See* Superfund Amendments and Reauthorization Act (SARA) of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986).
[20] *See* 42 U.S.C. § 9604(a) (Lexis 2006).
[21] *See, e.g.,* United States v. Alcan Aluminum Corp., 315 F.3d 179, 190 (2d Cir. 2003) (finding CERCLA's retroactive liability scheme constitutional after reviewing the purpose of the statute and relevant case law); New York v. Shore Realty Corp., 759 F.2d 1032, 1042 (2d Cir. 1985) (holding responsible parties strictly liable under CERCLA, pursuant to congressional intent); *but see* Cooper Indus., Inc., v. Aviall Servs., Inc., 543 U.S. 157 (2004) (concluding that a private party who has not been sued under CERCLA § 106 or § 107(a) may not obtain contribution from other liable parties).
[22] Meghrig v. KFC W., Inc., 516 U.S. 479, 483 (1996).
[23] *See* 42 U.S.C. § 6902(b) (Lexis 2006).
[24] *See id.* § 6924(v).

administrative, civil, or criminal penalties against parties who fail to comply.[25]

3. *The Environmental Law Conundrum*

Government and contractor attempts to clearly delineate their potential liability for environmental risks are often foiled by the aptly-described, "mind-numbing"[26] and "stupefyingly complex"[27] nature of CERCLA, RCRA, and other environmental regulations. The considerable breadth of these statutes and the lack of any specific environmental cost principles in the Federal Acquisition Regulation (FAR) also contribute to this risk allocation riddle.[28] In addition, remediation projects may be subject to a number of overlapping state and local environmental laws, creating confusion as to the priority of cleanup standards as well as conflicting and ambiguous directives.[29] When such confusion occurs, the government and, to a much larger degree, contractors are at greater risk for regulatory violations.

Even if the government and remediation contractors can successfully navigate this minefield of pandemonium, they still face confusing issues. One such source of confusion is the apparent tension between CERCLA and RCRA policies and federal procurement policies.[30] As previously stated, CERCLA and RCRA are designed to hold any party, including the government, responsible for past, present, and future actions that threaten human health, welfare, or the environment.[31] Federal procurement law, on the other hand, imposes upon the government an obligation to aggressively protect the taxpayer's money.[32] Therefore, CERCLA and RCRA policies requiring the

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[25] *See* 42 U.S.C. §§ 6928, 6972 (Lexis 2006).

[26] *See* American Mining Congress v. EPA, 824 F.2d 1177, 1189 (D.C. Cir. 1987); Randoph L. Hill, *An Overview of RCRA: The "Mind-Numbing" Provisions of the Most Complicated Environmental Statute*, 21 ENVTL. L. REP. (ENVTL. L. INST.) 10254, 10257 (1991); E. Donald Elliot, *The Last Great Clean Air Act Book?*, 5 ENVTL. LAW. 321, 326-27 (1998).

[27] *See* Jerry L. Anderson, *The Environmental Revolution at Twenty-Five*, 26 RUTGERS L.J. 395, 411 (1995).

[28] *See* Seymour, *supra* note 15, at 493; *see also* Kenneth Michael Theurer, *Sharing the Burden: Allocating the Risk of CERCLA Cleanup Costs*, 50 A.F. L. REV. 65, 68 (2001).

[29] *See, e.g.,* Colorado v. Dept. of Army, 33 ERC (BNA) 1585 (D. Colo. 1991) (determining, two years later, that compliance with the state law was not required after the same site referenced above was listed on the National Priorities List); Colorado v. U.S. Dept. of Army, 707 F. Supp. 1562, 1572 (D. Colo. 1989) (holding that federal facility cleanups are subject to state hazardous waste laws despite ongoing Superfund cleanups).

[30] *See* Phillip M. Kannan, *The Compensation Dimension of CERCLA: Recovering Unpaid Contract Costs*, 30 U. MEM. L. REV. 29, 52 (1999).

[31] *See* 42 U.S.C. §§ 9604(a), 6902(b) (2000).

[32] *See* Ingalls Shipbuilding, Inc. v. O'Keefe, 986 F.2d 486, 491 (Fed. Cir. 1993) (citing Universal Canvas, Inc. v. Stone, 975 F.2d 847, 850 (Fed. Cir. 1992)); Ralph C. Nash &

government to spend taxpayer dollars remediating sites often frustrate federal procurement law policies intended to shield the public treasury.

The government and government contractors frequently attempt to take advantage of this "grind" by trying to use CERCLA, RCRA *and* federal procurement laws to offset their potential environmental liability. Although this article focuses on the federal procurement law dimension of this risk-shifting "dance," CERCLA and RCRA play a powerful role in determining which party, ultimately, bears the risk of environmental liabilities. Working within this complex legal landscape makes contracting for environmental cleanup different than contracting for other services. The impassioned community interest in environmental cleanups is another distinguishing factor.

C. Community Interest in Environmental Work

Environmental conditions have increasingly been identified as the cause of injury, illness, and property damage.[33] Hazardous substances found on or around federal property may be particularly harmful (or even lethal) to the public, the environment, or both.[34] Consequently, time is generally "of the essence" in choosing and implementing an appropriate procurement strategy to remediate federal sites.[35] Few issues are of more concern to the public than issues affecting their health and property. Therefore, the success or failure and timeliness of federal environmental remediation contracts tends to strike much closer to the heart of a community than the successes, failures, or timeliness of contracts for "widgets" or other services.

The Department of Energy (DOE) and the Department of Defense (DoD) have been charged with cleaning up sites that pose some of the nation's most dangerous risks to public health and the

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John Cibinic, *Contracting Officer Determinations: For Better or Worse* 6, NO. 6 NASH & CIBINIC REP. ¶ 35 (1992).

[33] *See* ENVIRONMENTAL PROTECTION AGENCY, SOURCES OF COMMON CONTAMINANTS AND THEIR HEALTH EFFECTS, http://www.epa.gov/superfund/programs/er/hazsubs/sources.htm (last visited Feb. 20, 2006); U.S. DEPT. OF HEALTH AND HUMAN SERVICES, CANCER AND THE ENVIRONMENT, http://www.niehs.nih.gov/oc/factsheets/cancer-environment.pdf (last visited Feb. 20, 2006); *see also* Morgan v. Brush Wellman, Inc., 165 F. Supp. 2d 704, 709 (E.D. Tenn. 2001) (describing Beryllium as "per molecule the most deadly substance known to mankind").

[34] *See, e.g.*, Lucinda Marshall, *Military Pollution: The Quintessential Universal Soldier* (Mar. 27, 2005), *available at* http://www.comondreams.org/views05/0327-21.htm (last visited Feb. 20, 2006); Peter Eisler, *Both Sides Armed with Science and Studies in Conflict over Health Risks,* USA TODAY, Oct. 13, 2004, at 9A.

[35] Recognizing the time-sensitive nature of the potential effects of environmental contamination, Congress made expeditious cleanup of contaminated sites one of CERCLA's primary remedial objectives. *See* S. REP. NO. 96-848, 96th Cong. 2d Sess. 12, 13 (1980); *see also* Boeing Co. v. Cascade Corp., 207 F.3d 1177, 1191 (9th Cir. 2000).

environment.[36] As of October 2003, DOE's Environmental Management (EM) program encompassed the remediation and processing of approximately 324 nuclear facilities, 3,300 industrial facilities, and hundreds of radiological facilities.[37] In fiscal year 2004, the DoD's corresponding program, the Defense Environmental Restoration Program (DERP), addressed a total of 31,070 sites at 1,817 installations and 2,943 formerly used defense sites (FUDS).[38] Of those sites, 27,672 fell under the DoD's Installation Restoration Program (IRP),[39] while 3,398 were covered by the DoD's Military Munitions Response Program (MMRP).[40]

Although both the DOE and the DoD programs are focused on reducing risks to public health and the environment, these agencies, like other federal agencies, have not always been successful in implementing timely, appropriate, environmental remediation procurement strategies. Such strategy failures have often left communities disappointed and disillusioned.[41] DOE candidly recognized its responsibility for such public dissatisfaction in an October 2003 "Top-to-Bottom" review of its EM program.[42] Among other things, DOE reported that

> EM had lost its focus on risk reduction . . . EM's contracting strategy had failed to deliver cleanup and risk reduction, awarding large fees to contractors for very little in the way of tangible results . . . EM had failed to reduce environmental and public risks . . . [and] [t]he public had grown disenchanted; the environmental

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[36] *See* DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at I-5; DERP REPORT FY2004, *supra* note 7, at 17.
[37] DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at I-1.
[38] DERP REPORT FY2004, *supra* note 7, at I-2.
[39] *Id.* The IRP addresses hazardous substance, pollutant, or contaminant releases that pose environmental health and safety risks.
[40] *Id.* The MMRP addresses environmental health and safety hazards from UXO and discarded military munitions and includes sites other than operational ranges that require a military munitions response.
[41] If such failures result in noncompliance with environmental laws and state/federal regulators fail to enforce those laws, dissatisfied citizens may be able to sue for compliance under citizen suit provisions, including those found in 42 U.S.C. § 6928 and 42 U.S.C. § 9603(b). However, the public may get involved earlier in the process by submitting comments; requesting public hearings to clarify information or voice objections; and participating in remedial decisions and processes. *See* ENVIRONMENTAL PROTECTION AGENCY, 25 YEARS OF RCRA: BUILDING ON OUR PAST TO PROTECT OUR FUTURE 13-14 (2002). The statute authorizing the DERP provides another avenue for participation via its required Restoration Advisory Board (RAB), which is established for each project to "offer an opportunity for communities to have a voice in the cleanup process by bringing people together who reflect the diverse interests of the community." 10 U.S.C. § 2705(c) (2000); ENVIRONMENTAL PROTECTION AGENCY & DEP'T OF DEFENSE, RESTORATION ADVISORY BOARD (RAB) IMPLEMENTATION GUIDELINES (1994).
[42] DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at I-1, 2.

> regulators had grown impatient; and the taxpayers had grown wary.[43]

Unfortunately, these problems do not appear to be unique to DOE's EM program. Rather, the DoD and other federal agency environmental programs have been the subject of similar criticisms.[44]

One way federal agencies have tried to address these problems is by altering their acquisition strategies.[45] This article will examine and critique some of these alterations, specifically focusing on contractual and insurance-based methods federal agencies may use. While the insurance-based methods may be used to more readily address the community interests at stake—particularly those interests related to adverse health effects—the potential for phenomenal unanticipated expense (yet another unique characteristic of environmental cleanup work) may also be very influential in the other methods chosen for a particular project.

D. Potential for Phenomenal Unanticipated Expense

The wide range of possible latent variations in site conditions, daunting complexity of relevant environmental laws, ambiguity as to exposure for personal and property damages, and inability to get enough information to sufficiently characterize a site before work begins, may preclude an accurate appraisal of the actual liability risks involved in a project and expose federal remediation contracting parties to staggering unanticipated expenses.[46] Therefore, the government and remediation contractors cannot presume that the anticipated cost of a cleanup is definite—even when preliminary precautions (i.e., assessments,

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[43] *Id.* at I-2. The report also noted that $70 billion had been invested in the EM program from 1989-2000, yet the cost and schedule for completing the program had increased yearly. FY 2000 was provided as an example of this trend. In that year alone, over one-third of the sites extended their closure date by at least a year. *Id.*

[44] *See, e.g., CBO Testimony: Hearing Before the H. Subcomm. on Military Procurement and the Subcomm. on Military Readiness of the Comm. on National Security,* 104th Cong. (1996); NEW YORK CITY FOR OCCUPATIONAL SAFETY AND HEALTH (NYCOSH), EPA CLEANUP GEARS UP AMID WIDESPREAD CRITICISM (2002); Memorandum from Steven A. Herman, Assistant Administrator, EPA, *Guidance on Accelerating CERCLA Environmental Restoration at Federal Facilities* (Aug. 22, 1994), *available at* http://www.epa.gov/swerffrr/ documents/822memo.htm) (last visited Feb. 20, 2006).

[45] *See, e.g.,* DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at I-3; ASTSWMO GUIDE, *supra* note 10, at 2.

[46] *See* Gordon E. Hart, *Brownfields Redevelopment at Closed Military Bases*, *in* ENVIRONMENTAL ASPECTS OF REAL ESTATE AND COMMERCIAL TRANSACTIONS 937 (3d ed. 2004) (suggesting that larger environmental contractors may be more willing to take on such risks, especially if they are backed by appropriate environmental insurance policies or the contract encompasses enough well-characterized sites to adequately spread, over the whole contract, the risks of those sites that are less well characterized).

inspections, investigations, studies, and designs) have been taken.[47] Rather, in some cases, unexpected areas of contamination are not unearthed until the remedial action phase is well underway.[48] Such a discovery can send once economically feasible projects well into the "red." To understand why the government and government contractors take on these risky projects, it is useful to examine the dynamics that motivate them.

E. Motivations for Undertaking Remediation Projects

Although idealists and politicians might argue that various factors motivate the government and government contractors to undertake remediation projects—including moral obligations, protection of future generations, and honor-bound duties[49]—the two principal (if not only) factors that *really* motivate them are the law and money. The legal motivations stem, primarily, from CERCLA and typically apply more to the government than contractors because the government generally falls into the "owner/operator" or "arranger" category of "potentially responsible parties" (PRPs)[50]—a category that legally obligates the government to take action. Remediation contractors, on the other hand, are typically motivated by money.

Vast amounts of money have been, and continue to be, invested in environmental remediation services. For example, over the past decade, the DoD has spent almost $43.4 billion on its environmental programs.[51] Approximately $20 billion of that investment went into

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[47] *See Hearing Before the S. Subcomm. on Superfund, Waste Control and Risk Assessment of the Comm. on Environment and Public Works* 107th Cong. (2002) (testimony of Kenneth Cornell, Executive Vice President AIG Environmental, that "EPA often sees cost overruns of between 20% to 30% at lead NPL sites").

[48] *See Hearing of the Emerging Threats and Capabilities Subcommittee of the Senate Armed Services Committee Subject: Chemical Demilitarization Programs in the Fiscal Year 2006 Defense Authorization Request,* FEDERAL NEWS SERVICE, Apr. 11, 2005 (citing new technical requirements and the discovery of the presence of mercury in portions of the Tooele mustard stockpile as one example of unexpected conditions that increase the time and cost of site remediations); *see also HWAC Urges DOE to Contract Directly for Environmental Restoration, Bypassing M & Os,* 60 FED. CONT. REP. (BNA) 12, Sept. 27, 1993 (noting that "there are no guarantees as to the nature of the contaminants or of the subsurface conditions to be encountered" and government contractors often face "substantial technical uncertainties").

[49] *See* WILLETT KEMPTON ET AL., ENVIRONMENTAL VALUES IN AMERICAN CULTURE (1995); Geoffery Wandesford-Smith, *Moral Outrage and the Progress of Environmental Policy: What Do We Tell the Next Generation about How to Care for the Earth?*, *in* ENVIRONMENTAL POLICY IN THE 1990S 325-35 (Norman J. Vig & Michael E. Kraft eds., 1990).

[50] *See* 42 U.S.C. § 9607(a)(2),(3) (Lexis 2006).

[51] DERP REPORT FY2004, *supra* note 7, at 3 (providing defense environmental funding trends).

environmental restoration through the DERP.[52] In fiscal year 2004 alone, Congress appropriated $1.3 billion for the DoD environmental restoration activities at active installations and FUDS properties and an additional $361 million for environmental activities, including compliance, planning, and environmental restoration, at BRAC installations.[53] The DoD expects such funding to remain relatively consistent, at least in the near future, since approximately $1.3 billion has been appropriated for fiscal year 2005 and requested for fiscal year 2006.[54] While the DoD appropriations have been considerable, the appropriations for DOE's EM program dwarf them in comparison[55]—thereby providing another example of the government's significant investment in environmental remediation services.

The government relies extensively on private remediation contractors to meet its expansive cleanup obligations.[56] This reliance, stemming from the government's need for the scientific and technical expertise contractors can provide,[57] has created a solid market for federal environmental remediation services. With cost and time estimates like those provided by DOE ($225 billion to complete the EM program by 2035),[58] such a market attracts many contractors. However, it frequently only offers *lucrative* opportunities for those experienced and savvy enough to know how to effectively employ the previously mentioned contractual and insurance-based methods to shift or reduce the risks inherent in environmental remediation work. Such methods and their employment (by both the government and remediation contractors) are examined, in detail, in the next two sections.

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[52] *Id.* at 5.
[53] *Id.*
[54] *See id*. at 5-6 (providing discussion and a table, at Figure 3, of executed, appropriated, and requested environmental restoration funding with breakouts by program and category).
[55] *See* DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at I-2 (reporting that well over $70 billion has been invested in the EM program since its inception in 1989); s*ee also Hearing Before the H. Subcomm. on Energy and Water Development and Related Agencies Comm. on Appropriations,* 109th Cong. (2005) (statement of Paul M. Golan, Principal Dep. Asst. Sec. for Environmental Management, U.S. Dept. of Energy, re-stating DOE's FY 2006 $6.5 billion request for EM program appropriations and emphasizing that such a request is 7.8 percent less than the comparable appropriation for FY 2005).
[56] *See* Seymour, *supra* note 15, at 499 (citing a statement made by the Office of Technology Assessment (OTA) that "[t]o a large extent, the U.S. Environmental Protection Agency's Superfund program attempts to manage environmental cleanups by managing contractors" and a DOE five-year plan detailing DOE operations as evidence of the fact that most federal remediation projects are conducted by private contractors).
[57] *See, e.g.*, DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at II-2 (summarizing DOE's past, current, and future acquisition strategy and contract management to include selecting contractors with special skills needed for cleanup work).
[58] *See id*. at I-2, II-2.

III. CONTRACTUAL METHODS FOR REDUCING/SHIFTING RISKS

In an ultimate risk avoidance regime, the government and government contractors attempt to determine what could go wrong before contract performance begins so they can contract for those contingencies. Unfortunately, given the latent nature and unanticipated costs characteristic of environmental cleanup projects, there are often many "unknown unknowns." Therefore, contracting for such contingencies may not always be possible in the environmental remediation services arena.

Recognizing they cannot contract for every possible contingency, the government and government contractors jockey for a position in which unanticipated costs shift to the other party, should they arise. Such risk aversion and assumption positions are memorialized, per mutual agreement, in the consequent contract between the government and the government contractor. The type of contract, the nature of the specifications, and the contract clause terminology are all negotiated with this in mind. This section will examine each of these risk-shifting measures.

A. Contract Type as a Risk-Shifting Mechanism

The type of procurement contract affects the level of risk each party to the contract assumes.[59] To that end, courts often view the contracting parties' agreement to enter into a particular type of contract—detailed in the contract via the pricing arrangement—as a risk-shifting agreement.[60] Accordingly, the contract type plays a pivotal role in court decisions as to how risks are allocated.

Two basic types of contracts are used in government contracts: cost-reimbursement contracts and fixed-price contracts.[61] Various differences, including payment methods and financing burdens, distinguish cost-reimbursement contracts from fixed-price contracts.[62] However, for our purposes, the key distinguishing factor between these two types of contracts is how performance cost risks are allocated.

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[59] *See generally* Federal Acquisition Regulation (FAR) 16.103.
[60] Yankee Atomic Elec. Co. v. United States, 112 F.3d 1569, 1579 (Fed. Cir. 1997); *see also* United States v. Spearin, 248 U.S. 132, 136 (1918); ITT Arctic Servs., Inc. v. United States, 524 F.2d 680, 691 (Ct. Cl. 1975).
[61] FAR 16.101(b).
[62] JOHN CIBINIC, JR. & RALPH C. NASH, JR., FORMATION OF GOVERNMENT CONTRACTS 1061 (3d ed. 1998).

1. *Cost-Reimbursement Contracts*

There are generally two components of cost-reimbursement contracts: cost reimbursement and fees. Under these contracts, the government reimburses the contractor for allocable, allowable costs as they are incurred in performing the contract.[63] Although some cost-reimbursement contracts do not provide for contractor profits,[64] most do, because contractors—especially those providing an expensive service to the government like environmental cleanup—usually work to make a profit, not just to recoup their costs. Therefore, a contractor fee is negotiated before work begins in such cost-reimbursement contracts. This fee, which represents the profit the contractor will make on the work, may be stated as an incentive target fee,[65] an award fee,[66] or a fixed fee[67] (subject to statutory and regulatory limitations). However, percentage-of-cost fees are specifically prohibited.[68]

The cost-reimbursement contract fee and reimbursement scheme allows government contractors to reduce their risks. Because the contractor passes its costs directly to the government and the contractor's fee is predetermined, performance costs (even if they are higher than expected) do not negatively impact the contractor's profit. Further, contractors can generally stop performing work, without any repercussions, if performance costs exceed estimates and the government does not continue to furnish additional funds.[69]

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[63] FAR 16.301-1.

[64] *See* FAR 16.302 ("Cost Contracts"); FAR 16.303 ("Cost-Sharing Contracts").

[65] When this type of fee is used, cost overruns and under-runs are compared to the contractor's proposed cost, which is considered the "target cost." A mathematical formula (not a subjective judgment) is applied to reduce fees for each dollar of an overrun and increase fees for each dollar of an under-run. So, if there is an overrun, the contractor is reimbursed its costs, but such costs come out of its fee. In contrast, if there is an under-run, the contractor is reimbursed its costs and receives some additional fees. At some point in the overrun, a minimum fee is hit. When this happens, the government is in a pure cost reimbursement situation and there are no longer incentives for the contractor to be efficient. *See* FAR 16.304; FAR 16.405-1.

[66] Here, the contracting officer makes a subjective judgment, based on established criteria, as to what to award the contractor. In making this judgment, the contracting officer decides whether to pay the minimum (base) fee, the maximum fee, or somewhere in between. The range of effectiveness is the range between the minimum fee and the maximum fee. *See* FAR 16.305; FAR 16.405-2.

[67] Fixed-fee contracts appear neutral as to the contractor's incentive to be efficient, because the negotiated profit (fee) is fixed. Therefore, the contractor gets its fee whether it is efficient or not. *See* FAR 16.306.

[68] FAR 16.102 (implementing 10 U.S.C. § 2306(a) (2000), 41 U.S.C. § 254(b) (2000)); *see also* Muschany v. United States, 324 U.S. 49, 61-62 (1944) (explaining the basis for this statutory prohibition); Urban Data Sys., Inc. v. United States, 699 F.2d 1147, 1150 (Fed. Cir. 1983) (articulating general criteria for determining whether a contract is a cost-plus-a percentage-of-cost contract). This prohibition also applies to fixed-price contracts.

[69] CIBINIC & NASH, *supra* note 62, at 1061.

However, cost-reimbursement contracts are not altogether without risk to the contractor. For example, cost-reimbursement contracts do not allow contractors to avoid costs caused by their own fault or incompetence.[70] Additionally, the language in the contract itself may undercut the generally risk-free nature of the cost-reimbursement contract. To that end, contract specifications or statements of work may expressly place court-enforceable risks, otherwise atypical for cost-reimbursement contracts, on the contractor.

Absent such contractor fault or contract language to the contrary, the government usually assumes the risk of unanticipated costs, cost overruns, and nonperformance when it agrees to enter into a cost-reimbursement contract. This risk allocation scheme, combined with the difficulties and additional transaction costs inherent in the administration of cost-reimbursement contracts, helps to explain the government's general preference for fixed-price contracts.[71] Such fixed-price contracts are discussed next.

2. *Fixed-Price Contracts*

The most common type of government contract is the "firm-fixed-price" contract.[72] In firm-fixed-price contracts, the government and the government contractor agree, before any work is performed, that the government will pay the contractor a fixed fee or price for performance of the contract.[73] This pre-established price remains static, irrespective of the contractor's actual cost experience in performing the contract.[74] Further, although the government may agree to provide progress payments, the contractor must complete and deliver the work to fulfill the terms of the contract and receive final payment.[75] Otherwise, the contractor may be liable to the government for breach.[76] In this manner, the government is able to use fixed-price contracts to place the full responsibility for performance costs under or over the firm, fixed price and resulting profit (or loss) squarely on the contractor.[77]

In assuming this responsibility, the contractor also assumes the risk of unanticipated costs and cost overruns.[78] This risk shift should, theoretically, reduce administrative burdens and motivate the contractor

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[70] *See* Comptroller General Warren to the Secretary of War, B-18974, Aug. 16, 1941, 21 Comp. Gen. 149, 151; *see also* Morton-Thiokol, Inc., ASBCA 32624, 90-3 BCA ¶ 23,207 (1990).
[71] *See* Conway-Jones, *supra* note 7, at 11.
[72] *Id*.
[73] FAR 16.202-1.
[74] *Id*.
[75] CIBINIC & NASH, *supra* note 62.
[76] *Id*.
[77] FAR 16.101(b).
[78] *See* ITT Arctic Servs., Inc. v. United States, 524 F.2d 680, 691 (Ct. Cl. 1975).

to control costs by performing diligently. However, such efficiency measures are not always enough to avoid cost overruns, especially when there are unanticipated costs.[79] Regardless, under a firm-fixed-price contract, the contractor suffers a loss if the costs are greater than the fixed price but realizes a gain (in profits) if the costs are lower than the fixed price. In contrast, the government is only on the hook for the fixed amount of money it agreed to in the contract—notwithstanding whether the work is easier or harder than anticipated.

Though such a government-favorable risk allocation regime is obviously attractive to the government, using a firm-fixed-price contract may be contrary to the government's policy on contract selection if such a contract imposes unduly high (uncontrollable and unpredictable) risks on the contractor.[80] The government's basic policy is to use the type of contract that will prompt effective contractor performance—not overwhelm the contractor or subject it to unreasonable risk.[81] After all, a contractor's failure to fulfill the terms of the contract and/or bankruptcy does not serve either party's interests.

3. *Contracting Techniques Relative to Contract Type Selection*

Whether contracting officers have broad or narrow discretion in determining which type of contract to use in any given procurement depends, in large part, upon whether the contract results from sealed bidding or negotiated procurement procedures. Sealed bidding contracts must be firm-fixed-price contracts or fixed-price contracts with economic price adjustment.[82] In contrast, contracts resulting from negotiated procurements may basically be of any type or combination of types as long as they promote government interests.[83] Therefore, while contracting officers have very little discretion in selecting the type of contract when sealed bidding is involved, they have broad discretion in making such selections in negotiated procurements.

The government's preference for sealed bidding as opposed to negotiated procurements has changed over time. Prior to 1984, sealed bidding was the preferred government procurement method. However, in 1984, the Competition in Contracting Act (CICA)[84] amended federal

[79] *See* Day v. United States, 245 U.S. 159 (1917); Phoenix Bridge Co. v. United States, 211 U.S. 188 (1908).
[80] *See* FAR 16.103; FAR 16.104.
[81] *See id.*
[82] FAR 16.102 (a).
[83] FAR 16.102 (b).
[84] Competition in Contracting Act, Pub. L. No. 98-369, 98 Stat. 1175 (1984) (generally codified as amended at 10 U.S.C. §§ 2304-2305 (2000) and 41 U.S.C. §§ 253-253a (2000)).

procurement laws and eliminated the statutory preference for sealed bidding.[85]

Accordingly, now the only time contracting officers must solicit sealed bids is if the following four conditions are met: time permits sealed bidding; price and price-related factors are the sole basis for the award; discussions concerning bids are unnecessary; and more than one bid is reasonably expected.[86] When one or more of these conditions is missing, contracting officers may use negotiated procurement procedures.[87] However, although it is not specifically proscribed, contracting officers cannot haphazardly choose one procedure over another. Rather, when given such a choice, contracting officers must select the procedure "best suited to the circumstances of the contract action and consistent with the need to fulfill the government's requirements efficiently."[88]

In the environmental remediation context, some, if not all, of the four conditions required for sealed bidding generally appear to be missing. For example, the potential danger poor performance of these services could pose to the public and the environment arguably makes price only one of many factors the contracting officer should consider in awarding such contracts. Similarly, the complexity and variable nature of state and federal environmental laws suggest discussions are necessary to ensure offerors understand compliance requirements. Therefore, negotiated procurement procedures are usually best suited to these contract actions.

Such negotiated procedures and rationale were challenged and upheld in *G.W., Inc.*[89] In that case, G.W., Inc. (GWI) protested the use of negotiated procedures by the Defense Logistics Agency (DLA) to procure hazardous waste disposal services for over fifty military installations. In the protest, GWI claimed that DLA should have asked for sealed bids instead of negotiated procedures because negotiated procedures were improper.[90] To support its position, GWI made the following assertions: (1) sealed bidding is the preferred method of procurement; (2) the disposal services solicited are not complicated or technical enough to require discussion or negotiation because the activity is "mature, highly refined, and thoroughly regulated"; (3) DLA can rely on whether offerors have the required licenses and permits, rather than requiring technical proposals, to determine whether offerors have the

[85] 10 U.S.C. § 2304; 41 U.S.C. § 253; *see also* The Saxon Corp., Comp. Gen. B-221054, Mar. 6, 1986, 86-1 CPD ¶ 225.
[86] FAR 6.401; 10 U.S.C. § 2304(a)(2)(A).
[87] 10 U.S.C. § 2304(a)(2)(B); *see also* Integrity Mgmt. Int'l, Inc., B-219998.2, Feb. 18, 1986, 1986 U.S. Comp. Gen. LEXIS 1513.
[88] FAR 6.101.
[89] B-222570, B-222,571, Aug. 26, 1986, 65 Comp. Gen. 817, 86-2 CPD ¶ 225.
[90] *Id*.

requisite technical capability and understanding of environmental laws because state and federal environmental agencies would not otherwise issue such documents; and (4) sealed bid procedures were previously used to procure these services.[91] Unconvinced by these arguments, the Comptroller General denied GWI's protest.

In its decision, the Comptroller General reinforced CICA's elimination of the past preference for sealed bidding and found that two of the four conditions required to make sealed bidding mandatory were missing.[92] First, the Comptroller General noted that state and federal environmental compliance is a complex area, subject to conflicting interpretations.[93] Therefore, it determined DLA had a legitimate need to hold discussions to determine offeror understanding of environmental regulations.[94] Second, the Comptroller General found it appropriate to base this type of award on technical *and* price factors, not just price alone, considering the danger that improper performance could pose to the public health.[95]

Given the case law in this area, it is apparent that consideration of the complexity and dangers involved in environmental remediation will often result in the use of negotiated procedures to procure environmental remediation services.[96] Unlike the statutory guidance on sealed bidding, which requires the use of fixed-type contracts,[97] the statutory guidance for negotiated procurements gives contracting officers broad discretion to use either fixed-type contracts or cost-type contracts.[98] As previously discussed, the type of contract used in a particular procurement may have a significant impact on risk allocation. Therefore, the next section will explore the manner in which contracting officers exercise their discretion to determine what type of contract is appropriate in a particular negotiated procurement.

4. *Selecting the Type of Contract for Use in Negotiated Procurements*

Government contracting officers are directed to consider a number of factors in exercising their broad discretion to select the type of contract they will use in a negotiated procurement.[99] These factors are

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[91] *Id*.
[92] *Id*. (citing The Saxon Corp., *supra* note 85).
[93] *Id*. (citing Monterey City Disposal Serv., Inc., B-218624, Sept. 3, 1985, 64 Comp. Gen. 813, 85-2 CPD ¶ 261).
[94] *Id.*
[95] *Id*.
[96] *Id.; see also* Coastal Drilling, Inc., Comp. Gen. B-285085.3, July 20, 2000, 2000 CPD ¶ 130; WRS Infrastructure & Env't, Inc., Comp. Gen. B-281222, Jan. 12, 1999, 99-1 CPD ¶ 66.
[97] FAR 16.102 (a).
[98] FAR 16.102 (b); s*ee also* 10 U.S.C. § 2306(a) (2000); 10 U.S.C. § 254(a) (2000).
[99] FAR 16.104.

designed to assist the contracting officer in selecting a contract type in accordance with the government's policy, which, as previously described, is to impose sufficient, but not unreasonably high, risks on the contractor to motivate quality performance.[100] Among other things, the contracting officer must consider the type, complexity, and urgency of the requirement, the contractor's technical capability and financial responsibility, and price and cost analysis.[101]

Though selecting the contract type is generally a matter for negotiation,[102] the government ultimately decides what type of contract it will issue. While the government ordinarily prefers fixed-price arrangements in contracting,[103] firm-fixed-price contracts are only supposed to be used when "the risk involved is minimal or can be predicted with an acceptable degree of certainty."[104] Otherwise, alternative contract types—including cost-type contracts—should be considered.[105]

The considerable number of unknowns and consequent unpredictable risks typically inherent in environmental remediation suggest that using fixed-price contracts to procure these services does not strike a fair balance between contractor motivation and reasonable risk-taking. However, there has been a shift away from cost-based contracting to fixed-price contracting—perhaps because the government has recognized that, in addition to increased risks, there are significant transaction and opportunity costs involved in cost-type contracting.[106] Therefore, the government often chooses to use fixed-price contracting, even for environmental remediation. Such risk allocation and cost-saving measures also impact the manner in which the government drafts contract specifications.

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[100] *See* FAR 16.103; Department of Defense Appropriations Act of 1988, Pub. L. No. 100-202, § 8118, 101 Stat. 1329 (1987) (stating, in pertinent part: "[n]one of the funds provided for the Department of Defense in this Act may be obligated or expended for fixed-price-type contracts in excess of $10,000,000 for the development of a major system or subsystem unless the Under Secretary of Defense for Acquisition determines, in writing, that program risk has been reduced to the extent that realistic pricing can occur, and that the contract type permits an equitable and sensible allocation of program risk between the contracting parties").

[101] FAR 16.104.

[102] FAR 16.103 (a).

[103] FAR 35.006.

[104] FAR 16.103 (b).

[105] *Id*.

[106] Ralph C. Nash & John Cibinic, *"Cost-Based" Contracting: On the Way Out?*, 12 No. 11 NASH & CIBINIC REP. ¶ 58 (1998)*; see also* Truth in Negotiations Act (TINA), 10 U.S.C. § 2306a (2000) and 41 U.S.C. § 254b (2000); Cost Accounting Standards (CAS), 41 U.S.C. § 422 (2000) and 48 C.F.R. §§ 9903-9904 (2005); Cost Principles, FAR Part 31; 10 U.S.C. § 2324 (2000) and 42 U.S.C. § 7256a (2000). These are the three major statutory provisions principally driving the time and money spent by contractors and the government to administer cost-based contracts.

B. Contract Specifications as a Risk-Shifting Mechanism

The government uses specifications in solicitations to communicate its needs. Specifications are essentially work descriptions, including statements of work, drawings, and documents. As long as the specifications allow for full and open competition[107] and only include restrictive provisions when absolutely required to satisfy minimum government interests,[108] there is some flexibility in how the government drafts them to identify its needs. Therefore, some specifications describe the work in extensive detail while others simply require a certain end result. Consequently, specifications may be characterized as design specifications, performance specifications, or a combination of the two.[109]

1. *Design Specifications*

Design specifications, like good cooking recipes, provide cradle-to-grave instructions as to the materials that should be used and the manner in which the work should be performed.[110] The government contractor does not have the discretion to deviate from design specifications.[111] Instead, the contractor must "follow them as one would a road map."[112] Accordingly, the less time and discretion the contractor is allowed, the more likely the specification is a design, rather than performance, specification.

Among other things, providing such detailed instructions allows the government to: obtain standardization, more accurately measure and ensure contractor performance, and avoid the duplication of costs when it has previously procured the same or similar services or products.[113] For example, the government has, on numerous occasions, procured contractor services to conduct environmental remediation site investigations and studies. Therefore, the manner in which these services are performed may very likely be set out in design specifications even though such specifications may not be conducive for the actual cleanup work itself—particularly if the work is complex, significantly different from project to project, and long-term.

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[107] 10 U.S.C. § 2305(a)(1)(A)(iii) (2000); 41 U.S.C. § 253a(a)(1)(c) (2000).
[108] 10 U.S.C. § 2305(a)(1)(B)(ii); 41 U.S.C. § 253a(a)(2)(B); *see also* Morse Boulger, Inc., B-224305, Dec. 24, 1986, 66 Comp. Gen. 174, 86-2 CPD ¶ 715.
[109] *See* 41 U.S.C. § 253(a)(3) (Lexis 2006); *see also* FAR 11.002(a)(2)(i).
[110] *See* Blake Constr. Co. v. United States, 987 F.2d 743, 744 (Fed. Cir. 1993); *see also* J.L. Simmons Co. v. United States, 412 F.2d 1360 (Ct. Cl. 1969).
[111] *See Blake Constr. Co.*, 987 F.2d at 745; *J.L. Simmons Co.*, 412 F.2d at 1362.
[112] *See Blake Constr. Co.*, 987 F.2d at 745.
[113] CIBINIC & NASH, *supra* note 62.

2. *Performance Specifications*

Performance specifications are the antithesis of design specifications. They "set forth an objective or standard to be achieved, and the successful bidder is expected to exercise his ingenuity in achieving that objective or standard of performance, selecting the means and assuming a corresponding responsibility for that selection."[114] In setting forth these expectations, performance specifications simply communicate what the government wants as the end result. Therefore, such specifications are supposed to describe the work in terms of "what" the required output is, rather than "how" the work is to be performed. [115]

Ideally, this "customer satisfaction approach"[116] permits contractors the flexibility to seek better ways to accomplish work during performance—not just during the proposal process—thereby benefiting both the contractor and the government.[117] Using performance specifications appears to require the ability to forecast requirements in clear, specific, and objectively measurable terms at the outset of performance.[118] Unfortunately, however, accurately making such forecasts is frequently not possible—especially when a project is complex, long-term and variable, like most environmental remedial actions.[119]

Therefore, simply using performance specifications for all aspects of all projects, irrespective of whether they are long-term or difficult in nature, arguably, often results in either the government or the contractor receiving less than the benefit of their bargain. When performance specifications are used in this manner, contractors often include contingency amounts in their prices, anticipating the possibility of difficulties and failures—often referred to as "bidding a contingency."[120] If the contractor underestimates the contingency, the government likely receives a windfall. Alternatively, if the contractor overestimates the contingency or the contingency never occurs, the contractor likely receives a windfall. Consequently, in practice, there are very few contracts that have *purely* design specifications and very few

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[114] *Id.* at 744.
[115] *See* FAR 37.602(b)(1).
[116] Steven L. Schooner, Lecture on Formation of Government Contracts, George Washington University Law School, Sept. 21, 2005 (author was in attendance).
[117] Ralph C. Nash & John Cibinic, *Postscript: Proposals and Promises* 15, No. 1 NASH & CIBINIC REP. ¶ 3 (2001).
[118] *See* Ralph C. Nash & John Cibinic, *A Chance to Fix Performance-Based Contracting*, 19 No. 4 NASH & CIBINIC REP. ¶ 18 (2005).
[119] *See* JOHN AUSINK ET AL., IMPLEMENTING PERFORMANCE-BASED SERVICES ACQUISITION (PBSA): PERSPECTIVES FROM AN AIR LOGISTICS CENTER AND A PRODUCT CENTER 16, 36-39 (RAND 2002), http://www.rand.org/publications/DB/DB388 (last visited Feb. 20, 2006).
[120] *See* Schooner, *supra* note 116.

contracts that have *purely* performance specifications. Rather, it is more common to have a combination of design and performance specifications.[121]

3. *Design and Performance Specification Risk Allocation*

When the government provides a contractor with detailed design specifications, it impliedly warrants that the specifications it has provided are suitable for their intended purpose.[122] If the specifications do not meet this suitability requirement, they are considered defective. In those cases, the government will generally be held liable for any consequent problems.[123] The mere fact that the contractor was required to examine the site or check plans does not extinguish this implied warranty. Rather, the risk regarding design specifications resides and remains, even under those circumstances, with the government. This implied warranty risk allocation is commonly known as the "Spearin Doctrine."[124]

No such implied warranty exists with regard to performance specifications. Instead, when performance specifications are used, the contractor assumes the risk. Perhaps that is why, at least in part, the procurement process has traditionally preferred the use of performance specifications over design specifications.[125]

Despite such a preference, since most government contracts contain both design and performance specifications, identifying which contract specification caused something to go wrong is usually required to determine who should bear the risk—the government or the contractor.[126] If the part of the contract that caused the contractor difficulties was part of the design specification, the government bears the risk. If, on the other hand, it was covered by a performance specification, the contractor bears the risk.

However, the government procurement risk allocation inquiry does not stop at contract type or specification. Risks are also specifically allocated by contract clauses. Therefore, the use of different contract clauses to shift performance risks is examined next.

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[121] Aleutian Constructors v. United States, 24 Cl. Ct. 372, 379 (1991); Utility Contractors, Inc. v. United States, 8 Cl. Ct. 42, 50 n. 7 (1985).
[122] Stuyvesant Dredging Co. v. United States, 834 F.2d 1576, 1582 (Fed. Cir. 1987).
[123] *See id*.
[124] United States v. Spearin, 248 U.S. 132 (1918).
[125] *See* FAR 11.101(a) (establishing that "performance-oriented" specifications are preferred over "designed-oriented" specifications in the order of preference for requirements documents)*; see also* Robert J. Wehrle-Einhorn, *Use of Performance-Based Standards in Contracting for Services*, ARMY LAW. 10 (1993); Pitney Bowes, Inc., B-233100, Feb. 15, 1989, 68 Comp. Gen. 249, 89-1 CPD ¶ 157.
[126] *See Aleutian Constructors*, 24 Cl. Ct. at 378-381 (1991).

C. Contract Clauses as a Risk-Shifting Mechanism

Using boilerplate contract clauses in government contracts is the rule, not the exception. Therefore, unless the FAR authorizes a contract clause modification or omission, the standard terms and conditions found in these clauses are non-negotiable.[127] Further, once boilerplate clauses are included in a contract, they have the effect of law because they have been promulgated.[128]

Understanding which clauses are required in a particular government contract and the impact those clauses have on risk allocation helps in determining how to approach contingencies. The FAR does not specifically address environmental remediation risks. Rather, it simply provides a general clause mandating that contractors abide by applicable federal, state and local hazardous materials laws.[129] However, a host of other, broader contract clauses may have a key impact on who bears the risk in environmental remediation contracts. This article will focus on those clauses that pertain to differing site conditions,[130] changes,[131] permits and responsibilities,[132] and indemnification.[133] Because the Differing Site Conditions clause is, perhaps, the one most tailored to address the type of issues that frequently arise in environmental remediation disputes, it will be examined first.

1. *Differing Site Conditions Clause*

The subsurface nature of most of the contaminants that are the subject of environmental cleanup projects presents one of the major risks involved in environmental remediation work. Among other things, the contaminants' latent physical condition makes it difficult to accurately estimate the extent and cost of the work required to remediate a site before the work begins. Thus, what is ultimately required to clean up a site may differ materially from what is initially expected. When this type of disparity exists, the party who has assumed the risk for remediating the site may incur phenomenal, unanticipated expenses.[134]

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[127] FAR 52.104(a) (matrix listing "required" clauses, "required-when-applicable" clauses, and "optional" clauses for each principal type and/or purpose of contract).
[128] *See* FAR Part 52.
[129] FAR 52.223-3.
[130] FAR 52.236-2.
[131] FAR 52.243-5.
[132] FAR 52.236-7.
[133] Although this article only focuses on these four types of clauses, other clauses, including suspension and delay clauses, may also have a significant impact on who bears the risk in environmental remediation contracts. *See, e.g.*, FAR 52.212-4; FAR 52.249-10.
[134] *See* Exxon Valdez, 270 F.3d 1215, 1244-46 (9th Cir. 2001).

The government has recognized that contractors are generally unwilling to assume such significant risks by bidding for and engaging in remediation work without first conducting extensive site inspections and/or padding their bids to protect themselves against potential unfavorable conditions. These exhaustive site inspections and inflated bids, however, can significantly increase prices, inconvenience, and disruption to the government. Therefore, the government often uses the "Differing Site Conditions" clause[135] to make these projects more attractive to contractors.[136] The clause's most attractive feature to contractors is that it reduces contractor risks by allowing an equitable adjustment any time the contractor encounters one of two main contingencies: Type I (subsurface or latent physical conditions differing materially from those indicated in the contract)[137] and Type II (unknown, unusual conditions not reasonably anticipated).[138]

By placing the risk of these contingencies on the government, this clause is designed to eliminate the need for contractors to inflate their bids to account for the worst possible conditions that might be encountered. When the clause works, the government benefits from more accurate bidding and less inflation for contingencies which may never occur.[139] In return, contractors benefit by being reimbursed for the cost difference between the conditions they reasonably expected to encounter and the conditions they actually encountered.[140]

The contractor in *Frank Lill & Sons, Inc.*[141] was able to use the Differing Site Conditions clause to secure such a benefit. In that case, the government awarded Frank Lill & Sons, Inc. a contract to, among other things, locate, identify, remove, and dispose of all insulating materials containing asbestos in the Central Heating Plant at Plattsburgh Air Force Base.[142] To that end, the contract specifications indicated that "some asbestos material would be encountered and there was a possibility that asbestos existed in unknown locations."[143] Though this

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[135] FAR 52.236-2.

[136] *See* FAR 37.110(e). The Differing Site Conditions clause is primarily used in construction contracts and is, therefore, only "required-when-applicable" per FAR 52.301 in fixed-price construction contracts. However, it can be used in contracts for other services when appropriate.

[137] FAR 52.236-2(a)(1)*; see also* Stuyvesant Dredging Co. v. United States, 834 F.2d 1576, 1581 (Fed. Cir. 1987) (detailing what the contractor must prove to recover for Type I differing site conditions); Foster Constr. C.A. & Williams Bros. Co. v. United States, 435 F.2d 873, 875 (Ct. Cl. 1970).

[138] FAR 52.236-2(a)(2)*; see also* Appeal of Covco Hawaii Corp., ASBCA 26901, 83-2 B.C.A. (CCH) ¶ 16,554 (1983) (detailing what the contractor must prove to recover for Type II differing site conditions).

[139] *Foster Constr. C.A. & Williams Bros. Co.*, 435 F.2d at 887.

[140] *Id*.

[141] ASBCA 35,774, 88-3 B.C.A. (CCH) ¶ 20,880 (1988).

[142] *Id*.

[143] *Id*.

contract language spurred Frank Lill & Sons to conduct a pre-performance inspection of the site, review the relevant contract documents, and ask additional questions, Frank Lill & Sons was still unable to determine the total extent of the asbestos in the plant prior to performing the contract.[144] After contract performance began, Frank Lill & Sons discovered additional asbestos under a boiler in the facility.

The board concluded that this additional asbestos constituted a latent physical condition materially different from that indicated in the contract specifications, even though the contract had provided notice of the existence of asbestos in unknown locations:

> This latent condition was not as to the existence of asbestos at the site, which the contract indicated, but as to the quantity of asbestos which required removal. This is consistent with the Differing Site Conditions Clause policy of permitting contractors to rely on contract indications unless simple inquiries might have revealed contrary conditions.[145]

Accordingly, the board determined that Frank Lill & Sons was entitled to an equitable adjustment to compensate it for the increased cost of removing the asbestos located under the boiler.[146] Likewise, the board found an equitable adjustment warranted in *D.J. Barclay & Co*.[147]

Though these cases might suggest that it is relatively easy to recover the costs of additional environmental expenses incurred during contract performance when the contract contains a Differing Site Conditions clause, such opportunities are actually quite limited. The Differing Site Conditions clause offers relief *only* when there is a material difference between the conditions causing increased costs and contractor expectations or the contractor is able to meet the "relatively heavy burden of proof" required to demonstrate that the conditions it has encountered differ materially "from the 'known' and the 'usual'"[148] and the contractor could not have reasonably anticipated or discovered such conditions prior to bidding.[149] The Changes clause may also shift the risk of increased costs to the government, but it has similar limitations.

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[144] *Id*.
[145] *Id*.
[146] *Id.*
[147] ASBCA 29005 et al., 88-2 B.C.A. (CCH) ¶ 20,741 (1988); *but see* Diamond Pacific, NASA BCA 45-0391, 92-1 B.C.A. (CCH) ¶ 24,615 (1991) (board denied contractor's differing site conditions claim because the contractor failed to conduct a pre-bid site inspection wherein it would have discovered that asbestos was likely present at the site).
[148] Charles T. Parker Constr. Co. v. United States, 433 F.2d 771, 778 (Ct. Cl. 1970).
[149] Perini Corp. v. United States, 381 F.2d 403 (Ct. Cl. 1967); James E. McFadden, Inc., ASBCA 19921, 76-2 B.C.A. (CCH) ¶ 11,983 (1976).

2. *Changes Clause*

Though it is not necessarily required,[150] most government contracts include a Changes clause.[151] The Changes clause provides the government with the unilateral right to order changes during contract performance and the contractor with the right to an equitable adjustment if such changes increase performance costs or time.[152] A contracting officer's orders (oral or written)[153] or conduct (if considered a "constructive change")[154] can result in such compensable changes.

Orders that change the method of performance of the work and increase costs are an example of the type of oral or written orders that trigger equitable adjustments under the Changes clause. Such orders were at issue in *Active Fire Sprinkler Corp*.,[155] where the contracting officer ordered the Active Fire Sprinkler Corp. to make changes mandated by the EPA. While the contractor usually assumes the risk for any increased costs of complying with environmental regulations that change during contract performance,[156] the *Active Fire Sprinkler Corp.* board determined that the additional costs incurred in that case were due to the contracting officer's imposition of special procedures and precautions that went above and beyond the changes required by the environmental regulations.[157] Therefore, the Active Fire Sprinkler Corp. was entitled to an equitable adjustment.[158]

The boards have also frequently found that contractors have the right to an equitable adjustment when there has been a "constructive change." A constructive change is a change that causes the contractor to perform different work than is otherwise contractually required or formally ordered.[159] A constructive change may be triggered by government fault and/or the contractor's reasonable perception that such

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[150] *See* FAR 52.301 (matrix denoting whether or not clauses are required for each principal type and/or purpose of contract).
[151] FAR 52.243-5.
[152] CIBINIC & NASH, *supra* note 113, at 381*; see also* FAR 52.243-1, *Alternate I* (changes clause for fixed-price services contracts where no supplies are furnished).
[153] *See* The Lens Co. & Assocs. v. United States, 385 F.2d 438 (Ct. Cl. 1967).
[154] *See* Indus. Research Assocs., Inc., DCCAB WB-5, 68-1 B.C.A. (CCH) ¶ 7069, at 32,685-86 (1968) (describing the elements of such changes).
[155] GSBCA 5461, 85-1 B.C.A. (CCH) ¶ 17,868 (1984).
[156] *See* Overhead Elec. Co., ASBCA 25,656, 85-2 B.C.A. (CCH) ¶ 18,026 (1985) (placing the risk of complying with changes in environmental regulations for disposal of toxic or hazardous substances on the contractor)*; see also Warner Elec., Inc.*, VABCA 2106, 85-2 B.C.A. (CCH) ¶ 18,131 (1985) (concluding that the risk of complying with changes in environmental regulations for polychlorinated biphenyl (PCB) removal was assumed by the contractor).
[157] Active Fire Sprinkler Corp*.,* 85-1 B.C.A. (CCH) ¶ 17,868.
[158] *Id*.
[159] Indus. Research Assocs., Inc., 68-1 B.C.A. (CCH) ¶ 7069 at 32,686.

work was informally ordered.[160] Constructive changes typically fall into one of four categories: disagreements over contract requirements; defective specifications and government nondisclosure; acceleration; and government failure to cooperate.[161]

Long Services Corp.[162] provides an example of how the first category—disagreements over contract requirements—can result in a constructive change. The contract requirements in dispute in *Long Services Corp.*, like those disputed in *Active Fire Sprinkler Corp.*, involved asbestos removal. However, in *Long Services Corp.*, the government and Long Services disagreed as to what method Long Services was required to use to remove the asbestos.[163] Because it disagreed with Long Services' interpretation of the contract requirements, the government refused to allow Long Services to use the less expensive "glove bag" method to remove the asbestos in question.[164] Determining that Long Services' proposed glove bag method was industry-approved, legal, and contract compliant, the Board found that such a restriction on Long Services' method choice was improper.[165] Therefore, because this improper restriction increased Long Services' costs, the board considered it a constructive change, entitling Long Services to an equitable adjustment.[166]

In contrast, the boards have found equitable adjustments inappropriate in cases where the contractor's negligence has caused the "change" and, subsequently, increased costs. Such was the case in *D.J. Barclay & Co.*,[167] where D.J. Barclay failed to properly protect otherwise intact, but exposed, asbestos insulation from sandblasting, causing the insulation to be damaged to the extent that it had to be removed and replaced at additional expense.[168] Because D.J. Barclay's own negligent acts caused the changes that increased the cost of its work, it assumed the risk of those increased costs. Similarly, the contractor may be required to assume the risk of increased costs under the "Permits and Responsibilities" clause.[169]

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[160] *Id*.
[161] CIBINIC & NASH, *supra* note 62, at 434.
[162] PSBCA 1606, 87-3 B.C.A. (CCH) ¶ 20,109 (1987), *aff'd on recons.*, 88-1 B.C.A. (CCH) ¶ 20,270 (1987).
[163] *Id*.
[164] *Id*.
[165] *Id*. (recognizing that improperly restricting a contractor's choice of methods constitutes a constructive change if it increases the contractor's costs).
[166] *Id; see also* Bill Wright Painting & Decorating, Inc., ASBCA 33343, 87-1 B.C.A. (CCH) ¶ 19,666 (1987); Otto Randolph, Inc., ASBCA 11539, 66-2 B.C.A. (CCH) ¶ 5928 (1966).
[167] 88-2 B.C.A. (CCH) ¶ 20,741 (1988)*; see also* McCullough Eng'g & Contracting, VABCA 3088, 91-3 B.C.A. (CCH) ¶ 24,056 (1991) (finding no equitable adjustment for increased cost of PCB spill clean up where contractor essentially caused the spill).
[168] D.J. Barclay, 88-2 B.C.A. (CCH) ¶ 20,741.
[169] FAR 52.236-7.

3. *Permits and Responsibilities Clause*

The Permits and Responsibilities Clause imposes upon the contractor the responsibility for "obtaining necessary licenses and permits, and for complying with Federal, state, and municipal laws and regulations applicable to the performance of the work."[170] This compliance requirement extends to post-award changes to laws and regulations in existence at the time of award as well as to laws, codes, or regulations passed subsequent to award.[171] In addition, this clause makes the contractor responsible for "all damages to persons or property that occur as a result of the Contractor's fault or negligence," and requires that the contractor "shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others."[172]

The Permits and Responsibilities clause must be included in all fixed-price construction contracts, cost-reimbursement construction contracts, and, when applicable, fixed-price dismantling, demolition, or removal of improvements contracts.[173] Environmental remediation is usually not the focus of these contracts. However, it may become a crucial component of performance—particularly when contaminated soil cleanup or disposal is required for construction.

In *Shirley Construction Corp.*,[174] for example, Shirley Construction had to dispose of such contaminated soil as part of its contract with the Navy to construct a permanent building on a former fuel depot site in Norfolk, Virginia. Because the soil materials on the site were considered petroleum-contaminated industrial waste, they could not be used for filling or backfilling. Therefore, the contract required that such soil materials be taken to an EPA-approved Industrial Waste Site.

At the time of contract award, Virginia state regulations required the excavated industrial waste soil to be sampled only once to ascertain the soil's level of contamination. This sampling requirement was designed to help determine the type of landfill appropriate for its disposal. However, approximately eight months later, when Shirley Construction consulted its potential contaminated soil disposal sites, it discovered that Virginia had issued new state regulations requiring the soil to be sampled every 100 cubic yards. The new state regulations necessitated soil tests in excess of the one Shirley Construction contemplated when it bid the contract.

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[170] *Id*.
[171] *See* Gulf Contracting, Inc., ASBCA 27221 et al., 84-2 B.C.A. (CCH) ¶ 17,472 (1984); Norair Eng'g Corp., ENGBCA 3375, 73-1 B.C.A. (CCH) ¶ 9955 (1972); Elecs. & Missile Facilities, Inc., ASBCA 8627, 63 B.C.A. 3979 (CCH) ¶ 3979 (1963).
[172] FAR 52.236-7.
[173] FAR 36.507*; see also* FAR 52.301.
[174] ASBCA 42954, 92-1 B.C.A. (CCH) ¶ 24,563 (1991).

Since it incurred an added $9,725.41 in complying with Virginia's revised regulations, Shirley Construction requested an equitable adjustment for that amount. However, the board found that Shirley Construction was responsible for the additional compliance costs under the contract's Permits and Responsibilities clause.[175] Therefore, the board denied Shirley Construction's equitable adjustment request.[176]

As this case illustrates, the Permits and Responsibilities clause is a powerful risk-shifting mechanism. In addition to imposing all known, necessary expenses on the contractor, it also puts the contractor at risk for unexpected compliance costs. Since the contractor, arguably, has no way to properly account for such possibilities in its estimates,[177] whether such risks should be shared, rather than unilaterally assumed, has been a matter of much debate for over a decade.[178] Equally, if not more, debatable is the use of indemnification clauses to reduce or shift environmental remediation contract risks.

4. *Indemnification Clause*

Indemnification clauses, uniquely tailored to cover specific performance contingencies, may be used to shift the entire risk of loss from one party, who would otherwise be legally liable, to another.[179] Claims for indemnification will be strictly construed to ensure the parties are not held to obligations they never intended to assume.[180] Therefore, indemnification clauses must explicitly describe the terms of the indemnification agreement to be enforceable.[181]

The government successfully used such an indemnification clause to shift environmental remediation risks to the contractor in *Eason & Smith Enterprise, Inc*.[182] In that case, Eason & Smith Enterprise was awarded five government contracts to transport hazardous waste for disposal. Pursuant to those contracts, Eason & Smith transported several hundred thousand pounds of hazardous waste from various military bases to the Diaz Refinery. After each shipment, the Diaz Refinery certified it was handling the waste in accordance with the law. However, some time after Eason & Smith Enterprise made its last shipment, the Arkansas Department of Pollution Control and Ecology (ADPC&E) determined

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[175] *Id*.
[176] *Id*.
[177] *See* Ralph C. Nash & John Cibinic, *Construction Contract Clauses: Time for a Reevaluation?*, 7 No. 9 NASH & CIBINIC REP. ¶ 51 (1993).
[178] *See id*.
[179] American Transtech Inc. v. U.S. Trust Corp., 933 F. Supp. 1193, at 28-29 (S.D.N.Y. 1996)*; see also* United States v. Farr & Co., 342 F.2d 383, 386 (2d Cir. 1965); Rosado v. Proctor & Schwartz, Inc., 66 N.Y.2d 21, 24 (N.Y. 1985).
[180] *See* Monaghan v. SZS 33 Assocs., 1995 U.S. Dist. LEXIS 2735 (S.D.N.Y. 1995).
[181] Haynes v. Kleinewefers & Lembo Corp., 921 F.2d 453, 456 (2d Cir. 1990).
[182] ASBCA 47776, 97-2 B.C.A. (CCH) ¶ 28998 (1997).

that Diaz Refinery had improperly disposed of the waste. Consequently, the Diaz Refinery ceased operations and the ADPC&E identified the government as a potentially responsible party (PRP).

The government paid its $45,814.47 PRP share of the remediation costs and then it to recoup that amount from Eason & Smith Enterprise based on the indemnification clause contained in each of the five government-Eason & Smith Enterprise contracts.[183] The indemnification clause in those contracts shifted the risk of such remediation costs to Eason & Smith Enterprise.[184] Therefore, the Board determined that Eason & Smith Enterprise, not the government, was responsible for the remediation costs caused by Diaz Refinery's improper disposal methods.[185]

Contractor attempts to use this indemnification approach to shift risks are, arguably, much less likely to be successful—especially if contractors are basing their arguments on wartime contract indemnification clauses.[186] Contrary to the broad, apparently contractor-favorable language usually characteristic of the clauses at issue in these cases, the courts have often adopted the government's narrow interpretation of this language, thereby finding that the risk of unforeseen costs falls on the contractor, not the government.[187] Faced with limited success in employing these and the other contractual methods mentioned above, contractors frequently turn to environmental insurance to protect themselves against the risks inherent in environmental remediation contracts.

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[183] *Id*.

[184] *Id*. The pertinent part of the clause was as follows: "Upon receipt/removal of items from the various Government installations the contractor assumes accountability, physical custody and full responsibility for such items. The Government assumes no liability for any damage to . . . any other person . . . arising from or incident to the processing, transporting, disposal, or any subsequent operation performed upon . . . any component . . . of this item . . . . The contractor agrees to hold the Government harmless and indemnify the Government for any and all costs . . . incident to the processing, transporting and disposal of any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, material or substance, whether intentional or accidental." *Id.*

[185] *Id*.

[186] *See* Randall J. Bunn, *Contractor Recovery for Current Environmental Cleanup Costs Under World War II-Era Government Contract Indemnification Clauses*, 41 A.F. L. REV. 163, 179 (1997) (detailing WWII indemnification clauses and the obstacles those clauses pose for contractor recovery); Kenneth M. Theurer, *Sharing the Burden: Allocating the Risk of CERCLA Cleanup Costs*, 50 A.F. L. REV. 65 (2001) (analyzing Vietnam Era indemnification clauses and the difficulties those clauses present concerning contractor recovery); Patrick Edward Tolan, Jr., *Environmental Liability under Public Law 85-804: Keeping the Ordinary Out of Extraordinary Contractor Relief*, 32 PUB. CON. L.J. 215 (2003) (examining the limited scope of Public Law 85-804 as it relates to contractor recovery).

[187] *See* United States v. Vertac Chemical Corp., 46 F.3d 803 (8th Cir. 1995); Hercules, Inc. v. United States, 24 F.3d 188 (Fed. Cir. 1994).

IV. ENVIRONMENTAL INSURANCE AS A RISK-SHIFTING/REDUCTION METHOD

Since its inception in 1979,[188] environmental insurance coverage has expanded and changed rapidly—particularly within the last ten years.[189] Market forces, political pressure, and the economy have often played a pivotal role in triggering such changes.[190] For example, between 1996 and 1999, when the insurance market was "soft," environmental insurance carriers responded by altering their policies to include: broader and more flexible coverage; higher maximum dollar coverage limits; longer policy periods; and lower product costs.[191] Conversely, when the market became "hard" again, between 1999 and 2002, insurance carriers increased premiums and decreased carrier capacity.[192]

Despite the arguably fickle nature of the environmental insurance market, carefully negotiated environmental insurance policies may benefit both government contractors and the government. Among other things, these policies allow government contractors to transfer risks and uncertainties to third-party insurers.[193] Accordingly, if unforeseen conditions arise, such policies provide an additional funding source to address them. As a result, contractors can take on a greater amount of risk at a reduced cost to the government. Therefore, although such products are not perfect, they can offer another effective risk allocation tool—under the right circumstances. Whether the "right" circumstances

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[188] *See* Janice E. Falini, *Using Environmental Insurance to Manage Risk Encountered in Non-Traditional Transactions*, 14 VILL. ENVTL. L.J. 95 (2003).

[189] *See* KRISTEN R. YOUNT & PETER B. MEYER, NORTHERN KENTUCKY UNIVERSITY & UNIVERSITY OF LOUISVILLE, MODELS OF GOVERNMENT-LED BROWNFIELD INSURANCE PROGRAMS (2002) [hereinafter YOUNT & MEYER I], http://www.epa.gov/brownfields/pdf/nku2002.pdf (last visited Feb. 20, 2006).

[190] *See* Anna Amarandos & Diana Strauss, *Environmental Insurance as a Risk Management Tool*, 15 NAT. RESOURCES & ENV'T 88 (2000).

[191] *See* KRISTEN R. YOUNT, NORTHERN KENTUCKY UNIVERSITY, ENVIRONMENTAL INSURANCE PRODUCTS AVAILABLE FOR BROWNFIELDS REDEVELOPMENT 2 (2000), http://www.epa.gov/swerosps/bf/pdf/insrep99.pdf (last visited Feb. 20, 2006). A "soft" insurance market is considered a "buyer's market," characterized by notable carrier-carrier competition, low premiums, and increased insurer capacity.

[192] *See* YOUNT & MEYER I, *supra* note 189, at 27 (noting that from 1999-2002, insurers incurred losses from environmental claims due, at least to some extent, to the newness of the policies and limited claims experience upon which to base rate models, causing some insurers to incur losses because they undercharged for policies and overlooked site assessment and remediation monitoring).

[193] *See* Chris A. Mattison & Edward J. Widmann, *Environmental Insurance: An Introduction for the Environmental Attorney and Risk Manager*, 30 ELR 10365 (2000); *see also* US Army Environmental Center (USAEC), PBC FAQ, http://aec.army.mil/usaec/cleanup/pbc02a.html (last visited Feb. 20, 2006).

exist depends, in large part, upon the type of insurance policies available to address particular site risks.[194]

Given the unique nature and complexities of most remediation sites, boilerplate insurance policies generally provide insufficient coverage to effectively address such risks.[195] Rather, to meet government and contractor needs, the insurance coverage must be specifically tailored to accommodate each individual remediation project. Several different types of environmental insurance are available, with an almost infinite variation in what can be offered in terms of the precise scope of coverage, limitations, and exclusions. This section explores the different types of environmental insurance policies most relevant to remediation contracts as well as the general scope, limitations and exclusions characteristic of each type of coverage. The section concludes with a discussion of the problematic aspects that may preclude using environmental insurance as an effective risk-management tool for remediation projects.

A. Types of Environmental Insurance Coverage

A limited number of companies specialize in the environmental insurance niche market, including AIG, XL, and Zurich.[196] Each company's policy lengths, limits, and underwriting approach vary. Accordingly, some carriers may waive exclusions or add coverages, while others may not. Further, if a policy is considered too risky for a carrier, it may not be offered to an applicant at all.[197] Therefore, like all risk management tools, environmental insurance has positive aspects (i.e., certainty) and negative aspects (i.e., coverage limitations).

Regardless, all of these companies advertise several different types of environmental insurance coverage. Each type covers certain categories of risk. Cleanup Cost Cap policies, Pollution Liability policies, and combined Cleanup Cost Cap and Pollution Liability policies are the three primary types of policies used to cover remediation risks and liabilities.[198] Other insurance policies available to cover such risks

[194] *See* YOUNT, *supra* note 191, at 15. Other factors to consider in determining whether the "right" circumstances exist include the policy's dollar and time limits on claims, site assessment requirements, and cost.
[195] *See* Hart, *supra* note 46.
[196] Mattison & Widmann, *supra* note 193; *see also* YOUNT, *supra* note 191.
[197] *See* YOUNT, *supra* note 191, at 15 (citing an example where an insurance carrier refused to provide coverage in a situation involving contaminated well-water used for drinking because claims were highly probable and, therefore, the carrier considered such coverage too risky).
[198] ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL INSURANCE POLICY COVERAGE AND TERMS 1 [hereinafter COVERAGE AND TERMS] (2005), http://www.epa.gov/brownfields/insurance/ei_insurance_coverage_012405.pdf (providing a chart

and liabilities include Finite Risk, Contractor's Pollution Liability, and Errors and Omissions policies.[199]

1. *Cleanup Cost Cap Policies*

Cleanup Cost Cap (also commonly referred to as Remediation Stop Loss) insurance policies protect the insured against cost overruns.[200] Cost overruns occur when actual cleanup costs exceed estimated cleanup costs during the planned remediation of a specific site. Under a Cleanup Cost Cap policy, the insurance carrier pays for such costs (up to the policy limits) once they exceed the amount of money the insured party has paid for the initial projected cleanup (as approved by the insurance carrier's underwriter) plus a self-insured retention ("SIR").[201]

The SIR basically functions as a buffer for insurance carriers, similar to a deductible. As such, it is typically calculated as a percentage (generally five to ten percent)[202] of the estimated cleanup costs. Consequently, a Cleanup Cost Cap policy for a $1 million remediation with a 10% SIR will not start paying for costs until the insured has expended $1.1 million—the estimated costs plus a $100,000 SIR.[203] Therefore, if costs never go above the projected cleanup costs and SIR baseline, the carrier never incurs any obligations because the insured is responsible for those costs.

a. Scope

Although specific coverages may vary—depending largely upon the individual carrier and the intricacies of the project—Cleanup Cost Cap policies offer an industry-wide, common core of coverages. Such coverages include costs caused by the following: additional or higher concentrations of "known" contaminants; new or "unknown" contaminants; regulatory changes; and/or project delays caused by

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identifying policy type, targeted policy holders, coverage explanations, and key exclusions) (last visited Feb. 20, 2006).

[199] *Id*. at 1-4*; see also* Mattison & Widmann, *supra* note 193. Transporter Insurance policies, Storage Tank Pollution Liability policies, and Closure/Post-Closure policies are also available. While some components of each of these policies will be discussed in the context of the primary policies listed in the text, they generally play a smaller role in providing protection against remediation risks. Therefore, individual treatment of each of these policies is beyond the scope of this thesis.

[200] Mattison & Widmann, *supra* note 193, at 16.

[201] *Id.; see also* YOUNT & MEYER I, *supra* note 189, at 11.

[202] *See* Mattison & Widmann, *supra* note 193*; see also* Amarandos & Strauss, *supra* note 190, at 90.

[203] YOUNT & MEYER I, *supra* note 189, at 11*; see also* YOUNT, *supra* note 191, at 16 (providing a similar example).

unexpected contamination.[204] Additionally, most Cleanup Cost Cap policies cover the costs of cleanup "at, adjacent to, or emanating from the defined remediation site location"[205] and terminate once the cleanup is complete and completion is certified—generally, via a "No Further Action" letter.[206]

b. Exclusions

Cleanup Cost Cap policies usually specify a number of coverage exclusions. Common exclusions include costs resulting from bodily injury, property damage, unwarranted contractor delays, unapproved cleanup plan changes, radioactive matter, asbestos, and regulator-imposed fines and penalties.[207] Long-term operations and maintenance costs are also typically excluded.[208] Rounding out the major categories of costs generally not covered under Cleanup Cost Cap policies are legal defense (associated with unanticipated remediation) and negotiation expenses—though these two categories are not targeted for exclusion as consistently as costs stemming from the other contingencies mentioned.[209]

2. *Pollution Liability Policies*

Pollution Liability is the second major category of insurance policies highly relevant to remediation contracts. Though these policies may be purchased alone, they are frequently purchased alongside or in stages with Cleanup Cost Cap policies.[210] While any of these purchasing methods may be effective for shifting risks to the insurer, initiating a Pollution Liability policy after a Cleanup Cost Cap policy term ends can

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[204] *Id.; see also* Mattison & Widmann, *supra* note 193*;* Amarandos & Strauss, *supra* note 190, at 89-90.

[205] Amarandos & Strauss, *supra* note 190, at 89.

[206] *See* Mattison & Widmann, *supra* note 193; OADUSD (Environmental Security), USING ENVIRONMENTAL INSURANCE IN DOD PROPERTY TRANSFERS: A NEW TOOL FOR MANAGING CLEANUP RISK 2 [hereinafter OADUSD] (Apr. 2001), https://www.denix.osd.mil/denix/Public/Library/Cleanup/CleanupOfc/Documents/LUCs/brac_ei_factsheet.pdf (last visited Feb. 20, 2006).

[207] *See* Mattison & Widmann, *supra* note 193; YOUNT & MEYER I, *supra* note 189, at 11.

[208] YOUNT & MEYER I, *supra* note 189, at 11 (citing pumping and treating groundwater over a period of years as an example of such uncovered long-term operation and maintenance costs).

[209] *See* YOUNT, *supra* note 191, at 17 (providing a table detailing five insurance carrier inputs regarding the coverages offered by their own company and four insurance broker inputs regarding coverages *most often* offered by the various carriers they use).

[210] *See id*. at 26 n.8*; see also* OADUSD, *supra* note 206 (offering examples of three cleanup locations where combination Cleanup Cost Cap/Pollution Liability policies have been purchased to insure against unforeseen environmental conditions: the Fleet Industrial Supply Center, Oakland, California; Lowry Air Force Base, Denver, Colorado; and the U.S. Army Research Laboratory, Watertown, Massachusetts).

be a particularly effective approach to protect the insured post-remediation.

a. Scope

Like the scope of coverages in other policies offered in the environmental insurance industry, the scope of Pollution Liability coverages has changed dramatically in the past decade. Now, most pollution liability policies offer on-site and off-site liability coverage[211] for claims arising from the discovery of previously unknown contamination (outside the scope of the approved remedial action plan), contamination caused by ongoing operations (released during the policy period), bodily injury (sickness, disease, mental anguish, shock, or death) or property damage (physical injury to or destruction of tangible property, including the loss of such property's use, resulting from pollution conditions).[212] Additionally, legal defense and "re-opener" costs are frequently covered.[213] If such coverages still do not afford enough protection, the insured can also generally add (for a higher premium) coverage for risks related to hazardous substances transportation and non-owned disposal sites, as well as business interruptions and diminution of property value due to newfound contamination.[214]

b. Exclusions

Pollution liability policies generally include a host of exclusionary provisions. While variations exist among carriers, such provisions typically exclude losses arising from known pollution

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[211] YOUNT, *supra* note 191, at 26 (defining the term "onsite" as "property designated in an insurance policy" and the term "offsite" as "locations beyond the boundaries of the insured property such as nearby parcels where pollution has migrated, disposal sites, and properties damaged during transportation of contaminants").

[212] *See, e.g.*, XL ENVIRONMENTAL, INC., GREENWICH INSURANCE COMPANY STAMFORD, CONNECTICUT GENERAL CONTRACTOR'S POLLUTION LEGAL LIABILITY POLICY, http://www.ecsinc.com/forms/pdf/GIC-gcplcp.pdf (specimen pollution liability policy) (last visited Feb. 20, 2006).

[213] *See id*. (providing a typical example of the language used in policies to cover legal defense costs in that the carrier expressly acknowledges that it has a right and duty to defend the insured, but that right and duty only extend to the applicable policy limits); YOUNT, *supra* note 191, at 27 (explaining that "re-opener" coverage insures against additional remediation costs imposed by regulators or the law after an agency re-opens a cleanup, including situations where the property's use has been modified or environmental regulations now mandate more stringent cleanup levels than those used in the initial remediation).

[214] *See* ZURICH IN NORTH AMERICA, ENVIRONMENTAL—CONTRACTOR'S POLLUTION LIABILITY, http://www.zurichna.com/zus/zsource.nsf/display?openform&id=384 (last visited Feb. 20, 2006); Amarandos & Strauss, *supra* note 190, at 89.

conditions or contamination in existence prior to the inception of the policy; contractual liability; and intentional wrongful acts or noncompliance with regulatory agency orders and directives.[215] Some policies also expressly bar coverage for specific pollutants, such as asbestos, radioactive matter (i.e., radon), and lead paint.[216] Others exclude underground storage tanks—though most offer separate storage tank liability insurance.[217]

3. *Finite Risk Policies*

Finite Risk policies are a variation of Cleanup Cost Cap policies. The distinguishing factor between the two is that Finite Risk policies serve as a combination insurance/investment vehicle whereas Cleanup Cost Cap policies generally just provide insurance.[218] To take advantage of the Finite Risk investment component, insurance carriers usually require any insured seeking this type of coverage to pay the carrier the entire amount of the estimated cleanup costs, plus the Cleanup Cost Cap policy SIR, at the outset of the program.[219]

Once those costs are paid, the insurance carrier caps the insured's remediation costs at the amount of the deposited funds and invests those funds into an account. Though most of the account is typically used to pay cleanup costs and insurance carrier premiums, the insured and the insurance carrier will "share" any profits (earned on investment of the cleanup funds) remaining in the account at the end of the policy term.[220] If, however, remediation costs exceed the estimated cost of cleanup and the SIR, there are no profits and the insurance carrier must pay the excess costs.

Insurance carriers assume the investment and timing risks of these policies.[221] Therefore, the Finite Risk approach is usually only

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[215] *See, e.g.*, XL ENVIRONMENTAL, INC., *supra* note 212.

[216] *See id.; see also* Mattison & Widmann, *supra* note 193; YOUNT, *supra* note 191, at 27; *but see* Zurich in North America, *supra* note 214 (indicating that Zurich's Pollution Liability policies have "no exclusions for asbestos, lead, or radioactive matter").

[217] Amarandos & Strauss, *supra* note 190, at 90.

[218] *See* Hart, *supra* note 46.

[219] *Id.; see also* YOUNT, *supra* note 191, at 21.

[220] YOUNT, *supra* note 191, at 22 (suggesting that the insurer usually receives a greater share of the profits because the insurer keeps the difference between the rate on its investment vehicles and the much lower contractually-defined rate applicable to the insured).

[221] *See* COVERAGE AND TERMS, *supra* note 198, at 4*; see also* YOUNT, *supra* note 191, at 22 (explaining that "[t]he timing risk refers to the possibility that the cleanup costs will be paid out faster than estimated in the remediation plan. If this happens, the insurer will have less time to earn investment income on the funds it is holding and thus will earn less on the project than anticipated, even if there are no cost overruns" and "[t]he investment risk refers to the chance that the insurer will not be able to realize the investment return that it was expecting.").

appropriate for projects where cleanup cost estimates are high, remediation is expected to take at least five years, and extensive site assessments have been conducted.[222] Otherwise, insurance carriers are not likely to realize enough investment income over time to make offering these policies worthwhile.

4. *Contractor's Pollution Liability Policies*

Contractor's Pollution Liability policies are specifically designed to cover risks encountered by contractors handling remediation, demolition, transportation, and disposal of hazardous materials. To that end, they insure such contractors against third-party environmental cleanup, bodily injury, and property damage claims stemming from covered contracting operations rendered by the insured on the property.[223] Additionally, these policies provide protection for pollution arising out of professional services performed by the contractor.[224]

These policies are similar to general Pollution Liability policies in many respects. In addition to the environmental cleanup, bodily injury, and property damages coverages mentioned above, both also extend coverage to protect the insured against on and off-site cleanup costs as well as defense costs.[225] Likewise, both types of policies often provide the same or comparable exclusions. However, unlike the general Pollution Liability policies,[226] Contractor's Pollution Liability policies are typically available on an occurrence as well as a claims-made basis[227] and are frequently offered in conjunction with Errors and Omissions policies.[228]

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[222] *See* ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL INSURANCE AND RISK MANAGEMENT TOOLS IN BROWNFIELDS CLEANUP AND REDEVELOPMENT 16, http://www.epa.gov/brownfields/insurance/onlince_insurance_021005.pdf [hereinafter BROWNFIELDS] (last visited Feb. 20, 2006)*; see also* YOUNT & MEYER I, *supra* note 189, at 12 (providing the same criteria for Brownfield's, which are similar to the cleanup projects described here).

[223] *See* COVERAGE AND TERMS, *supra* note 198, at 1.

[224] *Id.*

[225] *Id*.

[226] *See* Amarandos & Strauss, *supra* note 190, at 89 (explaining that Pollution Liability policies are claims-made policies, which do not cover pollution conditions unless they are discovered and reported during the policy period).

[227] *See, e.g.*, XL ENVIRONMENTAL, INC., *supra* note 212.

[228] *See, e.g.*, Zurich in North America, *Environmental – Professional Environmental Consultant's Liability*, http://www.zurichna.com/zus/zsource.nsf/display?openform&id=308&changemenu=No (outlining the coverages available in one of Zurich's combination Contractor's Pollution Liability/Errors and Omissions policies) (last visited Feb. 20, 2006)*; see also* COVERAGE AND TERMS, *supra* note 198, at 1 n.14.

5. *Errors and Omissions Policies*

Errors and Omissions policies (also commonly referred to as Professional Liability policies) cover damages (including pollution liability) caused by any acts, errors, or omissions attributable to the insured while the insured is performing professional services.[229] Such mistakes or negligent acts can be relatively straightforward, like a failure to detect contamination during a Phase I or Phase II audit, or, ostensibly, more complicated, like the negligent design of a remedial system.[230] Regardless, the scope of the covered professional services must be carefully defined because acts, errors, or omissions beyond the scope of defined services are not protected.[231]

B. Problematic Aspects and Drawbacks

While environmental insurance may appear to be an ideal risk-shifting option, it is neither a fail-safe solution nor appropriate for all cleanup projects. Therefore, parties to remediation contracts must thoughtfully evaluate the relevant drawbacks of environmental insurance on a case-by-case basis to determine whether such an approach will effectively shift risks in any given case.[232] Once the decision is made to pursue environmental insurance as a risk-shifting measure, the parties must navigate a virtual maze of potential pitfalls to ensure the individual policy purchased for a particular project is, in fact, tailored to provide the necessary protection for that project. Potential drawbacks and pitfalls frequently characteristic of environmental insurance policies involve issues related to the completeness and availability of coverage, as well as whether or not a claim, once made, will actually be timely paid.

1. *Completeness of Coverage*

The completeness of environmental insurance coverage hinges, in large part, upon the policy's "trigger language"—the precise terms used to

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[229] *See* YOUNT & MEYER I, *supra* note 189, at 13.

[230] *See* COVERAGE AND TERMS, *supra* note 198, at 1 (categorizing these examples as events that fall under the "Coverage Explanation" section of the chart and noting that, similar to Contractor's Pollution Liability policies, these policies are offered on an occurrence or claims-made basis).

[231] *See, e.g.*, TerraMatrix v. U.S. Fire Ins. Co., 939 P.2d 483 (Colo. App. 1997) (concluding that ammonia vapors from a printer were not covered under the insured's professional liability policy because they were not caused by a "professional service," as that term was defined in the policy).

[232] *See* Mattison & Widmann, *supra* note 193.

signal what is covered in a policy.[233] Therefore, policyholders must thoroughly review and analyze such language to ensure it triggers the intended policy coverage for risks. Retaining a qualified professional consultant who can fully appreciate the subtle nuances of such language—even when it is broad enough to create the illusion that uncovered contingencies are covered—may be required to avoid policy interpretation pitfalls and to negotiate appropriate modifications to policy terms, if necessary to protect the insured's interests.[234]

It is often difficult to discern the extent, if any, to which terms susceptible to a number of plausible, diverse meanings trigger coverage. Therefore, such terms commonly create policy interpretation pitfalls—especially for the inexperienced and unwary. Terms that frequently fall into this category include claims,[235] cleanup costs,[236] and legal expenses.[237]

2. *Availability of Coverage*

Given its perceived risk-shifting benefits, the government frequently requires contractors to obtain environmental insurance for remediation projects.[238] When appropriate, the government may even pay

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[233] *See* Steven L. Humphreys, *Getting the Deal Done: A Survival Guide to Environmental Problem Solving in Brownfields Transactions*, 11 FORDHAM ENVTL. LAW J. 799, 838-42 (2000).

[234] *See* Mattison & Widmann, *supra* note 193; *Reconsidering Environmental Insurance: A Maturing Market?*, MONTHLY UPDATE (Goodwin/Proctor LLP), June 2002, at 2.

[235] *See* Amarandos & Strauss, *supra* note 190, at 91 (advising policyholders that a narrow definition of the word "claim," especially one that *only* covers formal lawsuits, is a pitfall to avoid, given that policyholders are increasingly facing administrative actions rather than formal legal actions)*; see, e.g.,* County of Broome v. Aetna Cas. & Sur. Co., 540 N.Y.S.2d 620 (A.D. 3d Dep't 1989) (holding that coverage did not extend to a DEC administrative proceeding against the policyholder because it was not a "suit" seeking "damages").

[236] *See* Mattison & Widmann, *supra* note 193 (noting that policies that do not include both pre-cleanup site assessment and post-cleanup monitoring costs in their definition of "cleanup costs" present a pitfall for policyholders because they may result in significant insurance gaps); YOUNT, *supra* note 191, at 18, 30 (tables showing variations in carrier definitions of "remediation costs" in Cleanup Cost Cap and Pollution Liability policies)*; see also* Humphreys, *supra* note 233, at 839 (identifying, as another potential pitfall, definitions of cleanup costs that are limited to costs the insured is legally obligated to incur since such definitions would exclude coverage for cleanups performed to avoid future liability because liability does not currently exist as well as cleanups in response to affirmative orders or directives).

[237] *See* Amarandos & Strauss, *supra* note 190, at 91 (discussing some of the pitfalls related to "legal expenses" coverage, including language that limits the carrier's obligation to defend; caps such costs; and directs that such expenses be applied against overall policy limits, thereby depleting coverage for other losses).

[238] *See* USAEC, *supra* note 193, at 4 (stating that the Army generally requires contractors to obtain insurance to cover 100 to 150% of the total contract cost)*; see also* AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE), PERFORMANCE BASED CONTRACTING, FREQUENTLY ASKED QUESTIONS ABOUT INSURANCE 9 (2005) [hereinafter

the premiums for such insurance[239]—even though the government is self-insured and, thus, does not need to purchase insurance itself.[240] However, purchasing affordable coverage, with policy dollar and time limits high and long enough to adequately protect the policyholder, can prove very difficult in many cases and virtually impossible in others. Further, even if such coverage can be purchased, pursuing payment for claims can be onerous and unrewarding.

a. Policy Costs

As is the case with any type of insurance, premiums for individual environmental insurance policies are highly variable. Factors primarily affecting the price of premiums include: the way the policy is written (i.e., limits, deductibles, and definitions); the estimated cleanup costs; the certainty and reliability of pre-application work; and whether the policy covers one or more sites.[241] Depending upon how these factors are weighed, premiums may range anywhere from under one percent to twenty-five percent of the estimated cleanup costs.[242]

Transaction costs incurred in the insurance purchase and design process must be added to the cost of premiums to determine whether the overall cost of environmental insurance is reasonable relative to other project costs. Examples of transaction costs include: costs related to securing a professional consultant's services manpower hours diverted from other aspects of the project (especially in firms with no full-time insurance purchase and design office personnel); delays; and problems in weighing coverage alternatives.[243] If such costs, coupled with the cost of premiums, are too high, purchasing environmental insurance coverage may be cost-prohibitive—too expensive relative to its value—for a given

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AFCEE] (indicating that insurance requirements may be included in specifications) (presentation on file with author).

[239] USAEC, *supra* note 193, at 4.

[240] AFCEE, *supra* note 238.

[241] *See* YOUNT, *supra* note 191, at 23-24 (suggesting that higher policy limits, lower deductibles/SIRs, and broader definitions generally trigger higher premiums while proven technology, less complicated sites, shorter remediation periods, detailed characterizations, qualified contractors, remediation plan approval, and multiple site coverage may reduce premium prices).

[242] *Id.* at 22*; see also* Bill Stoneman, *Insurance Exit Strategies*, RISK & INSURANCE, http://www.riskandinsurance.com/040401_environmental_1.asp (citing an interview with the Senior VP of Marsh Environmental, Alan J. Bressler, wherein Bressler stated that Cost Cap insurance typically costs between six percent and twelve percent of the policy limits while Pollution Liability insurance may cost as little as 0.25 percent of policy limits) (last visited Feb. 20, 2006); KRISTEN R. YOUNT & PETER B. MEYER, STATE BROWNFIELD INSURANCE PROGRAMS, 2004 17-18, http://www.epa.gov/brownfields/pubs/state_report_04_revised.pdf [hereinafter YOUNT & MEYER II] (last visited Feb. 20, 2006).

[243] *See* YOUNT & MEYER I, *supra* note 189, at 32.

project.[244] To that end, insurance carriers have generally decided not to even offer Cleanup Cost Cap policy coverage for sites with estimated cleanups under $1 million (or $2 million, depending upon the carrier), reasoning that the costs required to conduct adequate assessments for these sites would make such policies cost-prohibitive.[245]

b. Policy Dollar Limits

The availability (or lack thereof) of policy dollar limits high enough to sufficiently shield policyholders from risks presents another problematic aspect of environmental insurance. Since 1999, insurers have experienced decreased returns on investments and increased losses (due, at least in part, to a considerable number of unexpected payouts—particularly on Cleanup Cost Cap policy claims).[246] These experiences, among other things, have generally caused insurers to take a more risk-averse approach to the cleanup projects they insure, to include lowering the maximum policy dollar limits available.[247]

As a result, it has become very difficult to purchase policies with large limits.[248] In light of these difficulties and in pursuit of lower-cost coverages, policyholders may purchase policies with limits that are too low to adequately protect them—defeating the purpose for which the insurance was acquired in the first place.[249] Unfortunately, such lower-than-required limits become even less protective when multiple insureds are included on a single policy[250] or costs tangential to the actual cleanup itself (i.e., defense costs) are applied against overall policy limits.[251]

c. Policy Time Limits

Acquiring a policy with a time limit long enough to cover the risks associated with a particular remediation project may also prove difficult—if it is even possible. Such timing issues usually arise in the context of Pollution Liability policies because the risks covered by those policies (i.e., third-party bodily injury and property damage) can take a substantial amount of time to manifest themselves. For example, symptoms from exposure to pollutants often lay dormant for long periods of time and polluted groundwater frequently migrates at a slow pace.

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[244] *Id*.
[245] YOUNT & MEYER II, *supra* note 242, at 11.
[246] Goodwin/Proctor LLP, *supra* note 234*; see also* YOUNT & MEYER I, *supra* note 189, at 98.
[247] *See* YOUNT & MEYER I, *supra* note 189, at 27.
[248] *Id*.
[249] *See id*. at 33.
[250] *Id*.
[251] *See, e.g.*, XL Environmental, Inc., *supra* note 212.

Therefore, it may be years before either is discovered and a claim is filed.[252]

This can make it very difficult for policyholders to avoid such risks because Pollution Liability policies are "claims-made" policies, typically only available for periods of one to five years.[253] Consequently, if a claim is made against the insured and reported to the insurance carrier after the policy period ends, it will not be covered under the policy.[254] Given that environmental conditions often reveal themselves at a slow rate and policy renewal is not assured,[255] this presents a significant weakness in using environmental insurance as a risk-shifting measure.

3. *Payment of Claims*

Aside from the completeness and availability issues already discussed, the policyholder must often face additional issues regarding payment of claims. Among other things, there is a very real possibility that claims will be denied or payments will be significantly delayed. Carrier insolvency and coverage disputes are often responsible for such payment issues.

Though insurance companies are generally financially stable, they can (and have) become insolvent.[256] Needless to say, if the insurer cannot pay its claims, the scope of coverage becomes somewhat inconsequential.[257] Selecting an established, rated insurance provider may help to minimize, but not preclude, this potential pitfall.

Similarly, being prepared to resolve coverage disputes without having to resort to protracted, costly negotiations may reduce the negative impacts delayed payments have on a project. The limited case law in this area (due, at least in part, to the relative newness of these policies) and the absence of an insurance carrier reporting requirement for claim payment behavior make it difficult to discern how often carriers actually dispute claims.[258] However, this lack of accountability alone is, arguably, another significant drawback environmental

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[252] *See* YOUNT & MEYER I, *supra* note 189, at 19.

[253] YOUNT & MEYER II, *supra* note 242, at 68 (noting that it may still be possible to negotiate a ten-year policy, but it would be very difficult to purchase a policy for anything over ten years).

[254] *Id*.

[255] *See* YOUNT & MEYER I, *supra* note 189, at 33.

[256] *See* Goodwin/Proctor LLP, *supra* note 234 (identifying the Reliance National Insurance Company as one such provider recently liquidated and the Kemper Environmental Division as another provider that has not faired well in the environmental insurance market).

[257] *But see* YOUNT & MEYER I, *supra* note 189, at 33 (noting that insolvency guarantee funds may provide some compensation for losses caused by the insolvency of an insurer).

[258] *Id*. at 105-6*; see also* BROWNFIELDS, *supra* note 222, at 22.

remediation contractors should consider in determining whether the right circumstances exist for environmental insurance.

C. Cost/Benefit Analysis

Ultimately, the problematic aspects of an insurance policy must be weighed against the benefits of the coverage it provides to determine whether environmental insurance will effectively shift or reduce risks in a given case. In making this determination, the government and government contractors should be particularly wary of policy language, time, and dollar limitations. Further, the value of coverage relative to its expense and the possibility that a carrier will not pay or will delay payment of legitimate claims must always be considered. Though environmental insurance is certainly not a perfect risk elimination solution, it may serve as a relatively flexible risk-shifting/reduction tool under the right circumstances.

V. THE LOCKHEED FAILED PIT 9 CLEANUP[259]

The Lockheed failed Pit 9 cleanup is a good example of how the effective use (or lack thereof) of contractual and insurance-based risk-shifting methods can impact a remediation project. The subcontract to remediate Pit 9, between the government's Management and Operating (M&O) contractor (first, EG&G, Inc. (EG&G), then, Lockheed Martin Idaho Technologies Company (LMITCO))[260] and the private remediation contractor (Lockheed Martin Advanced Environmental Systems, Inc. (LMAES)),[261] is particularly instructive. Even though the government

[259] Relevant court decisions and the Lockheed Pit 9 subcontract itself served as the primary sources of information for this section. However, plaintiff exhibits (PEx), which often cited to defense exhibits (DEx), and the Lockheed Martin Idaho Technologies Company (LMITCO)/EG&G, Inc. proposed "Findings of Fact" (both on file with the author) were used to supplement such case law and contract language in an effort to provide greater detail as to the contents and history of Pit 9, correspondence between and among the involved parties, and the circumstances surrounding specific language used in the RFP, specifications, and subcontract clauses. Although every effort was made to ensure these sources were cited only for their factual recitations, given their potentially inflammatory nature, information derived from these sources has been clearly identified as such.

[260] EG&G Idaho, Inc., was the M&O contractor from 1976 to 1994. EG&G signed a letter subcontract with LMAES in August 1994. In October 1994, LMITCO replaced EG&G as the M&O contractor and entered into a "perfected firm-fixed-price subcontract" for Pit 9 with LMAES. *See* Lockheed Martin Corp. & Lockheed Martin Advanced Envtl. Sys., Inc. v. United States, 50 Fed. Cl. 550, 551-52 (2001), *aff'd,* 48 F. App'x. 752 (2002).

[261] LMAES was a subsidiary of Lockheed Martin Corporation (LMC). Since LMITCO was also a subsidiary of LMC, DOE retained all contracting and negotiating authority over the Pit 9 subcontract, barring EG&G/LMITCO from any further role in the still-pending subcontract negotiations with LMAES without prior DOE approval, until

was not, technically, a direct party to that subcontract,[262] it played an integral role in ensuring that the subcontract contained many of the risk-shifting methods previously discussed.[263] Therefore, this section will examine the LMITCO-LMAES Pit 9 subcontract, in considerable detail, to illustrate risk-shifting methods in action.

A. The Site

Pit 9 is part of the Idaho National Environmental and Engineering Laboratory (INEEL) complex—a DOE-owned research and engineering support site, located approximately 32 miles west of Idaho Falls, Idaho, in the northeastern portion of the Eastern Snake River Plain.[264] The wastes buried in Pit 9 originated from the Rocky Flats Weapons Plant and the INEEL itself.[265] Because these wastes were typically contaminated with radioactive and hazardous materials, they were generally "packaged" in 55-gallon drums and wooden boxes before being dumped into Pit 9.[266] At the time of closure, Pit 9 contained 6,479 such drums and boxes.[267] The waste in the drums and boxes included protective clothing, gloves, filters, rags, solvents, pieces of piping, valves, laboratory equipment and sludges, among other things.[268]

Several dangerous types of radioactive materials were buried in Pit 9. Plutonium and americium, both considered "transuranic" (TRU)

LMITCO implemented an organizational conflict of interest mitigation plan. It took approximately four months for LMITCO to implement such a plan. *See id*. at 556.

[262] *See id*. at 566 (finding no basis for privity between LMAES and the United States).

[263] The potential organizational conflict of interest between LMITCO and LMAES arguably provided the impetus for DOE's increased involvement in this subcontract. For example, it caused the DOE Contracting Officer (CO) to negotiate subcontract terms directly with LMAES and prompted the DOE creation of a Program Oversight Board (POB), responsible for overseeing acceptance of LMAES deliverables, change order request decisions, and directives affecting the LMAES guarantee of performance, as well as ensuring LMITCO did not perform any activities that would shift LMAES' fixed-price risk assumption. *See id.* at 556-57.

[264] More specifically, Pit 9 is one of about 20 pits entrenched in the INEEL 88-acre Subsurface Disposal Area (SDA), within the 144 acres known as the Radioactive Waste Management Complex (RWMC), located in the southwestern portion of the INEEL. *See* Lockheed Martin Idaho Techs. Co. v. Lockheed Martin Advanced Envtl. Sys., Inc. & Lockheed Martin Corp. v. EG&G Idaho, Inc., 2004 U.S. Dist. LEXIS 24460 1, 5 (D. Idaho Oct. 29, 2004).

[265] The materials from Rocky Flats were contaminated in the production of nuclear weapons, while the materials from INEEL were contaminated during nuclear research and nuclear fuel reprocessing. *See* Plaintiff Lockheed Martin Idaho Tech. Co. and Third-Party Defendants EG&G Idaho, Inc. & EG&G, Inc.'s Findings of Fact at 9 [hereinafter LMITCO/EG&G Findings of Fact] (citing DEx. 1153, p. 21) (on file with author).

[266] *Id.* (citing DEx. 1153, pp. 20-21).

[267] Of this total, 3,937 were drums and 2,542 were boxes. Seventy-two additional containers of an "unknown type" were also reportedly discovered in Pit 9. *See id*. at 6 (citing DEx. 1153, p. 20).

[268] *Id.* at 9 (citing DEx. 1153, p. 21).

waste, represent two such types of Pit 9 materials.[269] Each of these materials emits alpha radiation—a low energy radiation that is easy to shield, but can be extremely harmful to human health and the environment.[270] Other, much more dangerous types of Pit 9 radioactive materials include Mixed Activation Products (MAP) and Mixed Fission Products (MFP), both of which emit beta/gamma radiation—a more readily detectable radiation than alpha radiation, but also, arguably, a more significant health threat.[271] Cesium-137 and Cobalt-60 are two types of gamma-emitters believed to be in Pit 9. Though Pit 9 shipping records (obtained from waste generators) signaled the presence of these beta/gamma emitters, they did not provide enough information to determine the quantities or activities for such substances prior to remediation.[272]

B. The Remediation Plan

In 1989, the EPA declared the INEEL a Superfund site pursuant to CERCLA, 42 U.S.C. §§ 9601–9675.[273] Two years later, DOE, EPA, and the State of Idaho Department of Health and Welfare executed a Federal Facilities Agreement and Consent Order (FFA/CO), establishing a procedural framework for Pit 9 remediation efforts.[274] In compliance with that FFA/CO, DOE, EPA and Idaho issued a Record of Decision (ROD), thereby determining the substantive and technical terms for the Pit 9 subcontract.[275]

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[269] *Id*.

[270] *Id*. at 10 (providing that harmful effects arise when such particles come into direct contact with body tissue, i.e., through inhalation or ingestion; *see also Lockheed,* 2004 U.S. Dist. LEXIS 24460 at 10 (highlighting the fact that even when plutonium poses little danger as a radiation source, it can create a criticality—a nuclear chain reaction that can cause a burst of radiation and heat, which could be lethal or seriously injurious to workers).

[271] LMITCO/EG&G Findings of Fact, *supra* note 265, at 10-11 (noting that Gamma radiation can penetrate and damage human tissue, depending upon its energy level and citing DEx. 1153, p. 21).

[272] *Id*. at 11.

[273] Lockheed Martin Corp. & Lockheed Martin Advanced Envtl. Sys., Inc. v. United States, 50 Fed. Cl. 550, 551 (2001), *aff'd,* 48 F. App'x. 752 (2002)*; see also Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 6 (indicating that even though most of the containers in Pit 9, including the 55-gallon drums, had deteriorated by the late 1980s, no containment or treatment effort had been attempted to that point).

[274] *See Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 6 (outlining the reasons the FFA/CO specifically selected Pit 9 for early interim action: its contents "posed a serious threat;" Rocky Flats shipping records provided an estimate, albeit rough, of its contents while no estimates existed, rough or otherwise, for the rest of the SDA; and it was believed to be a representative sample of the extent of contamination that would be found in the SDA as a whole).

[275] *Id*.

C. The Request for Proposals (RFP)

Despite LMAES' multiple presentations, political clout, and unsolicited sole source procurement proposal,[276] DOE decided to issue an RFP for the Pit 9 project. The project was designed to remove the TRU waste in the pit while shielding and containing (not removing) the gamma-emitters.[277] In an effort to incorporate private industry's input regarding the feasibility of the proposed RFP's objectives and to assist bidders in identifying risks, EG&G provided offerors a draft RFP, gave a tour of the pit, and conducted pre-bid conferences.[278] LMAES played an active role in this process—expressing concerns (particularly about the use of a fixed-price contract),[279] identifying potential risks, and, arguably, even shaping the resulting contract.[280]

Notwithstanding LMAES's involvement and insistence otherwise, the final Pit 9 RFP called for a fixed-price, performance-based contract. In addition to other performance-based criteria, the RFP established three phases of work: the Proof of Process (POP) test phase, which tested, on a small scale, whether the bidder's process would work; the Limited Production Test (LPT) phase, which determined, on an integrated scale, whether all systems would function as proposed; and the full scale remediation operation phase.[281] Further, the RFP expressly notified contractors that they bore the financial risk of the success or

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[276] *See id*. at 7 (explaining that LMC perceived the environmental remediation market to be a multibillion-dollar market and, therefore, wanted to use the Pit 9 project as an entry point, hoping that it would prove itself on Pit 9 and be chosen to remediate the entire RWMC)*; see also* LMITCO/EG&G Findings of Fact, *supra* note 265, at 26 (offering a Dec. 30, 1991 memo from LMAES to its chief Washington lobbyist which requested the lobbyist "turn up the political heat" and highlighting consequent inquiries of an Idaho Senator as evidence of the political pressure Lockheed could exert).

[277] *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 7 (noting that neither removal nor treatment of the gamma-emitters was part of the Pit 9 project).

[278] According to the LMITCO/EG&G Findings of Fact, during the August 1991 pre-bid conference, attendees were advised that the "[r]eporting confidence [is] not good." with regard to the amount of beta-gamma emitters in Pit 9 and that the Pit 9 project office did not know the accuracy of the information from Rocky Flats so the "subcontractor must account for this in his proposal." LMITCO/EG&G Findings of Fact, *supra* note 265, at 17.

[279] *See id*. at 20 (highlighting a letter from LMAES to EG&G, stating "[s]ince this is a first-of-a-kind demonstration, there are many unknowns and imponderables. A "cost-plus" type of contract better suits the purposes of elucidating actual unit costs upon which to base a record of decision.").

[280] *See id*. at 15-16 (asserting that Lockheed was so involved in this process that the company "boasted that 'Lockheed had developed INEEL requirements'" and, in an Oct. 1995 presentation to its new sector president, claimed that "DOE bought [the] Lockheed approach").

[281] *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 11-12.

failure of their design and process.[282] LMAES successfully completed Phase I and was selected to proceed with Phases II and III. The next two sections examine some of the specifications and clauses included in the final LMITCO-LMAES subcontract[283] for that work.

D. Contract Specifications

The *Lockheed* court confirmed that the Pit 9 LMITCO-LMAES subcontract was, in fact, a design/build performance specification contract.[284] In reaching this conclusion, the court focused, in part, on the following portion of the contract's "Mission Statement":

> The mission of the Pit 9 Comprehensive Demonstration is to excavate, characterize, treat as necessary, and dispose or store all wastes from Pit 9 at a minimum cost to the DOE. The method of achieving this is to acquire the services of a qualified private subcontractor to perform an integrated 'turnkey' pilot project . . . .[285]

The court found the contract's use of the term "turnkey" particularly compelling on this issue.

When it analyzed the turnkey language in the contract, the court basically equated a turnkey contract to a performance specification contract. Thus, it noted that such a characterization "means that the subcontractor will use its own means to produce the end result desired by the owner" and stated that "[i]n a pure turnkey project . . . [t]he owner simply gets out of the way, and allows the contractor to use his ingenuity to complete the project. The owner reappears only when the contractor is done and ready to turn over the keys to the project. Hence the term 'turnkey.'"[286] LMITCO's stated and actual role in administering the contract provided the court additional support for its decision that the term "turnkey" aptly described the Pit 9 project.[287]

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[282] LMITCO/EG&G Findings of Fact, *supra* note 265, at 23 (quoting the RFP to say "[d]esirable attributes shall include a totally integrated "turnkey" project where "cradle-to-grave" solutions are identified, where compliance with state and federal laws and regulations are understood and addressed, [and] where maximum responsibility, authority and liability are assumed by the subcontractor").

[283] LMITCO replaced EG&G as the M&O contractor before the final Pit 9 subcontract was issued. As previously mentioned, DOE was instrumental in negotiating the Pit 9 subcontract during this transition. *See* Lockheed Martin Corp. & Lockheed Martin Advanced Envtl. Sys., Inc. v. United States, 50 Fed. Cl. 550, 556-557 (2001), *aff'd,* 48 F. App'x. 752 (2002).

[284] *See Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 31.

[285] *Id*.

[286] *Id*. at 31, 32.

[287] Although the contract entitled LMITCO to "review and comment" on all submitted plans, the court concluded that this language did not shift the design or baseline

Various other contract specifications and characterizations were similarly consistent with labeling the project a performance specification project. For example, subsequent language in the Mission Statement directed that the "attributes of the subcontract include . . . [LMAES] assuming maximum responsibility, authority, and liability for the project . . . [and] minimal involvement by the DOE and [LMITCO]."[288] The court cited both of these contract provisions in reaching its turnkey/performance specification conclusion.[289]

Such directives required LMAES to design the Pit 9 remediation solution and to assume responsibility for the success or failure of its design. LMAES' assumption of design risks and responsibilities is also in harmony with characterizing Pit 9 as a performance specification project rather than a design specification project. The court specifically made this performance/design specification distinction when it highlighted the fact that the Pit 9 contract had a "complete lack of any detailed designs for a particular remediation method."[290] Consequently, the court asserted that such a lack of designs, in conjunction with the contract's turnkey label and Guarantee of Performance clause, "all operate[d] to place the entire risk of design failure on LMAES."[291] That court-referenced Guarantee of Performance clause and some of the other Pit 9 risk-shifting clauses will be examined next.

E. Contract Clauses

The Pit 9 subcontract contained a number of risk-shifting clauses. However, the clauses designed to address issues pertaining to LMAES' guarantee of performance, differing site conditions, and permits and responsibilities were, arguably, the primary risk-shifting clauses in the contract. Therefore, the following discussion details each of those clauses, in turn.

1. *Guarantee of Performance (GOP) Clause*

The GOP Clause was a key risk-shifting component of the Pit 9 subcontract. Such a clause was incorporated in the contract to protect EG&G/LMITCO and DOE by requiring a refund of any progress or milestone payments in the event that LMAES failed to comply with Pit 9

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allocation of risk from LMAES to LMITCO nor did LMITCO's actions otherwise alter the turnkey/performance-based nature of the contract. *See id.* at 34.

[288] *Id*. at 32.

[289] *Id*.

[290] *Id.* at 33.

[291] *Id*.

remediation specifications.[292] The pertinent part of the Pit 9 GOP clause provides:

> In the event that the Subcontractor does not provide complete compliance with the specifications for Phase II by the completion date identified in the subcontract, the Subcontractor shall have a period of four (4) months, except for major equipment failure/redesign which the Subcontractor shall have nine (9) months, to demonstrate such compliance to the Contractor at the Subcontractors' expense. If complete compliance is not obtained by the Subcontractor in the initial period of performance plus the above referenced extension periods, the Subcontractor shall provide complete reimbursement of monies paid to the Subcontractor for work performed under Phase II.[293]

In addition to including this clause in the contract, which was signed by LMAES, LMITCO also required a corporate officer of LMAES' parent company, LMC, to sign a separate GOP clause—thereby ensuring that both LMAES and LMC were liable for such a refund.[294]

2. *Differing Site Conditions Clause*

Given the uncertainties surrounding Pit 9, the Pit 9 subcontract included two Differing Site Conditions clauses: one for the construction phase, the other for the operations phase. Both clauses mirrored the standard FAR Differing Site Conditions clause.[295] Therefore, they required LMAES to promptly notify LMITCO in writing if LMAES encountered either of the following two conditions:

> (1) subsurface or latent physical conditions at the site which differ[ed] materially from those indicated in this subcontract, or (2) unknown physical conditions at the site, of an unusual nature, which differ[ed] materially from those ordinarily encountered and generally

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[292] *Id*. at 32.

[293] Subcontract No. C91-133136 Between Lockheed Idaho Tech. Co. & Lockheed Environmental Sys. and Tech. Co., Oct. 1, 1994, at 20 [hereinafter LMITCO-LMAES Pit 9 Subcontract] (issued pursuant to Contract No. DE-AC07-94ID13223 between DOE & LMITCO) (on file with author).

[294] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 82 (identifying Robert Young, the Group President in 1994, as the LMC corporate officer who provided the requisite signature).

[295] *See* FAR 52.236-2.

> recognized as inhering in work of the character provided for in the subcontract.[296]

If the subsurface conditions were determined to be materially different, the clauses required LMITCO to equitably adjust the subcontract price, schedule, or both.[297] However, LMAES's failure to give proper notice would preclude such recovery.[298]

3. *Permits and Responsibilities Clause*

The Pit 9 subcontract also contained two risk-shifting "Permits" clauses. The first clause, included in the "Purchase Orders and Subcontracts" portion of the contract, provided that "the subcontractor shall procure all necessary permits or licenses and abide by all applicable laws, regulations, and ordinances of the United States and of the state, territory, and political subdivision in which the work under this subcontract is performed."[299] The second clause, located in the contract's "Construction Subcontracting" section, reiterated and expanded upon these responsibilities. To that end, it stated that "[t]he subcontractor shall, without additional expense to the Contractor, be responsible for obtaining any necessary licenses and permits, and for complying with any federal, state, municipal laws, codes, and regulations applicable to the performance of the work."[300]

Accordingly, both Permits clauses identified LMAES as the party responsible for compliance with regulatory requirements. As the responsible party, LMAES was required to comply with DOE orders as well as state and federal laws and regulations. Further, LMAES—not LMITCO—assumed the risk of additional cost and/or time associated with such compliance.

F. Risk Allocation Overview

To summarize the LMITCO-LMAES Pit 9 risk allocation scheme, LMAES assumed the risks of performing a fixed-price, first-of-a-kind, performance specification contract to remediate Pit 9. If LMAES encountered unexpected pit conditions, it had to continue working while

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[296] *See, e.g.*, EG&G Idaho, Inc. Construction Subcontract General Provisions (June 1994), *in* LMITCO-LMAES Pit 9 Subcontract, *supra* note 293, at 4*; see also* Lockheed Martin Idaho Techs. Co. v. Lockheed Martin Advanced Envtl. Sys., Inc. & Lockheed Martin Corp. v. EG&G Idaho, Inc., 2004 U.S. Dist. LEXIS 24460 1, 36 (D. Idaho Oct. 29, 2004).
[297] *Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 36.
[298] *Id*.
[299] EG&G Idaho, Inc. Standard Terms and Conditions for Purchase Orders and Subcontracts (June 1994), *in* LMITCO-LMAES Pit 9 Subcontract, *supra* note 293, at 13.
[300] EG&G Idaho, Inc. Construction Subcontract General Provisions, *supra* note 296, at 7.

it made a claim for equitable adjustment,[301] sought recovery under the Differing Site Conditions clause, and, ultimately, succeeded in its remediation efforts or refunded all interim progress payments it had received to LMITCO, per the Guarantee of Performance clause.[302] Further, LMAES was responsible for ensuring its operations complied with all applicable orders, laws and regulations—even if such compliance required it to incur additional expenses or delays. No special environmental insurance was required or purchased for the project.[303]

The record is replete with evidence that EG&G/LMITCO made continual efforts to inform prospective offerors, including LMAES, of the ambiguous nature of the Pit 9 contents. Among other things, EG&G/LMITCO repeatedly and expressly disclaimed the reliability of the shipping records and Pit 9 content inventories[304] and conducted multiple pre-bid conferences wherein potential inaccuracies in estimates and other EG&G/LMITCO-provided information were identified.[305] Additionally, EG&G/LMITCO specifically outlined the unknowns pertaining to whether LMAES' proposed design and processes would be successful in specifications attached to the executed Pit 9 subcontract.[306]

The record also indicates that LMAES recognized and even acknowledged these substantial uncertainties before entering into the contract. For example, its then vice president and general manager, Steve J. Winston,[307] had authored a 1970s study of the Rocky Flats

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[301] The Disputes clauses in the contract, modeled after the FAR 52.233-1 Disputes clause, provided that "[t]here shall be no interruption to the prosecution of the work during the pendency of any dispute that may arise between the parties hereto or between subcontractor and its subcontractors." EG&G Idaho, Inc. Construction Subcontract General Provisions, *supra* note 296, at 7; *see, e.g.*, EG&G Idaho, Inc. Construction Subcontract General Provisions, *supra* note 296, at 5.

[302] *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 93.

[303] E-mail from James F. Nagle, Oles Morrison Rinker & Baker LLP (July 5, 2005) (on file with author). Mr. Nagle served as legal counsel for LMITCO.

[304] *See, e.g.,* LMITCO/EG&G Findings of Fact, *supra* note 265, at 25 (pointing out that the words "estimate," "estimated," "approximately" and "about" were used over 27 times in the listing of the Pit inventory); *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 16 (citing the Einerson report, which was provided to LMAES in Nov. 1993 and stated that "INEEL personnel have long known, based on earlier briefings and miscellaneous unclassified documents, that the 'official' numbers for the RFP inventory in the SDA are not believed to be the best estimates" and concluding that the shipping records were so inaccurate that "further analysis of the shipping records was not considered productive").

[305] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 16. EG&G conducted three pre-proposal conferences from 1991 to 1993. LMAES attended all three conferences.

[306] *Id*. at 98 (quoting Sec. 2.3.2.3 of the specifications, attached to the executed Pit 9 subcontract: "[b]ecause some aspect of the remedial techniques have not been proven on radioactively contaminated, hazardous waste sites like Pit 9, implementation of the preferred remedial alternative is contingent upon successful demonstration that the cleanup criteria and other performance objectives can be met in the LPT phase").

[307] The court recognized that Mr. Winston played a "unique role" in this case. Although he was the general manager for LMAES during the beginning stages of the Pit 9

plutonium and concluded from that study that "the Rocky Flats shipping records were inaccurate, and . . . that there may be much more radioactive waste in Pit 9 than indicated by those shipping records."[308] Along those same lines, LMAES had several internal discussions regarding the potentially "huge" disparities between the numbers reflected in the pit content *estimates* and the *actual* pit contents.[309] Further, LMAES memorialized this knowledge in writing when it wrote a 1992 letter to EG&G stating, in part, that "no one knows the contents of Pit 9"[310]

In recognition of these unknowns and their associated risks, LMAES attempted, on multiple occasions, to persuade LMITCO to change the Pit 9 contract from a fixed-price contract to a cost-plus-fixed-fee contract. During these attempts, LMAES asserted, among other things, that a fixed-price contract would force "subcontractors to bid with excessive contingencies to cover the large number of items beyond their control."[311] It also expressed concerns that the risks involved in participating in the project were "demonstrably imprudent."[312] However, LMITCO was not persuaded by such arguments.

Having been unsuccessful in convincing LMITCO to change the contract type, LMAES refocused its risk-shifting efforts and tried to transform the specifications in the contract from performance specifications to design specifications instead.[313] If LMAES had been successful in this venture, the risk of design failure would have shifted from LMAES to LMITCO. However, EG&G/LMITCO and DOE made concerted efforts to ensure they did not get involved in the contract in a manner that would change the nature of the contract's performance specifications because they wanted to avoid such a risk shift.[314] Maintaining this type of hands-off, performance specification approach

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remediation, he later left LMAES and joined LMITCO. Eventually, he was even responsible for terminating LMAES and pursuing this lawsuit on LMITCO's behalf. *See Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 15 n.2.

[308] *Id*. at 14*; see also* LMITCO/EG&G Findings of Fact, *supra* note 265, at 21 (highlighting testimony by Winston wherein he indicated that he was convinced that LMAES knew more about the contents of the pit than the EG&G presenters by the time EG&G conducted a tour of the pit on Sept. 18, 1991).

[309] *Id*. at 19.

[310] *Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 15 (citing PEx. 1066 at p. 3).

[311] LMITCO/EG&G Findings of Fact, *supra* note 265, at 21.

[312] *Id*. at 20*; see also Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 63 (referencing LMAES' Mar. 28, 1997 request that the contract be reformed from a fixed-price contract to a cost-plus contract).

[313] *Lockheed Martin Corp. v. EG&G Idaho, Inc.*, 2004 U.S. Dist. LEXIS 24460 at 67.

[314] *Id.* at 60*; see also* Lockheed Martin Corp. & Lockheed Martin Advanced Envtl. Sys., Inc. v. United States, 50 Fed. Cl. 550, 556-557 (2001), *aff'd,* 48 F. App'x. 752 (2002) (explaining that one of the purposes of the DOE POB was to ensure that LMITCO did not perform any activities that would shift LMAES' fixed-price risk assumption).

was a cornerstone of the EG&G/LMITCO and DOE philosophy regarding the Pit 9 subcontract.[315]

Despite LMAES' recognition of the substantial uncertainties shrouding Pit 9's contents, its obvious concerns regarding a fixed price contract for such work, and LMITCO's refusal to alter the contract's performance-based nature (particularly the Guarantee of Performance clause), LMAES still signed on to the Pit 9 project. Such a risky undertaking was largely motivated by LMAES' belief that the Pit 9 project would serve as its gateway into the environmental remediation market—a market it estimated could be worth billions[316]—and its confidence that it could use the contract's Differing Site Conditions clause to cover any unexpected contingencies.[317] Unfortunately, at least for LMAES, it was wrong on both counts.

G. Risk Allocation Ramifications

In 1997, after experiencing significant performance problems,[318] scheduling delays,[319] safety issues,[320] design setbacks,[321] equipment

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[315] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 99 (quoting DOE's philosophy: "[t]he only way this approach can work is for the DOE and EG&G to maintain a hands off role to the maximum extent possible. In other words, the DOE and EG&G should get out of the way and let the selected subcontractor do the work it was hired to do, except to the extent absolutely necessary . . .").

[316] *See Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 7*; see also* LMITCO/EG&G Findings of Fact, *supra* note 265, at 453 (providing excerpts from an April 4, 1994 briefing wherein LMAES espoused that the "[m]arket is too big to ignore," "[t]he technical risks may have been too great for a small business but not to a behemoth like Lockheed, especially in light of the possible rewards," and "[t]he DOE Mixed Waste Market alone has major growth potential $8 billion realizable by 1999 and a total market valued at $300 billion").

[317] *See Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 14-15, 27.

[318] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 69, 105 (asserting that a lack of management systems, unqualified personnel, and underbidding were main contributors to LMAES' performance problems, as evidenced by the deposition of a Lockheed Pit 9 review team member and internal LMAES' briefings concluding estimates were flawed)*; see also Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 41 (citing an internal Oct. 1995 LMAES report regarding its "test bed" wherein LMAES concluded "we failed" and attributed its failure to, among other things, poor design; a failure to staff the project with experts; corrosion; and a failure to conduct small-scale testing prior to building the full-scale test bed).

[319] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 132 (referencing an internal memo sent in Dec. 1996 by the then program manager stating, "[a]s you are all probably aware, the Pit 9 program is in a severe cost overrun condition with equal schedule concerns").

[320] *See id*. at 168 (quoting LMAES' response to the Source Evaluation Board regarding its Advanced Mixed Waste Treatment Project proposal as follows: "[a]s a consequence of this inadequate staffing, the radiation protection program and the PSAR [(Preliminary Safety Analysis Report)] were deemed, correctly, to be totally inadequate by DOE").

inadequacies,[322] substantial losses,[323] and repeated failures to reform the contract, LMAES slowed its Pit 9 work effort and tried to negotiate more LMAES-favorable contract terms. However, faced with new cost completion estimates of $517.4 million[324] (more than triple its original cost estimate)[325] and LMITCO's continued refusal to restructure the contract, LMAES eventually stopped work altogether.[326] After failing to provide adequate assurances to LMITCO that it would perform its obligations, LMAES was terminated for default on June 1, 1998.

LMITCO gave two reasons for the termination: (1) failure to make progress, and (2) anticipatory repudiation of the contract.[327] In accordance with the Guarantee of Performance clause, the termination letter also demanded that LMAES refund LMITCO $54,386,165—the amount of progress payments it had received for work under the subcontract.[328] Although LMAES had planned to use the Differing Site Conditions clause to cover any unexpected contingencies it encountered, it never provided LMITCO written notice of such differing site conditions.[329] Rather, LMAES argued, in large part, that its failure to successfully remediate Pit 9 was caused by LMITCO's refusal to approve its remediation systems and technical baseline.[330] These outstanding issues and debts were ultimately resolved in court.[331]

In a comprehensive, 100-page decision, the LMITCO-LMAES court concluded that the termination for default was proper based on the contract's risk allocation scheme.[332] In reaching this conclusion, the court determined that LMAES had assumed "the entire risk that its design of a remediation process might fail."[333] Therefore, LMITCO had no obligation to approve LMAES's systems or technical baseline—

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[321] *See, e.g.*, *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 25-26, 42 (reporting the LMAES Counter-Current Ion Exchange (CCIX) process; use of stainless steel tanks and piping; and unwieldy machinery size as examples of LMAES design setbacks/failures).

[322] *See id*. at 41 (citing pumps clogging and machinery corroding as examples of equipment inadequacies).

[323] *See* LMITCO/EG&G Findings of Fact, *supra* note 265, at 286 (referencing a Mar. 31, 1996 Contract Status Review (CSR) that projected a loss on the Pit 9 project in excess of $150 million).

[324] *Lockheed Martin Corp. v. EG&G Idaho, Inc*., 2004 U.S. Dist. LEXIS 24460 at 64.

[325] LMAES' original cost estimate was $178,608,000. *See id*.

[326] *See id*. at 68 (noting that "LMAES stopped all progress on the project by November, 1997, and was only engaged in moth-balling activities thereafter").

[327] *Id.* at 69.

[328] *Id*. at 69-70.

[329] *Id*. at 98.

[330] At trial, LMAES made several other claims as well, but this was, arguably, the primary argument it made throughout the course of the project and the trial. *See id*.

[331] *Id*.

[332] *Id.* at 99.

[333] *Id.* at 92.

approvals which would have constituted a contract re-write and resulted in a risk shift.[334]

Further, because LMAES had never provided LMITCO written notice of a differing site condition, the court essentially found that issue moot.[335] Consequently, the court ordered LMAES to return the monies paid to it by LMITCO, plus interest, and to pay approximately $11 million to dispose of the facility it built to do the work.[336] The court's ruling was a stinging defeat for LMAES. However, neither DOE, EG&G/LMITCO, nor the public can chalk up a victory—more than a decade and a half has passed since Pit 9 was listed as a Superfund site, yet the Pit 9 remediation is still nowhere near complete.[337]

VI. THE PERFORMANCE-BASED CONTRACTING (PBC) INITIATIVE

The LMITCO-LMAES Pit 9 performance-based contracting (PBC) approach is representative of the current government initiative to use PBC to the greatest extent possible to procure federal environmental remediation services[338] and, thus, align environmental cleanup efforts with the President's Management Agenda.[339] High-priced/low-return cleanup contracts, designed to reward contractors simply for fulfilling process requirements, were, in large part, the impetus for the government's PBC initiative.[340] As opposed to those contracts, performance-based contracts (PBCs) reward contractors for achieving results—not merely "going through the motions." Consequently, under the PBC approach, the performance risk is transferred to the contractor to

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[334] *Id.* at 67.
[335] *See id*. at 98.
[336] *Id*. at 99.
[337] At the time of trial, the "Alt Pit 9" project was already in place, but that project had not even passed on to the 10 percent design stage. The design stage, alone, was estimated to cost $1.58 billion. That figure included several costs that are incomparable to LMAES' project costs, but even when such incomparable costs were eliminated, the estimate still came to approximately $760 million. *See id*. at 73-75.
[338] *See, e.g.*, Memorandum from Maureen T. Koetz, SAF/IEE (Environment, Safety and Occupational Health) to AF/ILE, AFRPA/DR, AF/SGO, and AF/XOO, Air Force Cleanup Program Performance-Based Management Policy (Oct. 27, 2004) (indicating that the Air Force cleanup policy mandates the use of "[p]erformance-based contracting and acquisition strategies . . . to the greatest extent possible") (on file with author).
[339] OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, THE PRESIDENT'S MANAGEMENT AGENDA FY2002 (2001) (espousing a performance-based, results-oriented agenda as opposed to an agenda based solely on promises and processes).
[340] In 1987, DoD, alone, estimated it would take $14 billion and thirteen years to fulfill its cleanup obligations. Over the past twenty years, $30 billion has been spent on DoD's still incomplete program. In 2004, DoD provided new estimates, including costs exceeding $50 billion and project completion beyond 2014. *See* AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE), PERFORMANCE BASED CONTRACTING, PBSA IN AF ENVIRONMENTAL REMEDIATION CONTRACTS 2 (Aug. 2004) (on file with author).

motivate the contractor to complete the remediation in the most timely and cost effective manner.[341]

A. Types of Performance-Based Contracts (PBCs)

Various types of contracts may be used to achieve performance-based remediation goals. However, given their government-favorable risk-shifting nature, the government generally prefers to use firm-fixed-price contracts or firm-fixed-price contracts with insurance (commonly referred to as "guaranteed" fixed-price contracts).[342] As previously discussed, firm-fixed-price contracts place the maximum risk and responsibility for costs and resulting profits or losses upon the contractor.[343] Guaranteed fixed-price contracts, on the other hand, may allow the contractor to shift some of those risks and responsibilities to a third-party insurer.[344] Further, the insurance component of guaranteed fixed-price contracts generally creates greater certainty that the remediation will actually be completed on time and on budget.[345]

B. Government Agency Involvement

The EPA, DOE, and the DoD have all embraced the government's PBC initiative. To that end, each agency has issued guidance and developed models to aid in expeditiously implementing PBC.[346] Further, the agencies have set goals to encourage and measure success.[347]

The DoD military components have been particularly active in utilizing PBC and setting high PBC goals. The Army is the military services' leader in aggressively implementing PBC. For example, in FY 2004, the Army awarded fourteen performance-based contracts (PBCs) at active installations, assigning thirty-six percent of its annual environmental restoration program funds to those PBCs.[348] Additionally, the Army set a goal to further increase such funding for PBCs to fifty percent by the end of FY2005.[349] Recognizing the benefits of PBC,

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[341] ASTSWMO GUIDE, *supra* note 10, at 3.
[342] *See* DERP REPORT FY2004, *supra* note 7, at I-15; Conway-Jones, *supra* note 7, at 11.
[343] *See supra* Part III(A)(2).
[344] *See supra* Part VI.
[345] *See id*.; ASTSWMO GUIDE, *supra* note 10, at 4.
[346] *See, e.g.,* ENVIRONMENTAL PROTECTION AGENCY, RESULTS-BASED APPROACHES AND TAILORED OVERSIGHT GUIDANCE (2003); DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at II-2; DERP REPORT FY2004, *supra* note 7.
[347] *See, e.g.,* DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at II-2; DERP REPORT FY2004, *supra* note 7, at I-7, I-15, I-22.
[348] DERP REPORT FY2004, *supra* note 7, at I-7.
[349] *Id*.; *but see* ASTSWMO GUIDE, *supra* note 10, at 2 (stating that the Army FY2005 goal is eighty percent rather than fifty percent).

other military services and federal agencies have established similar, though less aggressive, PBC implementation goals.[350]

C. Potential Benefits of PBC

PBC is frequently touted as a faster, more cost-effective approach for attaining site remediation and closure.[351] Buzz words commonly used to describe PBC include enhanced contractor performance, innovation, and flexibility.[352] Additionally, reduced government oversight and a risk shift from the government to the private sector are often viewed as PBC benefits.[353]

PBC has proven itself worthy of such buzz and advertised benefits on a number of occasions. The DoD PBC success stories include the use of PBCs to achieve cleanups at Ft. Leavenworth,[354] Ft. Dix,[355] and the Lake City Army Ammunition Plant (LCAAP).[356] DOE and other agencies have reported similar PBC gains in cleanup and risk reduction.

The Rocky Flats remediation is, perhaps, DOE's most widely-publicized PBC success story. In 1997, the estimated cost to remediate Rocky Flats was $17.1 billion and the date of completion was FY2045.[357] However, in 2002, the Rocky Flats estimated completion cost was reduced to $7.1 billion and the date of completion was accelerated to FY2006.[358] According to DOE, implementing a PBC strategy for the Rocky Flats project was instrumental in this dramatic time and money reduction.[359]

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[350] *See, e.g.*, AFCEE, *supra* note 340 (reporting the Air Force PBC goal to be twenty percent of restoration projects); DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at II-2 (maintaining that one of DOE's goals is to safely complete all cleanup and disposal by 2035).
[351] *See* ASTSWMO GUIDE, *supra* note 10, at 2.
[352] *See* USAEC, *supra* note 193, at 2.
[353] *Id*.
[354] DERP REPORT FY2004, *supra* note 7, at I-7 (reporting that "[s]ince 2001, Fort Leavenworth has made tremendous progress using GFPR [Guaranteed Fixed Price Remediation]": of nine sites identified in the first contracting phase, four are almost complete; three have remedies in place; and two are in the interim remedial action stage).
[355] *See* ASTSWMO GUIDE, *supra* note 10, at 27 (indicating that PBCs are being used at ten Ft. Dix sites; those sites are ahead of schedule; and both EPA and the State have been satisfied with the progress and quality of work thus far).
[356] *See id*. at 25 (asserting that, "[t]o date, LCAAP under the PBC has completed more quality primary and secondary documents than in any other year of its Installation Restoration Program").
[357] DOE TOP-TO-BOTTOM REVIEW, *supra* note 8, at III-19.
[358] *Id*.
[359] *Id*. at III-19, II-7. Contractor innovations (including the development of a process for decontaminating boxes so they could be shipped, intact, to low-level waste disposal cells) also reduced costs and schedules.

D. Potential Drawbacks of PBC

While PBC success stories suggest that PBC can be an effective cost-cutting, time-reduction approach, it is not necessarily always the *best* approach. Rather, the profit motive, reduced agency oversight, and contractor risks inherent in PBC represent some of the potential drawbacks of using PBC to procure federal environmental remediation services. This section explores such drawbacks and offers anecdotal examples of some of PBC's shortcomings.

1. *Profit Motive*

One of the major criticisms of PBC is that the PBC profit motive prompts contractors to cut corners and push for the cheapest remedial actions possible—irrespective of what is best for the protection of human health and the environment.[360] Thus, unlike the cost-reimbursement nature of other contracts (e.g., time-and-materials contracts), which motivates contractors to identify additional required work, the typically fixed-price nature of PBCs, arguably, motivates contractors to reduce the scope of work. Contractors are motivated to reduce the scope of work because such a reduction generally leads to greater profits.[361]

Further, the PBC profit motive has been criticized for causing PBC contractors to pressure regulators to give them preferential treatment—often to the detriment of others seeking similar reviews and approvals to meet their goals.[362] In this manner, the PBC profit motive can be, to a large degree, a double-edged sword. On one hand, it encourages contractors to quickly complete projects so they can earn greater profits—a result that benefits everyone. However, on the other hand, the same profit motive can induce contractors to trod over regulators and other contractors—a result that benefits no one but, perhaps, the PBC contractor.

2. *Reduced Government Agency Oversight*

Similarly, reduced government oversight—another trademark of PBCs—can be good or bad. In some cases, it increases the efficiency of both the government and the contractor—freeing government personnel

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[360] *See, e.g.,* AIR FORCE (AF) ATLANTA REGIONAL ENVIRONMENTAL OFFICE (REO), REGULATOR VIEWS ON PERFORMANCE BASED CONTRACTING (PBC) [hereinafter REO] (2004) (on file with author); ASTSWMO, *supra* note 10, at 22, 24.

[361] *See* ASTSWMO GUIDE, *supra* note 10, at 22.

[362] *See* REO, *supra* note 360 (citing a case where a PBC contractor demanded immediate review/approval of his work to get the job done as quickly as possible and reporting that "[t]his did not go well with the other bases who needed regulator support to meet their own project goals").

to do other things and enabling contractors to exercise ingenuity.[363] However, in other cases, it causes confusion,[364] overburdens state and EPA regulators,[365] and increases skepticism regarding the government's motives.[366]

The Fort Sheridan cleanup effort[367] offers a good example of the negative impacts reduced government oversight can have on cleanup projects. During the Ft. Sheridan cleanup project, a reduction or lack of government oversight reportedly contributed to a Clean Water Act violation, the time-consuming resolution of contractor activities that were inconsistent with prior decisions and approved designs, and a multitude of contractor questions that should have been handled by the agency (DoD), but were, instead, posed to and fielded by the EPA.[368] Consequently, implementation of PBC at Fort Sheridan has, arguably, required significantly more time and resources than would have been required under a more traditional approach.[369]

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[363] *See supra* Part V(B)(2).

[364] *See* SMI AND PROJECT PERFORMANCE CORP., GUARANTEED/FIXED PRICE REMEDIATION CONTRACT LESSONS LEARNED FINAL REPORT 2 (2002) [hereinafter SMI & PROJECT PERFORMANCE REPORT] (noting that the innovative nature of PBCs may cause confusion and some suspicion among regulators) (on file with author); ASTSWMO GUIDE, *supra* note 10, at 18 (identifying confusion as to how to resolve disputes as one drawback of PBCs).

[365] *See* ASTSWMO GUIDE, *supra* note 10, at 14 (asserting "[i]if one of the advantages of PBC for DoD is the need for less oversight, then one of the drawbacks for States is the need for more regulatory oversight," because, among other things, "[u]nder PBC, regulators field significantly more contractor questions"); REO, *supra* note 362 (noting that "PBC will dump large, unplanned work programs on the regulators . . . states will bear the brunt under PBC . . . [and] the EPA will not manage the Air Force's [or other agency's] contractors").

[366] *See* Memorandum from Lt. Col John M. Smith, HQ AFCEE/JA, to HQ AFCEE/TD, Guaranteed Fixed Price Remediation Issues (Feb. 12, 2004) (suggesting that regulators perceive that agencies are trying to walk away from clean up responsibilities by turning programs over to contractors and, therefore, it should be made clear to the regulators that agencies are not trying to avoid their responsibilities; rather, they are seeking a better, faster way to meet public health goals).

[367] The objective of the Fort Sheridan PBC cleanup effort was to perform all necessary environmental restoration work necessary to achieve regulatory closure of Fort Sheridan. Remedial actions pertained to landfills, coal and pesticide storage areas, underground storage tanks, unused wells, and lead-based paint removal. *See* SMI & PROJECT PERFORMANCE REPORT, *supra* note 364, at 14.

[368] *See* ASTSWMO GUIDE, *supra* note 10, at 22-23 (suggesting these problems were caused, in large part, by confused lines of authority and a lack of agency communication and guidance).

[369] *See id.* at 23 (reporting that, under the original contract, the entire Fort Sheridan cleanup was to be completed in Sept. 2003; however, the latest projections for two of the landfills, alone, exceeded that deadline by over a year).

3. *Contractor Risks*

Additional drawbacks stem from the PBC risk allocation scheme. Since most PBCs are fixed-price contracts, the risk-related drawbacks associated with such contracts, discussed in Chapter V, apply. Therefore, PBC bids tend to be more contingency-based and, thus, higher priced than bids that would be proposed under non-PBC, non-fixed price contracts.

Another risk-related drawback of PBC is that fewer experienced environmental restoration firms may bid for this type of contract—either because risks are too high, corporate philosophies prevent them from taking on more risk than usual, or they have a poor track record of winning PBCs.[370] Consequently, the winning and/or only bidder may be an inexperienced firm willing to assume unreasonable risks just to "buy in" to the field.[371] Alternatively, such a bidder may be nothing more than the "best of the worst." Needless to say, each of these scenarios presents obvious drawbacks.

When these drawbacks are not carefully considered before a decision is made to use PBC for a particular project, both the government and the contractor often receive less than the benefit of their bargain. One must look no further than the LMITCO-LMAES Pit 9 subcontract to see how such unfulfilled expectations can affect the government and the contractor. Unfortunately, however, the biggest losers in these situations are often the public health and the environment.

E. Recommended PBC Considerations

PBC is not a "one-size-fits-all" solution. Therefore, even though it generally sounds good on paper, putting PBC into practice may not always be the best contracting approach. Accordingly, with stakes like the public health and the environment on the line, every aspect of PBC—benefits and drawbacks alike—must be analyzed before a decision is made to use a PBC strategy for any given environmental remediation project.

VII. CONCLUSION

In recent years, the government has increasingly pushed remediation contractors to insulate it from the risks involved in federal environmental cleanups. Contractual and insurance-based risk-shifting measures, ultimately taking shape in the government's PBC initiative,

[370] *Id*. at 5, 15 (reporting that the prospective bidder and insurer uncertainties as to the remedy for Landfill 5 in the Fort Sheridan cleanup effort led only one company to submit a bid and that bid was non-responsive).

[371] LMAES was, arguably, motivated by such a "buy-in" opportunity when it agreed to the terms of the LMITCO-LMAES Pit 9 remediation subcontract.

have played a crucial role in effecting such a "push." Contractors have fought back—primarily, by declining to undertake certain ill-defined remediation projects, using conservative assessment methodologies backed with higher bids, making greater demands for more thorough site characterizations/investigations, and even creating skeletal corporations with limited assets for high-risk cleanup projects.

Unfortunately, this preoccupation, by both parties, with shifting risks has often resulted in an "us-against-them," attack/counter-attack mentality between the government and government contractors. Consequently, though both parties recognize that they need each other to be able to remediate sites, they often seem to forget that they share the same goals. To that end, contractor successes are government successes. Likewise, contractor failures are government failures.

Accordingly, there is no government victory in finding flaws or shortcomings in contractor work. Rather, the true government victory lies in rewarding contractors for meeting and exceeding expectations. Such successful contractor outcomes equate to successful government, public health, and environment outcomes. Therefore, the government should do everything in its power to help contractors fulfill remediation goals while still preserving adequate incentives to ensure contractor accountability.

Striking such a balance includes ensuring that the PBC approach, though highly encouraged, does not become a "presumptive" approach. Despite its numerous benefits and obvious risk-shifting appeal, PBC is inappropriate for many cleanup projects—particularly those for which such an approach would simply be too risky for contractors to undertake. Such projects generally include cleanups that are inadequately characterized, involve groundwater remediation with no discrete end points, and require long-term operations or monitoring. Therefore, the decision to use the PBC strategy should always be site specific and carefully calculated in light of what is known about site contamination and other conditions. Blindly applying PBC, without conducting such an analysis first, will likely set contractors up to fail—a result that, as previously discussed, benefits no one.

Further, even if the decision is made to use PBC for a particular project, the government must stay involved in overseeing the remediation effort. Though reduced government oversight is promoted as one of PBC's main cost and time-saving benefits, the government cannot merely hire a contractor to perform the remediation, hand that contractor the project, walk away, and expect to get the results it desires. Therefore, "tailored" oversight is a better approach.

True to its name, tailored oversight is, simply, oversight that is tailored to meet the needs of individual sites. Under such an approach, the appropriate level of government oversight is dependant upon the complexity of the site, the past performance, financial backing, and

technical capabilities of the contractor, and any other factors that may otherwise impact (positively or negatively) the timeliness, efficiency, and protective qualities of cleanup operations. Therefore, it may, or may not, include "reduced" oversight. Nevertheless, this type of customized oversight will save time and money in the long run by, among other things, precluding the type of setbacks experienced in the LMITCO-LMAES Pit 9 project—setbacks caused, in part, by allowing an obviously failing contractor to stumble along for prolonged periods of time, thereby delaying and, at least indirectly, impeding public health and environment goals.

To do their part in improving the federal environmental remediation process, contractors should take affirmative steps to protect themselves, yet still promote open communication and cooperative information sharing. Taking care of themselves enables contractors to take better care of the government. Such self-preservation requires gaining a thorough understanding, within economic limits, of the potential environmental compliance and cleanup issues relative to particular projects. It also includes conducting realistic assessments of risk and financial thresholds before taking on such projects, and, ultimately, walking away from projects and contract terms that present unreasonable risks.

Promoting open communication and cooperative information sharing, on the other hand, requires contractors to completely step outside their self-assessment "box" while they focus on the needs of the project at hand. Making this mental transition should help contractors to redirect their efforts so they can work with, not against, the government to reduce uncertainties by sharing collected information, offering advice based on contractor expertise, and voicing—not hiding—concerns. Openly exchanging lessons learned and best practices should also reinforce the notion that the government and contractors must work together, not apart, to successfully remediate sites.

Both the government and government contractors have begun to experience a certain measure of success in these areas. However, there is still significant work to be done to ensure the federal environmental remediation procurement program, as a whole, and its government-contractor risk-sharing component, in particular, achieve the desired end results. After all, the "[g]overnment likes to begin things—declare grand new programs and causes and national objectives. But good beginnings are not the measure of success. What matters in the end is completion. Performance. Results."[372]

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[372] President George W. Bush, *President's Message, in* THE PRESIDENT'S MANAGEMENT AGENDA, *supra* note 339, at 1.

DEPARTMENT OF DEFENSE AFFIRMATIVE COST RECOVERY AGAINST PRIVATE THIRD PARTIES

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Share everything.
Play fair.
Don't hit people.
Put things back where you found them.
Clean up your own mess.[1]

I. INTRODUCTION: CERCLA—CLEAN UP YOUR OWN MESS

The Reverend Robert Fulghum penned the above oft-quoted words as partial substantiation of his claim that he learned everything he really needed to know about life in kindergarten. Rev. Fulghum could very easily have been discussing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[2] His statements and the underlying principles they espouse—responsibility, equity, and accountability—capture much of the spirit Congress intended when it enacted CERCLA's liability scheme back in 1980, as well as the Superfund Amendments and Reauthorization Act (SARA) in 1986.[3]

This liability scheme, of course, is of vital importance to the Department of Defense (DoD), which is involved in the cleanup of hundreds of past or presently-owned military facilities, many of which are on the National Priorities List,[4] representing billions of dollars in expended and projected cleanup costs. Most recently, the DoD has placed emphasis on a new environmental litigation mission—to recover DoD funds expended on cleanup from those parties that contaminated or contributed to the contamination. This article will deal primarily with the issue of recovering funds from third parties when DoD has expended money to clean up environmental contamination, but will not address the issue of Natural Resource Damages or using an order under section 106 of CERCLA to require a third party to perform cleanup work on DoD property.

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[1] ROBERT FULGHUM, ALL I REALLY NEED TO KNOW I LEARNED IN KINDERGARTEN 6 (1990).

[2] Comprehensive Environmental Response, Compensation, and Liability Act, Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended at 42 U.S.C. §§ 9601-75 (Lexis 2006)). This article will use the common practice of referring to CERCLA sections by their statutory section numbers. These section numbers correspond with Title 42 of the United States Code, where CERCLA is codified, except the "1" is replaced by "96". For example, section 107 is 42 U.S.C. § 9607.

[3] Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified as an amendment to CERCLA at 42 U.S.C. § 9603 (Lexis 2006)).

[4] "[T]he President shall list as part of [the National Contingency Plan] national priorities among the known releases or threatened releases throughout the United States and shall revise the list no less often than annually." 42 U.S.C. § 9605(a)(8)(B) (Lexis 2006).

In the Fiscal Year 1998 Defense Authorization Act,[5] Congress encouraged the DoD to recover environmental cleanup costs by requiring that the DoD determine what potential affirmative cost recovery sites were located on DoD property and the likelihood of obtaining cost recovery on those sites. In September 2001, new Defense Environmental Restoration Program (DERP) Guidance provided that The DoD shall pursue recovery of response costs of $50,000 or more, whenever a cleanup response action is required on DoD property due to an imminent and substantial threat to human health or the environment, and the cooperation of the potentially responsible party could not be negotiated in advance of the cleanup work.[6]

Congress clearly indicated that it expects the DoD to be a good steward of taxpayer resources. It authorized each DoD component performing an environmental cleanup to credit any affirmative cost recovery monies back to their respective DoD component's Environmental Restoration Account[7] account.[8] Typically, federal fiscal guidelines provide that money recovered by a U.S. government agency go directly to the U.S. Treasury general receipts account, which does not directly benefit the recovering agency.

Though most of CERCLA deals with how environmental cleanups will be conducted, its cost allocation provisions are of critical importance to a potential litigant. Grossly oversimplified, one of CERCLA's objectives is to provide a mechanism or legal framework under which responsible parties who shared in creating an environmental "mess" can arrive at a fair and equitable way to share responsibility for cleaning it up. "CERCLA, as amended by [SARA], provides two legal avenues by which a private party can recoup some or all of the costs associated with an environmental cleanup: a cost recovery action under § 107(a) and a contribution action under § 113(f)(1)."[9] Each avenue may be used under a specific set of circumstances.

The first legal avenue, section 107 of CERCLA,[10] permits private parties, including the United States, to recover the costs of cleaning up hazardous waste from those contaminators deemed liable for it. CERCLA case law uses the term "potentially responsible party" (PRP) to refer to those from whom costs may be recovered. They fall

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[5] National Defense Authorization Act for Fiscal Year 1998, Pub. L. No. 105-85, 111 Stat. 1629, 1998 (1997).

[6] OFFICE OF THE UNDER SECRETARY OF DEFENSE (INSTALLATIONS & ENVIRONMENTAL), MANAGEMENT GUIDANCE FOR THE DEFENSE ENVIRONMENTAL RESTORATION PROGRAM Ch. 26 (Sep. 2001) [hereinafter RESTORATION PROGRAM], https://wwwdenix.osd.mil/denix/Public/ES-Programs/Cleanup/guidc.html.

[7] 10 U.S.C. § 2703 (Lexis 2006).

[8] *Id.* § 2703(e).

[9] Bedford Affiliates v. Sills, 156 F.3d 416, 423 (2d Cir. 1998).

[10] 42 U.S.C. § 9607 (Lexis 2006).

within one of the four categories referred to in section 107(a).[11] The four categories are: (1) current owners and operators of facilities where hazardous substances are released; (2) owners and operators of facilities at the time the hazardous substances were disposed; (3) persons who arranged for disposal or treatment of such substances; and (4) persons who accepted such substances for transport, treatment or disposal.[12] PRPs are held strictly liable for cleanup costs, subject only to CERCLA's limited defenses.[13]

Generally, one PRP, as defined by CERCLA statute and case law, cannot hold another PRP jointly and severally liable under section 107 because it is presumed that each PRP is liable for some portion of the contamination; thus, where there are multiple PRPs, no one PRP could possibly be liable for 100% of the damage.[14] Every circuit court has concluded that a PRP, without an affirmative defense that negates its own liability, must seek contribution under section 113 of CERCLA.[15]

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[11] *See* Pneumo Abex Corp. v. High Point, Thomasville and Denton R. Co., 142 F.3d 769, 773 n.2 (4th Cir. 1998) ("While CERCLA does not define 'potentially responsible party,' the courts have understood it to refer to a party who may be covered by the statute at the time said party is sued under the statute.").

[12] 42 U.S.C. 9607(a) (Lexis 2006).

[13] *See* 1325 "G" Street Associates, LP v. Rockwood Pigments NA, Inc., 235 F. Supp. 2d 458 (D. MD. 2002); s*ee also* 42 U.S.C. § 9607(b) (Lexis 2006). This section states:

> There shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the release or threat of release of a hazardous substance and the damages resulting therefrom were caused solely by-- (1) an act of God; (2) an act of war; (3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a) he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or (4) any combination of the foregoing paragraphs.

[14] Axel Johnson, Inc. v. Carroll Carolina Oil Co., Inc, 191 F.3d 409, 415 (4th Cir. 1999); *see also* Minyard Enterprises, Inc. v. Southeastern Chemical & Solvent Co., 184 F.3d 373, 385 (4th Cir. 1999).

[15] *Pneumo Abe*x, 142 F.3d at 776; *see also* Centerior Serv. Co. v. Acme Scrap Iron & Metal Corp., 153 F.3d 344, 356 (6th Cir. 1998); Sun Co. v. Browning-Ferris, Inc., 124 F.3d 1187, 1190-91 (10th Cir. 1997), *cert. denied*, 522 U.S. 1113 (1998); Pinal Creek Group v. Newmont Mining Corp., 118 F.3d 1298, 1301 (9th Cir. 1997), *cert. denied*, 524 U.S. 937 (1998); New Castle County v. Halliburton NUS Corp., 111 F.3d 1116, 1120 (3d Cir. 1997); Redwing Carriers, Inc. v. Saraland Apartments, 94 F.3d 1489, 1496

The second legal avenue, section 113(f)(1),[16] provides that any person may seek contribution from any other person who is liable or potentially liable under the general CERCLA liability clause contained in section 107(a), during or following any civil action under section 106 or section 107(a). "In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate. Nothing in this subsection shall diminish the right of any person to bring an action for contribution in the absence of a civil action" under section 106 or section 107.[17]

A third legal basis for recovery of response costs available to private parties, as well as federal agencies like the DoD, is an action in federal district court under state environmental recovery statutes. This option may be the only one available when the contamination is specifically excluded by CERCLA. For example, petroleum contamination is excluded from CERCLA liability,[18] but many state environmental cleanup laws authorize action by private parties against other parties that either contributed to or were the sole cause of the petroleum contamination.[19]

The DoD components, in coordination with the Department of Justice, must decide the best statutory basis upon which to recover from PRPs. This typically requires an analysis of the applicable federal and state statutes, the facts involved, the response actions taken, the defendant's financial state, and the proof of costs and liability required

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(11th Cir. 1996); United Techs. Corp. v. Browning-Ferris Indus., Inc., 33 F.3d 96, 101-03 (1st Cir. 1994).

[16] 42 U.S.C. § 9613(f)(1) (Lexis 2006). This section states:

> Any person may seek contribution from any other person who is liable or potentially liable under [CERCLA] § 107(a) [42 USCS § 9607(a)], during or following any civil action under section 106 [42 USCS § 9606] or under section 107(a) [42 USCS § 9607(a)]. Such claims shall be brought in accordance with this section and the Federal Rules of Civil Procedure, and shall be governed by Federal law. In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate. Nothing in this subsection shall diminish the right of any person to bring an action for contribution in the absence of a civil action under section 106 or section 107 [42 USCS § 9606 or 9607].

[17] *Id*.

[18] While oil is specifically excluded by CERCLA at 42 U.S.C. § 9601(14)(f), Massachusetts's State Superfund Law, Massachusetts Oil and Hazardous Material Release Prevention and Response Act, MASS. GEN. L. ch. 21E, § 4 (Lexis 2006) allows for recovery of response costs incurred and future response costs to be incurred in connection with the cleanup of fuels spills.

[19] *See* WASH. REV. CODE §§ 70.105D.40–70.105D.80 (Lexis 2006). Washington State's Model Toxics Control Act allows a party to recover against another potentially liable party for release of petroleum into the environment.

under each statute. Oftentimes, corporate successions, name changes, reverse mergers, and stock sales make it very difficult to determine a corporation's liability status.

II. THE PROCESS: ELEMENTS OF A COST RECOVERY ACTION FOR DOD AGENCIES

Section 107 provides generally that past and present owners and operators of a site, and generators and transporters, who contributed hazardous substances to a site, shall be liable. In order to establish liability under section 107(a), the plaintiffs must establish the following: 1) the contaminated site is a "facility"; (2) there has been a "release" or "threatened release" of a "hazardous substance" from the facility; (3) the government has incurred "costs" in response to the release or threat of release; and (4) each defendant must be one of the following "persons": (a) one who owns or operates the facility; (b) one who owned or operated the facility at which such hazardous substances were disposed of; (c) one who arranged for disposal of a hazardous substance which it owned or possessed, at a facility containing such hazardous substances; or (d) one who accepted a hazardous substance for transport to a disposal or treatment facility or to a site.[20]

Due to the possibility of cost recovery efforts in any case in which CERCLA funds are expended, the observation, documentation and preservation of critical facts and response costs is important to assure that:

- potential evidence concerning the site . . . and responsible parties is noted and documented before response activity or the passage of time obscures or eliminates it;
- physical evidence essential at trial is collected and preserved appropriately; and
- sufficient evidence of total costs and claims paid from the Fund has been maintained and is available to support recovery by the government.[21]

Typically, a cost recovery action begins with the government entity concerned cleaning up the contamination. Under section 104 of CERCLA, the United States or its authorized representatives may take a

[20] United States v. Stringfellow, 661 F. Supp 1053, 1059 (C.D. Cal. 1987).
[21] ENVIRONMENTAL PROTECTION AGENCY, COST RECOVERY ACTIONS UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) 2 (1983), http://www.epa.gov/compliance/resources/policies/cleanup/superfund/costrec-act-mem.pdf (last visited June 23, 2006).

"removal" or "remedial action"[22] at a site when, *inter alia*, any hazardous substance is released or there is a substantial threat of such a release into the environment.[23] While the cleanup is being conducted, or after it is complete, it is DoD policy that the individual service components shall pursue cost recovery for amounts when the total expended cleanup exceeds $50,000.[24]

The DoD agencies may pursue an action under section 107(a) for removal or remediation costs incurred by the United States not inconsistent with the CERCLA National Contingency Plan (NCP).[25] Most often, costs are paid by the DoD agency out of its environmental restoration account.[26] Section 104(b) also authorizes the recovery of costs of sampling, analysis, monitoring and surveying programs, and certain other costs, including those for planning, legal, and engineering services.[27]

A successful affirmative cost recovery action requires the DoD agency be prepared to introduce evidence demonstrating: (1) release of a hazardous substance or the substantial threat of such a release; 2) the responsibility of the defendant(s); (3) removal or remedial actions taken by the United States or the state which were not inconsistent with the NCP;[28] and 4) the costs of the action taken by the agency.[29]

The financial condition of a responsible party is not an essential element of proof of the cause of action. Even so, it is prudent to take this

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[22] 42 U.S.C. § 9601 (23)-(24) (Lexis 2006).
[23] *Id.* § 9604.
[24] RESTORATION PROGRAM, *supra* note 6. As a matter of policy:

> Components shall pursue recovery of response costs of $50,000 or more whenever a response action on DoD property is required because of legal requirements or an imminent and substantial threat to human health or the environment, and the cooperation of the other PRP could not be negotiated in advance of the work performance. The Components will inform ODUSD(I&E) of all attempts to recover response costs.

[25] 40 C.F.R. pt. 300 (2005). The NCP details criteria, identifies threats, explains when a removal action may take place, and sets forth procedures that must be followed by EPA, federal entities, and private parties for selecting and conducting CERCLA response actions. *Id.*
[26] 10 U.S.C. § 2703 (Lexis 2006).
[27] For a list of NCP costs that are recoverable, see 40 C.F.R. pt. 300 (2005).
[28] *See* United States v. Alcan Aluminum Corp., 964 F.2d 252, 258-59 (3d Cir. 1992); 40 C.F.R. pt. 300 (2005). Although the Code of Federal Regulations provides that the agency should document why its actions are consistent with the NCP, once the agency produces some documentation that its response is consistent with the NCP, the burden will shift to the defendant to prove that the agency's actions are inconsistent with the NCP.
[29] These are the elements of a section 107(a) CERCLA recovery action using terminology applicable to the government.

into consideration when determining whether to bring a cost recovery action under federal or state law.[30]

III. ANALYZING THE CASE: STATE VERSUS FEDERAL RECOVERY STATUTES

While a perfect world would allow the DoD agencies to bring suit pursuant to section 107 every time, the reality of affirmative cost recovery sometimes dictates that it be brought pursuant to applicable state law. One example would be petroleum spills, which are specifically excluded by definition from CERCLA at section 101(14) and section 101(33). In the case of such a spill, the federal government would be required to bring suit pursuant to state law,[31] or perhaps under contract law against a contractor that spilled the petroleum, to recover cleanup costs. Unfortunately for the DoD, this is a likely contaminant at many DoD air stations and remote operating bases, where petroleum is stored in large quantities by a third party for resale to the government.

IV. DISTINGUISHING RECOVERY RIGHTS BETWEEN PRIVATE AND FEDERAL PRPS

CERCLA initially only provided for cost recovery under section 107, which provides that any PRP shall be liable for "all costs of removal or remedial action incurred by the United States government . . . and any other necessary costs of response incurred by any other person."[32] Section 107 liability is strict, joint and several. Section 113 contribution actions, however, are governed by equitable factors.[33] The equitable factors are known as the Gore factors, named after the former vice president and senator from Tennessee. The Gore factors include: (1) the ability of the parties to demonstrate that their contribution can be distinguished; (2) the amount of hazardous substance involved; (3) the degree of toxicity of the hazardous substance; (4) the degree of

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[30] RESTORATION PROGRAM, *supra* note 6. This guide provides that the agency must determine whether recovery from the PRP is feasible. If the Department of Justice and the agency determine that recovery is not feasible, that fact must be reported to the Officer of the Secretary of Defense (Installations and Environment).

[31] *See* WASH. REV. CODE §§ 70.105D.40–70.105D.80 (Lexis 2006). Washington State's Model Toxics Control Act allows a party to recover against another potentially liable party for release of petroleum into the environment.

[32] William D. Evans, Jr., *The "Road Warrior" Quality of Superfund Contribution Litigation*, 32 TENN. BUS. J. 26, 29-30 (1996).

[33] United States v. Colorado & Eastern R.R., 50 F.3d 1530, 1536 n.5 (10th Cir. 1995). Courts may consider several equitable factors when apportioning costs, including those known collectively as the "Gore factors" after an unsuccessful amendment to CERCLA offered by then-Congressman Al Gore. *See also* ROBERT V. PERCIBAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 367 (2d ed. 1996).

involvement by the parties in generation, transportation, treatment, storage, or disposal; (5) the degree of care exercised by the parties taking into account the characteristics of the hazardous substance; and (6) the degree of cooperation by the parties with government officials to prevent harm.[34]

For this reason, a liable PRP would clearly prefer to recover costs of cleanup from other PRPs under the provisions of section 107 rather than section 113, since joint and several liability would allow the liable suing party to recover the full cost of the cleanup, not just the amount paid in excess of its equitable share.[35] Section 113 contribution actions generally must be brought within three years of one of the following triggering events: (1) the day of judgment in any section 113 action for the recovery of response costs or damages; (2) the date of an administrative order under a section 122(g) *de minimis* settlement; (3) the date of an administrative order under section 122(h) for a section 107 cost recovery settlement; or (4) the entry of a judicially approved settlement for any response costs or damages.[36]

A recent trend among federal circuit courts has prevented private PRPs from recovering the entire costs of remediation from multiple joint and severally liable defendants in a section 107 cost recovery action. This is true even where the party recovering costs innocently purchased the property and thus became a PRP and potentially liable based only upon ownership of the facility.[37] In suits where the recovery action is brought by a private PRP that factually has some responsibility for the contamination, courts have unanimously held that "one potentially responsible person can never recover 100 percent of the response costs from others similarly situated since it is a

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[34] *Colorado & Eastern*, 50 F.3d at 1536.

[35] A section 107(a) cost recovery claim allows recovery for all necessary response costs, while a section 113(f) contribution allows only for reapportionment of costs where it is possible to determine each party's fair share of the harm caused using equitable factors such as the Gore factors. *Colorado & Eastern*, 50 F.3d at 1536.

[36] 42 U.S.C. § 9613(g)(3)(A)-(B) (Lexis 2006).

[37] *See* Bedford Affiliates v. Sills, 156 F.3d 416, 424 (2d Cir. 1998) (explaining that their "decision today to limit the recovery of a potentially responsible person to contribution under § 113(f) not only is in keeping with the holdings of other Circuits . . . but also gives CERCLA its full intended effect"); Pneumo Abex Corp. v. High Point, Thomasville & Denton R.R. Co., 142 F.3d 769, 776 (4th Cir. 1998), *cert. denied*, 525 U.S. 963 (1998); Centerior Serv. Co. v. Acme Scrap Iron & Metal Corp., 153 F.3d 344, 356 (6th Cir. 1998) (finding that "parties who themselves are PRPs . . . are limited to actions for contribution governed by the mechanisms set forth in CERCLA § 113(f)"); New Castle County, 111 F.3d 1116, 1121 (3d Cir. 1997); Pinal Creek Group v. Newmont Mining Corp., 118 F.3d 1298, 1301 (9th Cir. 1997), *cert. denied,* 524 U.S. 937 (1998); Redwing Carriers, Inc. v. Saraland Apartments, 94 F.3d 1489, 1513-1514 (11th Cir. 1996); Colorado & Eastern R.R. Co., 50 F.3d 1530, 1536 (10th Cir. 1995); United Technologies Corp. v. Browing-Ferris Industries, Inc., 33 F.3d 96, 103 (1st Cir. 1994); Akzo Coatings, Inc. v. Aigner Corp., 30 F.3d 761, 764 (7th Cir. 1994).

joint tortfeasor—and not an innocent party—that ultimately must bear its pro rata share of cleanup costs under § 107(a)."[38]

Despite the virtual unanimity amongst the circuits regarding *private* PRPs, limiting them to section 113 actions, most courts that have addressed the issue have created exceptions for *federal* PRPs; permitting them to obtain full cost recovery under section 107, regardless of their PRP status.[39] These decisions create a distinction between private and federal PRPs, which is not evident in the statute.[40]

Most often, federal district courts have held that federal PRPs, despite their status as PRPs, may recover fully from jointly and severally liable defendants.[41] Many of these federal district courts have cited the following legislative history of SARA:

> [Section 113 of CERCLA] does not affect the right of the United States to maintain a cause of action for cost recovery under Section 107 (CERCLA § 107) or injunctive relief under Section 106 (CERCLA § 106), whether or not the U.S. was an owner or operator of a facility or a generator of waste at the site. Where the United States has been required to pay response costs as a generator or facility owner or operator, the United States may maintain an action to recover such costs from other responsible parties.[42]

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[38] *Bedford Affiliates*, 156 F.3d at 424.

[39] *See, e.g.*, United States v. Gurley, 317 F. Supp. 2d 870 (E.D. Ark. 2004); United States v. Monsanto Co., 182 F. Supp. 2d 385 (D.N.J. 2000); United States v. Chrysler Corp., 157 F. Supp 2d 849 (N.D. Ohio 2001); United States v. Friedland, 152 F. Supp. 2d 1234 (E.D. Colo. 2001); United States v. Hunter, 70 F. Supp. 2d 1100, 1108 (C.D. Cal. 1999) (permitting the United States government an alleged arranger to proceed under section 107); Town of Wallkill v. Tesa Tape, 891 F. Supp. 955, 959 (S.D.N.Y. 1995) (distinguishing a first circuit decision limiting private PRPs to section 113 contribution action because "neither a town nor other governmental entity was involved"); United States v. Kramer, 757 F. Supp. 397, 414 (D.N.J. 1991) (holding that the federal government as an alleged PRP "is therefore entitled to full recovery of [clean-up costs], whatever its potential liability for contribution"); United States v. Western Processing Co., 734 F. Supp. 930, 939-40 (W.D. Wash. 1990) (holding that although the United States was a former site operator, it may proceed with a section 107 cost-recovery action). Although this article refers to the distinction between federal and private PRPs, it should be noted that state and local governmental PRPs have been treated the same as the latter.

[40] Dianne K. LeVerrier, *Are Some Polluters More Equal Than Others? A Critique of Caselaw Establishing Preferential Treatment of Federal Potentially Responsible Parties (PRPS) Under CERCLA*, 17 TOURO L. REV. 503, 506 (Winter 2001).

[41] *Id.* at 518.

[42] *See* H.R. REP. NO. 99-253, at 79-80 (1985), *reprinted in* 1986 U.S.C.C.A.N. 2835, 2861-62.

V. STATUTE OF LIMITATIONS ISSUES

Where a federal agency is considering whether to bring an affirmative cost recovery action against a PRP, the statute of limitations analysis can be critical. Under CERCLA, the statute of limitations analysis may appear simple, but, as will be discussed herein, there has been a great deal of litigation in order to clarify some of the many ambiguities in the statutory language.

There are separate statutes of limitations for section 107 recovery and section 113 contribution actions. Under the recovery statute, where there has only been a removal action, a party has three years after completion of the removal action to bring a lawsuit against a PRP.[43] Where there has been a remedial action, the party has six years after initiation of physical on-site construction of the remedy to bring an action.[44] In cases where there is a removal action followed by a remedial action, the six year remedial action statute applies, provided the remedial action began no more than three years after the removal action was complete.[45] The terms removal and remedial action are defined at sections 101(23) and (24), respectively.

Where a party is required to use section 113 to initiate a contribution action, such an action must be commenced within three years after: (1) the date of the judgment for cost recovery or damages; 2) the date of the settlement under section 122(h) of CERCLA; or (3) the date of entry for a judicially approved settlement.[46]

In practice, it has been difficult for parties to correctly analyze the many facets of the statute of limitation issues surrounding CERCLA. There are several issues including: (1) whether the action taken is a removal or is remedial in nature; (2) whether the site is one facility or may be broken up into several different facilities with different statutes of limitation; and (3) whether it is a cost recovery or contribution action. Where it is a contribution action, there is a question of what to do if none of the triggering events mentioned in section 113(g)(3) have occurred.

One case that analyzes all the various questions that might be posed to a prospective plaintiff is a recent Ohio District Court case, *Cytec Industries, Inc. v. B.F. Goodrich, Co*.[47] While the authors do not agree with the court's decision regarding whether the facility should have been treated as one site or separated into two sites for purposes of the statute of limitation, the case is still very helpful in showing the prospective plaintiff how to analyze his or her case. The first question

[43] 42 U.S.C. § 9613(g)(2)(A) (Lexis 2006).
[44] *Id.* § 9613(g)(2)(B).
[45] *Id.*
[46] *Id.* § 9613(g)(3).
[47] 232 F. Supp. 2d 821 (S.D. Ohio 2002).

the court looked at was whether the action was one rightfully brought as a cost recovery or a contribution matter. The court determined Cytec was a PRP and, as such, was limited to bringing a contribution action.[48] Since Cytec was now limited to a contribution action, the next inquiry was whether any of the triggering events in section 113(g)(3) had occurred to start the clock running. The court found that none of the listed triggering events had occurred because Cytec had incurred costs pursuant to a unilateral administrative order. With this fact established, the court had to decide whether there was a relevant statute of limitations and, if so, which one applied.[49] The court, citing *City of Merced v. R.A. Fields,*[50] listed the following three approaches that might be taken when none of the triggering events had occurred:

> (1) follow the plain language of [section 113(g)(3)] and find that there is no statute of limitations for this case; (2) use the six-year statute of limitations in [section 113(g)(2)]; or use the three-year statute of limitations in [section 113(g)(3)] and import another triggering event from federal common law.[43]

Several appellate courts have ruled on this issue,[51] but the Sixth Circuit, in which the *Cytec* Court sat, had only dealt with the matter in dicta. In *Centerior Service Co. v. Acme Scrap Iron and Metal Corp.*,[52] the Sixth Circuit stated it need not adopt the Tenth Circuit's reasoning in *Sun Co. v. Browning-Ferris, Inc.*[53] because the matter of a statute of limitations was not directly before the court; however, they found the Tenth Circuit's reasoning to be most persuasive. In *Sun Co.*, the Tenth Circuit found the plaintiff's contribution suit, while governed by the equitable principles of section 113(f), was the initial action for recovery of such costs and, therefore, one should look to the "initial action" for recovery discussed in section 107. This would mean, for example, if Cytec's activities were found to be remedial in nature, the statute of limitation would be six years after initiation of the physical on-site construction of that action.[54]

Once the *Cytec* court made this determination, they turned to whether the response actions undertaken by Cytec had been a removal action or was remedial in nature. While CERCLA does define the terms

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[48] *Id.* at 832.
[49] *Id.*
[50] 997 F. Supp. 1326, 1334-35 (E.D. Cal. 1998).
[43] *Cytec Industries*, 232 F. Supp. 2d at 831.
[51] *See, e.g.*, Geraghty and Miller, Inc. v. Conoco, Inc., 234 F.3d 917, 924 (5th Cir. 2000); Sun Co. v. Browning-Ferris, Inc., 124 F.3d 1187, 1191 (10th Cir. 1997).
[52] 153 F.3d 344, 354-55 (6th Cir. 1998).
[53] 124 F.3d 1187, 1191 (10th Cir. 1997).
[54] *Id.* at 1192.

"removal" and "remedial action,"[55] there is often room for debate between the parties and the courts have set forth some general guidelines to assist parties with this issue. For example, some courts have indicated that a remedial action can begin before the EPA issues its final approval of the remedial design[56] and other courts have held the date the Record of Decision (ROD) is signed is the date it is issued and that is the date the removal action is completed.[57]

Remedial actions have been characterized as "seek[ing] to effect a permanent remedy to the release of hazardous substances when there is no immediate threat to the public health. Remedial actions usually cost more and take longer."[58] A removal action, by contrast, generally "costs less, takes less time, and is geared to address an immediate release or threat of release."[59] In *Cytec*, the court found the cleanup activities were not the result of an imminent release or threat of release, but was an option chosen by Cytec in order to comply with environmental regulations. The court felt Cytec's activities were, therefore, indicative of a remedial action.[60]

The question that followed was an inquiry as to when the physical on-site construction of the remedy began. In order to make that determination, the *Cytec* court looked to the following four-part test set out in *California v. Hyampom Lumber*:[61] the event in question must (1) be "physical," (2) occur "on-site," (3) be a part of the "construction of the remedial action," and (4) must constitute the "initiation" of the remedial action.[62] The *Cytec* court, using that analysis, found the act of beginning construction of a concrete slab upon which Cytec was to place equipment used to remove the contents of a sludge pond was the initiation of physical on-site construction.[63]

A final question addressed by the *Cytec* court is one that a federal agency seeking to bring an affirmative cost recovery action will almost always have to answer in determining whether the statute of limitation has run on all or part of a cleanup effort. Whether a large

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[55] 42 U.S.C. §§ 9601 (23), (24) (Lexis 2006).
[56] State of California v. Neville Chemical Co., 358 F.3d 661 (9th Cir. 2004); United States v. Navistar, 152 F.3d 702 (7th Cir. 1998); GenCorp., Inc. v. Olin Corp., 390 F.3d 433 (6th Cir. 2004); United States v. Drum Service, 109 F. Supp. 2d 1348 (M.D. Fla. 2000).
[57] California v. Celtor Chemical Corp., 901 F. Supp. 1481, 1487-89 (N.D. Cal. 1995); Pneumo Abex Corp. v. Bessemer and Lake Erie R. Co., 142 F.3d 769 (4th Cir. 1998); United States v. Davis, 882 F. Supp. 1217, 1225-27 (D.R.I. 1995).
[58] Public Service Co. of Colorado v. Gates Rubber Co., 175 F.3d 1177, 1182 (10th Cir. 1999).
[59] *Id*.
[60] Cytec Industries, Inc. v. B.F. Goodrich, Co., 232 F. Supp. 2d 821, 839 (S.D. Ohio 2002).
[61] 903 F. Supp. 1389, 1391 (E.D. Cal. 1995).
[62] *Cytec Industries*, 232 F. Supp. 2d at 839.
[63] *Id.* at 840.

industrial facility (or in our case, a large military facility) should be treated as a whole for purposes of the statute of limitation or whether it can be separated into distinct areas was a critical question for *Cytec* and may be for a federal agency recovery or contribution action.

The term "facility" is defined in CERCLA as being:

> (A) any building, structure, installation, equipment, pipe, or pipeline (including any pipe into a sewer, or public owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.[64]

The *Cytec* court concluded the broadest geographical definition of a facility appropriate under the specific fact scenario in a given case would "likely best advance CERCLA's two underlying purposes—to ensure prompt and efficient cleanup of hazardous waste sites and to place the costs of those cleanups on the potentially responsible persons."[65] Here the court found only one facility for purposes of determining the relevant statute of limitation. Other courts have held differently regarding whether it is advisable to construe the facility in question as broadly as possible.

For example, in *Union Carbide Corp. v. Thiokol Corp.*,[66] the plaintiffs alleged the defendants were liable for certain toxic waste cleanup costs occurring at a site the defendants sold to the plaintiffs. The defendants had maintained a landfill as well as several solid waste management units (SWMUs) on the property during their period of ownership. The statute of limitations had run on the landfill, but not on the SWMUs, assuming they were not all part of one facility along with the landfill.[67] The *Union Carbide* court decided the SWMUs were, in fact, separate facilities from the landfill because "the SWMUs [were] geographically distinct from the landfill, contain[ed] a variety of wastes that were not present in the landfill, may require different removal and remedial actions than the landfill, and were not treated as part of a unitary CERCLA facility with the landfill."[68]

In another district court decision, the New Jersey courts agreed with the United States that "because of the complexity of Superfund

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[64] 42 U.S.C.§ 9601(9) (Lexis 2006).
[65] *Cytec Industries*, 232 F. Supp 2d. at 835-836.
[66] 890 F. Supp. 1035 (S.D. Ga.1994).
[67] *Id.*
[68] *Id.* at 1043.

sites, it is beneficial to divide response actions into different operable units and RODs because [the agency] is therefore able to move quickly to reduce health and environmental risks."[69] The court went on to say that allowing the government to bring cost recovery actions based on the needs and timing of individual RODs honors CERCLA's goals of facilitating cleanup of hazardous waste and requiring the PRP to pay for the cleanup of those wastes.[70]

The Sixth Circuit Court of Appeals reached a decision with the opposite result. In *United States v. Township of Brighton*,[71] the court found that a property was one facility under CERCLA, thus making the Township liable not only for the costs of cleaning up the township dump but also the other portions of the site as well. The Township generally left its refuse in the southwest corner of the site, but the owner of the site (who was by the time of this action, bankrupt) had moved refuse around on the property and the owner had also used other portions of the site to dump materials from non-residents and industries. Based on the fact the owner had used the whole site as a dump, it was appropriately classified as a single facility.[72]

Clearly, the case law is not settled in this area. A federal agency involved in an affirmative cost recovery suit, however, should be able to make an argument that, due to the different types of activities usually ongoing at any given military installation, there is more than one facility involved. These activities will necessarily be producing different wastes, needing different remedies. Also, unlike the rest of the installation, the affirmative cost recovery claim will be based on a discrete action by a third party.

VI. RECOVERABLE COSTS

CERCLA allows governmental entities to recover all costs of removal or remedial actions incurred by the United States when those costs are not inconsistent with the NCP.[73] Courts generally rely on section 113(j) of CERCLA and review the agency's selection of a response action under an arbitrary and capricious standard based upon the administrative record.[74] Defendants in *U.S. v. Akzo Nobel Coatings, Inc.*[75] claimed EPA's conduct was arbitrary, capricious, and inconsistent

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[69] United States v. Manzo, 182 F. Supp. 2d 385, 403 (D.N.J. 2000).
[70] *Id*.
[71] 153 F.3d 307 (6th Cir. 1998).
[72] *Id*. at 313; *see also* Sierra Club v Seaboard Farms, Inc., 387 F.3d 1167 (10th Cir. 2004).
[73] 42 U.S.C. § 9607(a)(4)(A) (Lexis 2006).
[74] *See* United States v. Burlington Northern Railroad Co., 200 F.3d 679 (10th Cir. 1999); United States v. Chapman, 146 F.3d 1166 (9th Cir. 1998); United States v. Akzo Coatings of America, Inc., 949 F.2d 1409 (6th Cir. 1991).
[75] 990 F. Supp. 892 (E.D. Mich. 1998).

with the NCP, but the court found EPA had followed the requirements of the NCP[76] in force at the time. Those requirements included an evaluation of the following: (1) the technical feasibility; (2) cost-effectiveness; (3) implementability; (4) protection of human health and the environment; (5) reduction of toxicity, volume, and mobility of hazardous wastes; and (6) the adverse environmental impacts of competing remedies.[77] The *Akzo* court found that perhaps EPA did not select the best remedy available to it, but the job of the court was only to see that the remedy was rationally chosen based upon the information available at the time the remedy was selected.[78]

The types of costs recoverable under CERCLA are found both in the statute and in case law. For example, the United States is allowed to collect past response costs, oversight costs, indirect costs,[79] and at least in the case of remedial actions, monitoring costs.[80] The United States is also entitled to prejudgment interest.[81] The recovery of attorney's fees is also allowed because response costs as defined in section 101(25) include enforcement activities related thereto.[82]

However, in *United States v. Chapman*,[83] a Ninth Circuit Court of Appeals case of first impression, the court remanded back to the District Court to determine the reasonableness of the government attorneys' fees. There the district court recognized the government was entitled to attorneys' fees under section 107(a)(4)(A), but felt that further analysis as to the reasonableness of the costs submitted was necessary. The court in *Chapman* interpreted the Supreme Court case, *Key Tronic Corp. v. United States,* as prohibiting the award of attorneys' fees only where a private party is bringing a cost recovery action.[84] Additionally, the Second[85] and the Eighth[86] Circuit Courts of Appeal have held that the government is entitled to the award of attorneys' fees because the term "respond" as defined at section 101(25) includes "enforcement activities related thereto."

As the DoD begins its Affirmative Cost Recovery Program, it is important to remember adequate documentation of response costs

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[76] 40 C.F.R. 300.68(h)(2)(i)–(v.i.); *see also* American Cyanamid Co. v. Capuano, 381 F.3d 6 (1st Cir. 2004).
[77] *Id.*
[78] *U.S. v. Akzo*, 990 F. Supp at 897.
[79] U. S. v. Dico, Inc., 266 F.3d 864 (8th Cir. 2001).
[80] *Id*. at 878; *see also* United States v. Rohm & Haas Co., 2 F.3d 1265 (3d Cir. 1993); United States v. EI du Pont de Nemours & Co., 341 F. Supp. 2d 215 (W.D. N.Y. 2004).
[81] 42 U.S.C. § 9607(a)(4) (Lexis 2006).
[82] United States v. Gurley, 43 F.3d 1188, 1199-1200 (8th Cir. 1994), *cert. denied*, 516 U.S. 817 (1995) (affirming award of attorneys fees for U.S. Department of Justice and EPA's attorneys' work on a 42 U.S.C. § 9607(a)(4)(A) recovery action).
[83] United States v. Chapman, 146 F.3d 1166 (9th Cir. 1998).
[84] Key Tronic Corp. v. United States, 511 U.S. 809 (1994).
[85] B.F. Goodrich v. Betkoski, 99 F.3d 505 (2d Cir. 1996).
[86] U.S. v. Dico, Inc., 266 F. 3d 864 (8th Cir. 2001).

accrued by an agency will be necessary. Assuming the DoD is accorded the use of section 107 cost recovery authority, the burden will be on the PRP to prove response costs incurred by the government are inconsistent with the NCP.[87] Keeping in mind the Federal Rules of Evidence, the agency seeking cost recovery should document costs in close proximity to the time they are incurred and in a manner that is consistent with the ordinary course of business.[88] A recent Eighth Circuit case has held that the United States may prove its costs by presenting "thoroughly detailed cost summaries and supporting data," along with other competent evidence, so long as the evidence supported the agency's assertion the costs had actually been incurred.[89]

VII. RECOVERING FROM A CONTRACTOR

While there will be some circumstances where neighboring businesses, tenants, or trespassers will be responsible for releasing hazardous wastes onto federal property, there will also be instances where government contractors do so. This may occur where the contractor only has a single contract to perform some service on federal property. It can also occur in those instances where the contractor has a long-term relationship to operate a government facility, as well as production contracts under which some widget is produced for the government. These arrangements are often referred to as "GOCO" or Government Owned/Contractor Operated facilities.

In those circumstances where a contractor is responsible for releasing hazardous substances onto government property, the ability of the government to recover response costs expended on cleanup may be affected by the terms of the facility, production or performance contracts in place between the parties at the time of the release. While section 107(a)(4)(A) indicates a PRP will be liable for "all costs of removal or remedial action incurred by the United States . . . not inconsistent with the national contingency plan," section 107(e)(1) indicates there is no bar to agreements "to insure, hold harmless, or indemnify a party to such agreement for any liability under this section." So, before proceeding with a cost recovery action against a contractor, the government attorney must consider the terms of the contract or contracts that define the relationship between the two parties.

A recent Court of Federal Claims case, *DuPont De Nemours and Company, Inc. v. United States,* (later overturned) is illustrative of the inquiries the government attorney should make when considering affirmative cost recovery against a contractor.[90] In, *DuPont* the trial

[87] United States v. Hardage, 982 F.2d 1436 (10th Cir. 1992).
[88] FED. R. EVID. 803(6).
[89] United States v. Findett Corp., 220 F.3d 842 (8th Cir. 2000).
[90] DuPont De Nemours & Company, Inc. v. United States, 54 Fed. Cl. 361

court narrowed the circumstances in which indemnity or reimbursement clauses will require the government to indemnify or reimburse the contractor for CERCLA liability. The trial court heard arguments for and against allowing DuPont to recover money from the U.S. Army for environmental cleanup costs. The contracts involved dated back to World War II. The Army responded by claiming: (1) the Indemnification Clause of the contracts in question did not specifically include these environmental costs; (2) the liability for CERCLA costs accrued too long after the performance of the contract had ended and such costs were not provided for in the contract; and (3) the Anti Deficiency Act (ADA),[91] 31 U.S.C. § 1341 (2000), and its predecessor legislation prohibited an open-ended indemnification clause such as the one involved in this controversy.[92]

The trial court examined the language found in the reimbursement and indemnification clauses and determined the language was written broadly enough "to be properly interpreted to place the risk of unknown liabilities on the government, including liability for costs incurred pursuant to CERCLA."[93] In coming to this conclusion, the court looked at a district court decision, *Elf Atochem North America v. United States,*[94] to determine that a court should look to see if the indemnification clause was written so broadly that it could include environmental liabilities not common at the time the contract was entered into, or whether the language was so specific that it included such environmental costs.[95]

The trial court then looked at the government's claim that the costs were too remote in time from the performance of the contract. Here again, the court agreed with the contractor's argument. The court cited *Houdaille Industries, Inc. v. United States*[96] for the proposition that expenses arising out of the contractor's performance of the contract were reimbursable even years later, so long as the reimbursement clause does not limit itself to costs arising during the performance of the contract. In the DuPont contracts there was no such limiting language, so the time expanse was not found to bar DuPont's recovery.

The government's final argument against reimbursing DuPont was reluctantly accepted by the trial court and effectively blocked DuPont's attempt to obtain reimbursement and indemnification.[97] The trial court clearly believed the Indemnification and Reimbursement

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(2002), *rev'd*, 365 F.3d 1367 (Fed. Cir. 2004).
[91] 31 U.S.C. § 1341 (2000).
[92] *DuPont*, 54 Fed.Cl. at 364.
[93] *Id.* at 369.
[94] 866 F. Supp. 868 (E.D. Pa. 1994).
[95] *Id.* at 870 (citing Beazer East v. Mead Corp., 34 F.3d 206, 210 (3d Cir. 1994), *cert. denied*, 514 U.S. 1065 (1995)).
[96] 138 Ct. Cl. 301, 151 F. Supp. 298 (1957).
[97] *DuPont*, 54 Fed. Cl. at 370.

clauses evidenced intent on the part of the government to assume nearly all risks for costs and other liabilities incurred as a result of plaintiff's participation in the war effort through performance of this contract.[98] The lower court went on to note the ADA and its predecessors prohibited the inclusion of open-ended indemnification or reimbursement clauses in government contracts except where there is a specific appropriation or statutory authority.[99]

In the *DuPont* case, there was no specific appropriation and no specific statutory authority for the open-ended indemnification and reimbursement clauses found in the contract. The trial court noted that while the Act of July 2, 1940 did authorize cost plus fixed fee contracting, out of which flowed the Reimbursement clause in question, that Act still did not specifically authorize this reimbursement. In fact, as the trial court pointed out, the Act only authorized the Secretary of War to enter into contracts utilizing "moneys appropriated to the War Department for National Defense purposes."[100]

On appeal, the United States Court of Appeals for the Federal Circuit reversed the lower court, finding that while the ADA does have a prohibition against broad, open-ended indemnification clauses, the ADA also has an exception that applied in this case.[101] The relevant language relied upon by the appellate court states that open-ended indemnification or reimbursement is prohibited "unless such contract or obligation is authorized by Law." DuPont argued and the appellate court agreed that the Contract Settlement Act of 1944 was the law authorizing the indemnification clauses in question and allowing them to survive the termination agreements entered into in 1946.[102]

As a result of the *DuPont* decision, and *Ford v. United States*,[103] both of which involved WWII indemnification clauses, and both of which ruled against the United States in 2004, early and thorough efforts to locate and work with government contract experts to analyze historical contract documents must be included in any prudent affirmative cost recovery practitioner's standard operating procedure.

A final concern the government attorney must consider when contemplating an affirmative cost recovery action against a contractor is the potential for those costs to be included in overhead and spread out across many government contracts. The Federal Acquisition Regulation[104] and Defense Contract Audit Agency guidelines[105] allow

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[98] *Id.*
[99] *Id.*
[100] *Id.* at 373.
[101] DuPont De Nemours and Company, Inc. v. United States, 365 F.3d 1367 (Fed. Cir. 2004).
[102] *Id.* at 1380.
[103] 56 Fed. Cl. 85 (2003), *rev'd*, 378 F.3d 1314 (Fed. Cir. 2004).
[104] Federal Acquisition Regulation, 48 C.F.R. §§ 1-53 (Lexis 2006).

environmental costs to be charged against overhead in the absence of contractor wrongdoing or lack of due care[106] if the costs are reasonable and allocable to the contract.[107] Costs the contractor incurs to clean up environmental contamination occurring in past years are to be allocated through the contractor's General and Administrative (G&A) expense pool.[108]

While it may then be possible for the contractor to pass along the costs of reimbursing the government for environmental cleanup costs back through the G&A rates, it is equally possible those costs may make that contractor less competitive for future contracts. It is also possible the costs will be spread across a large number of government contracts so the entirety of those costs will not be passed back solely to the agency bringing the affirmative cost recovery action. Additionally, some, or all of those costs may be disallowed because of actions by the contractor that caused the environmental cleanup to be necessary in the first place. Finally, it is also possible the government and the contractor, in negotiating a settlement of an affirmative cost recovery action, could structure a settlement that avoids inclusion of cleanup cost reimbursements in the G&A rates of current or future contracts.

VIII. CONCLUSION

Congress has clearly indicated it expects the DoD to be good stewards of the taxpayer resources provided to it through the environmental restoration account[109] by allowing the DoD agencies to credit any affirmative cost recoveries back to the environmental restoration accounts. Pursuant to fiscal law guidelines, any such crediting requires a specific authorization by Congress; otherwise, money returning to a federal agency is required to be returned as general receipts to the U.S. Treasury. Congress has allowed money recovered as a result of the DoD going after other parties responsible for releasing hazardous substances onto DoD property to be returned to the agency's environmental restoration account,[110] instead of going directly back to the U.S. Treasury. In the 1998 Defense Authorization Act, Congress further encouraged cost recovery by requiring the DoD to develop a process for determining what potential affirmative cost recovery sites were on DoD property and required that the DoD investigate those sites and make a determination as to the likelihood of cost recovery. In

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[105] DEFENSE CONTRACT AUDIT AGENCY, DCAA CONTRACT AUDIT MANUAL DCAAM 7640.1 ¶ 7-2120 (February 23, 2003) [hereinafter DCAAM].
[106] 10 U.S.C. § 2324 (Lexis 2006).
[107] DCAAM, *supra* note 105, ¶ 7-2120.1.
[108] *Id*. ¶ 7-2120.6.
[109] 10 U.S.C. § 2703 (Lexis 2006).
[110] *Id.* § 2703(e).

September 2001, the new Defense Environmental Restoration Program Guidance provided that "[c]omponents shall pursue recovery of response costs of $50,000 or more whenever a response action on DoD property is required because of legal requirements or an imminent and substantial threat to human health or the environment, and the cooperation of the other PRP could not be negotiated in advance of the work performance."[111]

To ensure the DoD is able to meet the intent of Congress and protect the public fisc, the DoD must proceed assuming section 107 cost recovery is available to it. Using section 107 cost recovery instead of contribution under section 113 will ensure the DoD is able to perform its unique role as environmental enforcer on its lands—a role not unlike the EPA's role on non-federal lands. The DoD is provided a specific amount of funding from public monies in order to cleanup DoD properties; if the DoD does not pursue recovery from outside entities where there is clear PRP status, then tax dollars may not be available to pay for the cleanup of DoD sites. Instead, environmental restoration account funds will be continually depleted through DoD cleanup efforts. In essence they will be used to subsidize private party disposal activities. The use of section 107 will provide the availability of joint and several liability and will allow the government to shift the burden to a defendant who must then prove the remedy selected and the procedures followed were inconsistent with the NCP.

With that said, however, the DoD must be mindful of the facts involved in a given case and, where appropriate, should only seek recovery up to an amount reasonably attributable to the PRP along with any other costs generally recoverable by the United States. Additionally, great care must be taken to assure the DoD captures all the costs attributable to third parties' disposal activities on DoD property. For those cleanups, the DoD must double our efforts to comply with the NCP and the DoD must continue to be mindful of the statute of limitations constraints. Air Force base-level personnel should alert their Major Command counterparts where there is a potential cost recovery action against a third party so the Major Command and Headquarters level personnel can assure all necessary steps are taken to preserve our cause of action as well as begin the required coordination with the Department of Justice.

[111] RESTORATION PROGRAM, *supra* note 6.

ELECTRONIC WASTE CONTROL LEGISLATION: OBSERVATIONS ON A NEW DIMENSION IN STATE ENVIRONMENTAL REGULATION

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I. INTRODUCTION

From the dawning of the computer era in 1936[1] to the present advancements in speed, portability, and user accessibility, the personal computer has become remarkably integrated into American society. Accordingly, the military has embraced the use of personal computers and associated electronics. The computer industry has met the growth of America's computing needs with a steady flow of more efficient and affordable machines.

Quietly following this rising tide of production has been the growing concern of what to do with a flood of obsolete computer equipment and the fear that even the proper disposal of these materials in landfills could carry significant negative environmental and human health impacts. While there is currently no comprehensive federal regulation of electronic waste or "e-waste," as it has been termed, almost half of the states are currently considering legislation to address this concern.

Currently, three states and the territory of Guam have enacted legislation specifically targeting the problem of e-waste, each approaching the issue in a different way. In most states, the resulting legislation addresses e-waste without presenting a problem to the military. California's approach, however, does present a concern for the military and other federal facilities located within the state. Unfortunately, a number of state legislatures are now considering proposals similar to California's. Using the California legislation as a backdrop, this article will address the growing area of state e-waste regulation and offer tools with which to analyze and address the issues.

Section II provides information regarding the nature and scope of the e-waste problem facing the United States and what the federal government and states are doing to manage it. Because it is the first of its type, and because it presents compliance hurdles for the military which may be duplicated in a number of other states, the California legislation will be analyzed in Section III. Section IV presents a legal and factual framework within which one can consider and analyze the issues presented by e-waste legislation similar to California's. Section V offers recommendations that may be useful to military attorneys facing this issue in other states. While every state that addresses this issue will ultimately adopt its own unique approach, the information contained in this article presents a good starting point for identifying and communicating the limitations that military and other federal facilities may have in complying with certain types of e-waste legislation.

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[1] Mary Bellis, *The History of Computers, a Timeline*, ABOUT, http://inventors.about.com/library/blcoindex.htm (last visited Feb. 22, 2006).

II. THE PROBLEM OF ELECTRONIC WASTE

Approximately 62% of U.S. households owned computers in 2003, an increase from 37% six years earlier.[2] This increase in ownership naturally leads to an increase in the amount of e-waste as these computers and related equipment reach the end of their functional life. E-waste can be defined as used electronic products, such as computer central processing units, computer monitors, computer printers, and televisions that have reached the end of their functional lives and simply have no further use.[3]

To keep up with the rate of advancement in computer technology, today's consumers are more likely to purchase a new model rather than attempt to upgrade their existing machine.[4] This trend is exacerbated by the fact that the cost of manufacturing personal computers is continually falling. This makes the purchase of a replacement a relatively cost effective alternative to repair.[5]

While estimates vary, the rate of technological advancement or "the upgrade cycle" ranges from two to three years, which means that a new computer purchased today will reach the end of its useful life and require disposal in that time span.[6] Available data indicates that the vast majority of retired computers, monitors, printers, and television sets has yet to be discarded or recycled and instead remains "stockpiled" in the closets, attics, and basements of the American public.[7] This portends a "tip of the iceberg" scenario for the problem of e-waste disposal across the nation. For example, the National Safety Council estimates that 100 million computers and monitors became obsolete in 2003.[8] The International Association of Electronics Recyclers estimates that 20 million television sets became obsolete in 2003.[9] Of this amount, only a fraction was disposed of in landfills or recycled. The Environmental Protection Agency (EPA) estimates that less than 8 million computer monitors and 8 million television sets are currently disposed of annually

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[2] *Handling of Electronic Waste: Hearing Before the Subcomm. on Superfund, Toxics, Risk and Waste Management,* 109th Cong. 1 (2005) (Statement of John B. Stephenson, Dir. Natural Resources and Environment, United States Government Accountability Office) [hereinafter Stephenson].
[3] *Id*.
[4] U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, CAREER GUIDE TO INDUSTRIES 3 (2005).
[5] *Id*.
[6] ENVIRONMENTAL PROTECTION AGENCY, GREENING YOUR PURCHASE OF ELECTRONICS 1 (Dec. 2001).
[7] Stephenson, *supra* note 2, at 6.
[8] *Id*.
[9] *Id*.

in U.S. landfills.[10] The gap between what has become obsolete and what is actually disposed of suggests that a huge amount of electronic products are simply stored for disposal or recycling at some later date. As a consequence, many commentators forecast that this nation will soon see a flood of e-waste that it is not sufficiently prepared to handle.[11] Of course this view is not universal, and other commentators dispute the severity of the problem, doubting both the projected volume of e-waste and the environmental and human health risks it presents if properly handled.[12] These types of concerns, however, are driving legislative and regulatory efforts.

On the federal level, the EPA has implemented a variety of programs intended to encourage the voluntary recycling of used electronics.[13] For example, it has proposed conditionally removing Cathode Ray Tubes (CRT) from the Resource Conservation and Recovery Act (RCRA) definition of solid waste—relieving some of the RCRA disposal requirements that currently apply—in order to foster the recycling of CRT components.[14] This is significant because a CRT is a vacuum tube, with a high lead component, used in most televisions and many computer monitors, which has historically comprised a large percentage of e-waste.[15]

The e-waste problem has historically received little attention at the federal legislative level. Federal legislation proposed over the last two years approached the problem primarily through tax credits to manufacturers who establish recycling programs, tax credits to consumers for recycling, and fees upon manufacturers to establish

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[10] *Id.*

[11] *See* Danielle M. Bergner, *Comment: The Electronic Waste Recycling Act of 2003: California's Response to the Electronic Waste Crisis*, 88 MARQ. L. REV. 377, 378 (2004); Betsy M. Billinghurst, Note and Comment*: E-Waste: A Comparative Analysis of Current and Contemplated Management Efforts by the European Union and the United States*, 16 COLO. J. INT'L ENVTL. L. & POL'Y 399, 400-405 (2005).

[12] *See generally* DANA J. GATTUSO, COMPETITIVE ENTERPRISE INSTITUTE MANDATED RECYCLING OF ELECTRONICS, A LOSE-LOSE-LOSE PROPOSITION (2005), http://www.cei.org/pdf/4386.pdf (offering counter arguments to specific popular points of concern about e-waste management and disposal).

[13] U.S. GOV. ACCOUNTABILITY OFFICE, REPORT TO CONGRESSIONAL REQUESTERS, ELECTRONIC WASTE, STRENGTHENING THE ROLE OF THE FEDERAL GOVERNMENT IN ENCOURAGING RECYCLING AND REUSE 25-28 (2005).

[14] 67 Fed. Reg. 40507, 40510-40514 (2002) (to be codified at 40 C.F.R. §§ 261.2(c)(4), 261.4(a)(14), (a)(23)). The proposed legislation would remove used, intact CRTs and shredded circuit boards from the RCRA definition of solid waste, unless they are actually disposed. It would still require proper storage while awaiting recycling and would exclude used, broken CRTs from the RCRA definition of solid waste if they were stored for recycling in "a building with a roof, floor and walls" or if not in a building, then in a specified "container." *Id.*

[15] *Id.* at 40509.

national, state, and local e-waste recycling programs.[16] Because of the relative lack of attention given this issue by Congress, a wide range of stakeholders, to include manufacturers, recyclers, retailers, consumer groups, and environmental groups, have expressed growing concern. [17]

Comparatively, the states have been much more aggressive in addressing the e-waste problem. The result has been an increasing patchwork of varying and potentially conflicting state laws. Faced with the potential difficulty and expense such a regulatory landscape presents, many stakeholders, including manufacturers, have indicated a preference for uniform federal regulation.[18]

The concerns that primarily vex the states include the potential volume of e-waste that may soon appear in state landfills and the toxicity of the materials contained in that waste. Depending on its source, e-waste may contain a variety of toxic materials, including lead, cadmium, antimony, beryllium, mercury, and lithium, all of which has the potential to leach into the environment upon disposal.[19] Currently, a hazardous waste of great concern is lead, which is used in the manufacture of CRTs.[20] The scientific data currently available on the subject of leachate from e-waste is sparse and, as one might expect, certain studies support a cause for concern while other studies minimize it.[21] Another area of state interest involves those materials contained in e-waste that have economic value but are difficult to recover, such as gold, silver, platinum, and copper. The U.S. Geological Survey reports that one

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[16] *See* H.R. 320, 109th Cong. (2005) (providing tax incentives to encourage manufacturers of computer, cell phone, and television equipment to operate recycling programs for use by consumers of their products); H.R. 425, 109th Cong. (2005) (establishing a grant and fee program through the EPA to encourage the recycling of used computers and develop a related national infrastructure); S. 510, 109th Cong. (2005) (authorizing a consumer tax credit for recycling used, qualified electronic waste and prohibiting the disposal of certain electronic items); H.R. 4316, 109th Cong. (2005) (authorizing a consumer tax credit for recycling used, qualified electronic waste and prohibiting the disposal of certain electronic items).

[17] Stephenson, *supra* note 2, at 2, 6, 17.

[18] *Id*. at 17.

[19] OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, DRAFT SUMMARY REPORT: ENVIRONMENTAL CONCERNS RELATED TO USED ELECTRONIC PRODUCTS 2-3 (2004), http://www.econ.state.or.us/epsb867rpt.pdf (last visited Feb. 22, 2006).

[20] Stephenson, *supra* note 2, at 5.

[21] *Compare* TIMOTHY G. TOWNSEND, STATE UNIVERSITY SYSTEM OF FLORIDA, FLORIDA CENTER FOR SOLID AND HAZARDOUS WASTE MANAGEMENT, CHARACTERIZATION OF LEAD LEACHABILITY FROM CATHODE RAY TUBES USING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (1999), http://www.ees.ufl.edu/homepp/townsend/Research/CRT/CRTDec99.pdf (concluding laboratory testing suggests risk of chemical release, but recommending further *in situ* study) (last visited Feb. 22, 2006) *and* DANA J. GATTUSO, COMPETITIVE ENTERPRISE INSTITUTE, MANDATED RECYCLING OF ELECTRONICS, A LOSE-LOSE-LOSE PROPOSITION (2005), http://www.cei.org/pdf/4386.pdf (commenting on a number of continuing studies in the area of chemical releases from e-waste in landfills) (last visited Feb. 22, 2006).

metric ton of computer scrap contains between 40 and 800 times the concentration of gold contained in gold ore and 30 to 40 times the concentration of copper contained in copper ore.[22] Devising an economical method to tap into this recyclable resource could provide a source of state revenue.

Arguably, the military's use of computers and other electronic equipment is equal to or greater than that of the per capita civilian population, and regulations that affect the citizens of any individual state may similarly affect a military facility or other federal agency located therein. Records developed by the Air Force Equipment Management Systems/Integrated Asset Management Systems (AFEMS/ITAMS) show that between July and November 2004, Air Force facilities in California purchased 5,455 new pieces of computer equipment to include monitors, printers, and central processing units.[23] This figure does not encompass all purchases made by Air Force facilities in California during that timeframe because many purchases made at the installation level are not tracked through the AFEMS/ITAMS system.[24] Similarly, Navy Region Southwest reports that a single Navy command in California purchased 12,677 separate pieces of computer equipment in 2004.[25] Alternatively, the Defense Reutilization and Marketing Service has "demanufactured"[26] for recycling an estimated 165 million pounds of used military electronics nationwide since February 1999.[27] This amount excludes e-waste generated by other federal agencies.

The current flood of legislation under consideration by state legislatures illustrates the increasing concern over e-waste. There are currently twenty-two states considering seventy-one separate legislative proposals dealing with the disposition of e-waste.[28] The Council of State Governments (COSG), Eastern Regional Conference, recently released a draft model statute for state e-waste programs.[29] Notably, the COSG model places the responsibility of financing and developing the program

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[22] DONALD BLEIWAS & THOMAS KELLY, OBSOLETE COMPUTERS, "GOLD MINE," OR HIGH-TECH TRASH? RESOURCE RECOVERY FROM RECYCLING, U.S. GEOLOGICAL SURVEY, USGS FACT SHEET 3-4 (2001), http://pubs.usgs.gov/fs/fs060-01/fs060-01.pdf (last visited Feb. 22, 2006).

[23] E-mail from AFEMS/ITAMS (Jun. 17, 2005) (on file with author).

[24] *Id.*

[25] E-mail from DoD REC 9 Counsel (May 17, 2005) (on file with author).

[26] This term is used to describe the processing of computers and other used electronics by which they are taken apart to recover all of the economically useful materials therein for reuse or recycling.

[27] Aliya Sternstein, *Agencies' Approaches to Recycling Electronics are Largely Piecemeal*, FED. COMP. WEEK, May 16, 2005, at 3, *available at* http://www.fcw.com/article88872-05-16-05-Print (last visited Feb. 22, 2006).

[28] The states include: CA, HI, IL, IA, KY, ME, MA, MI, MN, MS, NB, NH, NJ, NY, NC, PA, RI, SC, TN, VT, WA, and WI.

[29] *See* COUNCIL OF STATE GOVERNMENTS, MODEL ELECTRONIC RECYCLING LEGISLATION, http://www.csgeast.org/pdfs/RegionalDraft7-06_revised.pdf (last visited Feb. 22, 2006).

on the manufacturer.[30] It also requires the retailer to duly notify the consumer of where and how to reuse and recycle old equipment through the use of a toll-free telephone number or web-site[31] and specifically prohibits charging fees to consumers.[32] Massachusetts is currently considering House Bill 3238, which mirrors the COSG model.[33] Other states are considering similar legislation.[34]

Three states and one U.S. territory[35] have already enacted legislation intended to control the final disposition of certain types of e-waste which, apart from simply banning its land disposal, would ensure its ultimate recovery and recycling. Each state that has enacted e-waste legislation has taken a different approach.

For example, the Maine legislature placed the primary responsibility for "ensuring proper handling, recycling, and disposal of discarded products" on the manufacturers of a specified range of electronic devices,[36] with shared responsibilities for recycling at the municipal and state level.[37] The law covers the recycling of a "computer central processing unit, a cathode ray tube device, a flat panel display or similar video display with a screen that is greater than 4 inches . . . and that contains one or more circuit boards."[38] It requires manufacturers to develop, implement, and finance a plan "for the collection and recycling or reuse" of the subject materials that they produced plus "orphan waste."[39]

Maryland has enacted a pilot program covering desktop personal computers, laptop computers, and computer monitors.[40] The law requires manufacturers who annually sell more than 1,000 computers to register with the state and pay an initial $5,000 registration fee.[41] The manufacturer may then either establish its own "take-back" program and pay an annual fee of $500 or continue to pay an annual fee of $5,000 without establishing a recovery program.[42] Under the law, the manufacturer's take-back program must collect, recycle, refurbish, or

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[30] *Id.* at 3.
[31] *Id.* at 4-5.
[32] *Id.* at 6.
[33] H.B. 3238, 184th Gen. Court, Reg. Sess. (Mass. 2005), *available at* http://www.mass.gov/legis/bills/house/ht03pdf/ht03238.pdf
[34] These states include: MN, NB, NJ, NC, RI, VT, and WA.
[35] Currently California, Guam, Maine and Maryland have functional e-waste regulations. *See* notes 36-69 and accompanying text.
[36] ME. REV. STAT. ANN. tit. 38, § 1610(1) (Lexis 2006).
[37] *Id.* § 1610(5).
[38] *Id.* § 1610(2)(C).
[39] *Id.* § 1610(6) ("Orphan waste" includes covered electronic devices for which the manufacturer cannot be identified or is no longer in business and has no successor in interest.).
[40] MD. CODE ANN., ENVIR. § 9-1701–1730 (Lexis 2006).
[41] *Id.* §§ 9-1727(a), 9-1728(c).
[42] *Id.* § 9-1728(c).

reuse its computers, at no cost to the user, by providing postage paid mailing packages and designated collection points.[43] The law also allows the manufacturer to contract with recyclers, local governments, and other manufacturers to develop and implement its take-back program.[44]

In Guam, the legislature originally drafted a law which enabled the Guam Environmental Protection Agency (GEPA) to levy an advance disposal fee on the purchase of computers, monitors, and televisions as well as a wide range of other consumer products including cars and "enameled white goods"[45] (a term which generally includes, but is not limited to, appliances like refrigerators, washers, dryers, and stoves).[46] After receiving complaints from various stakeholders on the island, including the Navy and the Air Force, the legislature redrafted the law. The legislature is now considering Guam Bill 232 which, if passed, will amend the previously enacted advance disposal fee legislation and instead impose fees, ranging from $3 to $30, on all motor vehicles registered on the island.[47] Under Guam Bill 232, the Guam Department of Revenue will collect the fees and pay them into a special fund from which the GEPA may draw to finance the recycling and disposal of a wide range of materials.[48]

The three pieces of legislation described above place the burden and cost of e-waste control either directly upon computer manufacturers or indirectly upon the residents of the state or territory. They also have little impact on federal facilities located in those states or territories. The California legislature, however, has addressed the problem in a way that causes concern to federal facilities located in the state, including military facilities. California places part of the monetary burden of the state recovery and recycling program on the retail consumer.[49] This regulated class includes, by definition, agencies of the federal government. California's legislation requires the consumer to pay a fee at the time of sale of a Covered Electronic Device (CED).[50] The state pays the revenue collected from the fee into a special account from which the state and local governments may draw funds to manage the collection and recycling of CEDs at the end of their functional life.[51] California's fee structure is problematic for military and other federal facilities operating

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[43] *Id*. § 9-1701(e).
[44] *Id*.
[45] 10 GUAM CODE ANN. § 51501(i) (Lexis 2006).
[46] *Id.* § 51501(b).
[47] G.B. 232, 28th Leg. (2005).
[48] *Id*.
[49] CAL. PUB. RES. CODE § 42461(c) (Lexis 2006). The producers of the electronics may also share the financial responsibility of the recycling and disposal programs. *Id.*
[50] *Id*. § 42464. CED's are video display devices containing screens larger than four inches. *Id*. § 42463(f)(1).
[51] *Id*. § 42476.

within the state because there appears to be no clear waiver of sovereign immunity under RCRA or any other corresponding federal statute that would require federal agencies to pay such a fee. It is important to note that nine other states are currently considering legislation which would impose an advance fee (ranging from one to ten dollars) on retailers or consumers to pay for recycling and reutilization programs.[52]

III. THE CALIFORNIA ELECTRONIC WASTE RECYCLING ACT

On September 24, 2003, the Governor of California signed Senate Bill 20, The Electronic Waste Recycling Act of 2003 (EWRA), into law.[53] This authorized the California Department of Toxic Substances Control (DTSC) to "adopt management standards, by regulation, as an alternative to the hazardous waste control laws, for electronic waste that DTSC determines is hazardous, to the *extent consistent with the federal Resource Conservation and Recovery Act of 1976.*"[54] Subsequently, California Senate Bill 50[55] was signed into law on September 29, 2004 and California Assembly Bill 575[56] was signed into law on July 18, 2005, to clarify certain provisions of Senate Bill 20.[57]

The EWRA states the legislature's intent "to enact a comprehensive and innovative system for the reuse, recycling and proper and legal disposal of covered electronic devices"[58] and to ensure that the cost associated with the "proper management of covered electronic devices be internalized by the producers and *consumers* of covered electronic devices at or before the point of purchase, and *not at the point of discard.*"[59]

The statute covers electronic devices that have a "video display device containing a screen greater than four inches, measured diagonally."[60] This generally includes CRT, liquid crystal display, and plasma screens associated with personal and laptop computers, television sets, and portable DVD players. The statute defines "consumer" as "a person who purchases a new or refurbished covered electronic device in

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[52] These states include: IL, IA, MN, NY, NC, SC, TN, WA, and WI.
[53] CAL. PUB. RES. CODE § 42460 (Lexis 2006).
[54] S.B. 20, 2003-2004 Sess. (Cal. 2004).
[55] S.B. 50, 2003-2004 Sess. (Cal. 2004).
[56] A.B. 575, 2005-2006 Sess. (Cal. 2005).
[57] The final promulgated regulations can now be found in the CAL. PUB. RES. CODE §§ 42460–42486 (Lexis 2006) and CALIFORNIA HEALTH AND SAFETY CODE §§ 25214.9-25214.10.2 (Lexis 2006) (incorporating Public Resources Code provisions by reference).
[58] CAL. PUB. RES. CODE § 42461(a) (Lexis 2006).
[59] *Id.* § 42461(d) (emphasis added).
[60] *Id.* § 42463(f)(1).

a transaction that is a retail sale."[61] The term "person" includes "the United States and its agencies and instrumentalities to the extent permitted by law."[62] The EWRA requires a consumer to pay a fee at the time of purchase of new or refurbished CEDs,[63] but gives the retailer[64] an option to absorb the cost under certain conditions.[65]

For federal facilities, the problem presented by these regulations and their enabling legislation is that the items upon which the state charges its fee are new consumer products entering the stream of commerce and not, by definition, a RCRA solid or hazardous waste.[66] That is to say, CEDs, as defined by the EWRA, are not RCRA regulated waste. While any state may enact more stringent regulations than those prescribed by RCRA,[67] such regulations may not apply equally to agencies of the federal government under the principle of sovereign immunity.[68] In this case, the waiver of sovereign immunity found in RCRA's Federal Facilities Compliance Act (FFCA) of 1992,[69] does not contemplate federal agency compliance with the fee structure under the EWRA. To a military attorney, this argument may seem logical. It may even seem self evident, as it complies with the RCRA rule of thumb, "no waste, no waiver." However, it is important to recognize that many state regulators do not often deal with sovereign immunity and may be unaware of the Supreme Court's interpretation of waivers of sovereign immunity and the reasons for the doctrine. For the military attorney, being able to understand and communicate these principles can help resolve misunderstandings with environmental regulators in the area of e-waste regulation.

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[61] *Id*. § 42463(d).
[62] *Id*. § 42463(o).
[63] *Id*. § 42464(a).
[64] *Id*. § 42463(r) (meaning a person who makes a retail sale of a new or refurbished covered electronic device).
[65] *Id*. § 42464(d) (allowing the retailer to pay the fee "on behalf of the consumer" if he provides a statement to that effect on the receipt for the transaction, thus making the cost of the fee the responsibility of the retailer).
[66] 42 U.S.C. § 6903(5), (27) (Lexis 2006). Under RCRA, solid waste includes things such as "garbage, refuse, [or] sludge;" hazardous waste is defined as a form of solid waste. *Id.*
[67] *Id*. § 6929.
[68] *See* Dep't of Energy v. Ohio, 503 U.S. 607 (1992).
[69] Pub. L. No. 102-386, § 102, 106 Stat. 1505 (1992) (which amended 42 U.S.C. § 6961(a) by inserting the following after the first sentence: "The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines. The reasonable service charges referred to in this subsection include, but are not limited to, fees or charges assessed in connection with the processing and issuance of permits, renewal of permits, amendments to permits, review of plans, studies, and other documents, and inspection and monitoring of facilities, as well as any other nondiscriminatory charges that are assessed in connection with a Federal, State, interstate, or local solid waste or hazardous waste regulatory program.").

IV. LEGAL ANALYSIS OF THE CALIFORNIA ELECTRONIC WASTE RECYCLING ACT

A. Supreme Court Sovereign Immunity Analysis

State regulators may assume that the waiver of sovereign immunity in any federal environmental regulation is the final word on whether an agency of the federal government must comply with state law. That is to say, the generally broad language of any waiver, by itself, allows unbridled state regulation of federal agencies. For example, one may read RCRA's apparently broad waiver in the FFCA and assume that the federal government has waived sovereign immunity to all state solid and hazardous waste regulation. This assumption may similarly attach to the question of whether the FFCA removes all barriers to the state's imposition of fees upon agencies of the federal government, as long as the fee has some nexus to the ultimate disposal of solid waste. Although the FFCA speaks broadly on the issue, it is important to remember that the language of this (or any other) waiver does not exist in a vacuum. It must be understood in reference to its regulatory structure as a whole and the interpretation given it by the federal courts.

It is not within the scope of this article to present an in-depth discussion on the history, purpose, and need for (or against) the doctrine of sovereign immunity. Indeed there exists bountiful and enlightened consideration on many facets of this topic.[70] For the purposes of this article, it is important to examine the Supreme Court's prevailing standard of sovereign immunity analysis and to be familiar with the fiscal underpinnings of the doctrine. [71]

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[70] *See generally* Gregory C. Sisk, *A Primer on the Doctrine of Federal Sovereign Immunity*, *in* LITIGATION WITH THE FEDERAL GOVERNMENT, ALI-ABA, (4th ed. 2005); John Copeland Nagle, *Waiving Sovereign Immunity in an Age of Clear Statement Rules*, 1995 WIS. L. REV. 771 (1995); Gregory J. May, *United States Department of Energy v. Ohio & the Federal Facility Compliance Act of 1992: The Supreme Court Forces a Hazardous Compromise in CWA and RCRA Enforcement Against Federal Agencies*, 4 VILL. ENVTL. L.J. 363 (1993).

[71] It is important to note that in circumstances where a federal statute does waive sovereign immunity, the military attorney should also apply a fee/tax analysis to all state fees. While the fee/tax analysis is beyond the scope of this article, be aware that different circuits apply different rules to this issue. *See generally* Massachusetts v. United States, 435 U.S. 444 (1978) (examining whether a fee discriminates against federal functions if it is based on a fair approximation of the use of the state program, and whether the fee produces revenues exceeding the cost to the state of providing program benefits); Jorling v. Dep't of Energy, 218 F.3d 96 (2d Cir. 2000) (relaxing the *Massachusetts v. United States* test, upholding a fee so long as some benefit is available); United States v. City of Columbia, 914 F.2d 151 (8th Cir. 1990) (assessing

Contemporary Supreme Court jurisprudence applies the "Clear Statement Rule" to questions of whether a statute waives sovereign immunity and subjects federal agencies to state regulation. Under the Clear Statement Rule, the Court requires that Congress speak with clarity and specificity in any statutory waiver of sovereign immunity. The corollary to this rule is the Court's unwillingness to expand a waiver of sovereign immunity through inquiry into extrinsic indices of congressional intent. This rule preserves federal immunity from state regulation in the absence of specific congressional instruction to the contrary.[72] It also requires a reviewing court to consider only the plain language of a statute when determining the existence and breadth of a waiver of sovereign immunity and places little or no emphasis upon the congressional purpose behind the statute.[73] This approach is both a refinement of a historical line of analysis[74] and a departure from a more liberal line of interpretation of the issue.[75]

Supreme Court cases like *Dep't of Energy v. Ohio*,[76] and its progeny, apply the clear statement rule and place strict limitations on

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all facts and circumstances on the basis of economic realities and the essential nature of the state program).

[72] Nagle, *supra* note 70, at 802.

[73] *Id.* at 819. It is interesting to note that a strict "clear statement rule" may run contrary to the legislative intent of the underlying statute. By foregoing any examination of congressional intent regarding statutory purpose, the rule may lead to judicial interpretations that Congress not only did not intend, but could not have reasonably foreseen at the time of drafting. The question then becomes, at the time of drafting, does Congress have the ability to forecast every future situation and sufficiently communicate its intent to waive sovereign immunity in that specific circumstance?

[74] *See generally* Irwin v. Dep't of Veterans Affairs, 498 U.S. 89, 94 (1990) (stating that waivers of sovereign immunity must be strictly construed, but noting previous cases "have not been entirely consistent"); Army and Air Force Exch. Serv. v. Sheehan, 456 U.S. 728, 734, 740 (1982) (stating that federal courts may entertain actions against the services only if Congress has consented to suit); United States v. Testan, 424 U.S. 392, 399 (1976) (stating that, in a court of claims context, a waiver of the traditional sovereign immunity "cannot be implied but must be unequivocally expressed") (citing Soriano v. United States, 352 U.S. 270, 276 (1957)); United States v. Michael, 282 U.S. 656, 659 (1931) ("[I]t is also well established that suit may not be maintained against the United States in any case not clearly within the terms of the statute by which it consents to be sued.").

[75] *See generally* Franchise Tax Bd. v. U.S. Postal Service, 467 U.S. 512, 517 (1984) ("[We] start from the premise that such waivers by Congress of governmental immunity in case of such federal instrumentalities should be liberally construed. This policy is in line with the current disfavor of the doctrine of governmental immunity from suit, as evidenced by the increasing tendency of Congress to waive the immunity where federal governmental corporations are concerned.") (citing FHA v. Burr, 309 U.S. 242 (1940); Hancock v. Train, 426 U.S. 167, 188, 198 (1976) (examining the legislative history of the Clean Air Act in deciding the scope of the waiver of its sovereign immunity); Canadian Aviator, Ltd. v. United States, 324 U.S. 215, 222 (1945) (relying on legislative history as an expression of congressional intent to provide a broad waiver of immunity in the Public Vessels Act).

[76] 503 U.S. 607 (1992).

how a state may interpret RCRA's waiver of sovereign immunity. *Dep't of Energy* involved the issue of whether RCRA's FFCA or its citizen suit provision, RCRA § 7002, subjected federal agencies to state fines and penalties.[77] In concluding that neither of these provisions waived the sovereign immunity of the United States in a manner that would permit states to impose punitive sanctions, the Supreme Court stated that such waivers must be unequivocally expressed, construed strictly in favor of the sovereign, and not enlarged beyond what the waiver requires.[78] *Dep't of Energy* built upon and consolidated considerable precedent and, by so doing, severely narrowed a court's ability to broadly interpret waivers of sovereign immunity. It also illustrates the Supreme Court's growing inclination to determine Congress's intent only within the confines of the statutory text.[79] In *Dep't of Energy*, the Court also suggested that a plausible argument for a waiver of sovereign immunity was not enough to overcome the clear statement rule.[80]

The Court in *United States v. Nordic Village*[81] went one step further. In *Nordic Village*, the Court firmly established that a mere plausibility in favor of a waiver of sovereign immunity serves only to point out a statutory ambiguity, thus defeating the argument for waiver.[82] *Nordic Village* held that a plausible argument in favor of sovereign immunity is enough to demonstrate that Congress did not clearly intend to waive sovereign immunity.[83] *Nordic Village* also serves as a clear statement that the Court will only look for an "unequivocal expression" of waiver within the four corners of the statutory text and will not look to other sources to divine congressional intent.[84] *Nordic Village* was a departure from a previous case, *Ardestani v. I.N.S.*,[85] in which the Court did look to the congressional record to determine whether the Equal Access to Justice Act (EAJA) waived sovereign immunity for the award of attorney's fees and costs incurred during deportation hearings.[86] Of particular note in *Ardestani* was the Court's restraint in interpreting the

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[77] *Id.* at 615-16 (the case also examined the applicability of fines and penalties arising under provisions of the Clean Water Act).
[78] *Id*. at 615 (citing McNary v. Haitian Refugee Center, Inc., 498 U.S. 479 (1991); Ruckleshaus v. Sierra Club, 463 U.S. 680 (1983); United States v. Mitchell, 445 U.S. 535 (1980); McMahon v. United States, 342 U.S. 25 (1951); Eastern Transportation Co. v. United States, 272 U.S. 675 (1927)).
[79] *Id*. at 627-28.
[80] *Id*. at 618 (stating that the Court need not decide that question because Ohio's arguments failed in the face of the RCRA and CWA statutory text).
[81] 503 U.S. 30 (1992).
[82] *Id*. at 36-37.
[83] *Id.* at 37.
[84] *Id*. ("[T]he 'unequivocal expression' of elimination of sovereign immunity that we insist upon is an expression in the statutory text. If clarity does not exist there, it cannot be supplied by a committee report.").
[85] 502 U.S. 129 (1991).
[86] *Id*. at 131-32.

plain language of the EAJA in conjunction with a strict construction of waivers of sovereign immunity. This approach led the court to state that it was limited in its ability to broaden the statutory waiver despite the indices of an apparently broader congressional purpose.[87]

B. The Requirement to Protect the Public Fisc

While the foregoing is useful to explain the limits of state regulation of federal agencies, it is important to also recognize and articulate an easily understandable reason for the doctrine of sovereign immunity. While commentary on the historical and present day purposes of the doctrine abound,[88] it is necessary to recognize the fiscal underpinnings of federal sovereign immunity. Of course, the overarching purpose of the doctrine is to protect the government from suit. However, the argument "the king can do no wrong" might engender only a blank stare from a state regulator, and related theories like "indignity of suit" and "no legal right against the lawmaker" tend to fare no better. The need to protect the public treasury, or the federal taxpayers' money, has a somewhat greater appeal. This purpose has been established through a long line of cases,[89] is represented in important recent cases,[90] and is more easily understood by regulators—who are also federal taxpayers.

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[87] *Id*. at 138 ("The clearly stated objective of the EAJA is to eliminate financial disincentives for those who would defend against unjustified governmental action and thereby to deter the unreasonable exercise of Government authority. . . . We have no doubt that the broad purposes of the EAJA would be served by making the statute applicable to deportation proceedings. We are mindful that the complexity of immigration procedures, and the enormity of the interests at stake, make legal representation in deportation proceedings especially important. . . . But we cannot extend the EAJA to administrative deportation proceedings when the plain language of the statute, coupled with the strict construction of waivers of sovereign immunity, constrain us to do otherwise.").

[88] *See generally* Gregory C. Sisk, *A Primer on the Doctrine of Federal Sovereign Immunity in* LITIGATION WITH THE FEDERAL GOVERNMENT (4th ed. 2005).

[89] *See generally* John H. Alden v. Maine, 527 U.S. 706, 749 (1999) ("Not only must a State defend or default but also it must face the prospect of being thrust, by federal fiat and against its will, into the disfavored status of a debtor, subject to the power of private citizens to levy on its treasury or perhaps even government buildings or property which the state administers on the public's behalf."); Louisiana v. Jumel, 107 U.S. 711, 728 (1883) ("[T]his is very far from authorizing the courts, when a State cannot be sued, to set up its jurisdiction over the officers in charge of the public moneys, so as to control them as against the political power in their administration of the finances of the State."); Land v. Dollar, 330 U.S. 731, 738 (1947) ("[T]he rule is based on practical considerations reflected in the policy which forbids suits against the sovereign without its consent. The 'essential nature and effect of the proceeding' may be such as to make plain that the judgment sought would expend itself on the public treasury or domain, or interfere with the public administration.").

[90] *See* Dep't of Energy v. United States, 503 U.S. 607, 628 (1992) ("[T]his absence of any example of punitive fines is powerful evidence that Congress had no intent to

Regulators should understand that when federal employees misspend public monies they can be administratively or criminally punished under the Anti Deficiency Act (ADA).[91] The purpose of the ADA is to ensure that federal government officials make no payment or commit the United States to make payment at some future time for goods or services (including those provided by the state under environmental regulation) unless it is covered by an available congressional appropriation.[92] Violations of the ADA are subject to administrative and penal sanction. Administrative punishments include "suspension from duty without pay or removal from office."[93] Penal sanctions may include fines up to $5,000, imprisonment up to two years, or a combination of both.[94]

C. The Limits of the Resource Conservation and Recovery Act's Federal Facilities Compliance Act of 1992

With the preceding in mind, it is worthwhile to consider the language of the FFCA to determine exactly what sovereign immunity it waives and the extent of that waiver. RCRA § 6001(a), states in pertinent part:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions or injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of

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subject the United States to an enforcement mechanism that could deplete the federal fisc regardless of a responsible officer's willingness and capacity to comply in the future."); United States v. Nordic Village, 503 U.S. 30, 39 (1992) ("A suit for the payment of funds from the Treasury is quite different from a suit for the return of tangible property in which the debtor retained ownership.").

[91] 31 U.S.C. § 1341 (Lexis 2006).

[92] GOV. ACCOUNTABILITY OFFICE, PRINCIPLES OF FEDERAL APPROPRIATIONS LAW, VOLUME II 6-3 (2006).

[93] 31 U.S.C. §§ 1349(a), 1518 (Lexis 2006).

[94] *Id*. §§ 1350, 1519.

> reasonable service charges. The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge).[95]

The first question a state regulator may ask is "What is the scope of RCRA's waiver of sovereign immunity?" Guided by the Supreme Court's analytical framework, this inquiry is limited to the statutory text. RCRA § 6001(a) describes both when agencies are subject to the waiver of sovereign immunity and the extent of that waiver.[96] The first sentence establishes that the range of federal entities subject to RCRA's waiver of sovereign immunity consists of those federal departments, agencies, and instrumentalities "(1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in *any activity* resulting, *or which may result*, in the disposal or management of solid waste or hazardous waste."[97] Sovereign immunity is waived only for those agencies that are in one of the two defined categories. Thus, the phrase "any activity resulting, or which may result, in the disposal or management of solid waste" is relevant only in determining which federal entities may be subject to state law. By its plain language, it is not determinative of which state laws will apply to those entities.

RCRA § 6001 then prescribes the laws for which sovereign immunity is waived by stating that federal departments, agencies, and instrumentalities, "shall be subject to, and comply with, all Federal, State, interstate, and local requirements . . . respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges."[98] Sovereign immunity is thus waived only for those state requirements that concern solid and hazardous waste disposal or management as those

[95] 42 U.SC. § 6961(a) (Lexis 2006).
[96] *Id.*
[97] *Id*. (emphasis added).
[98] *Id*.

terms are defined by RCRA.[99] As stated previously, legislation like California's EWRA imposes its fee on the purchase of new or refurbished computer products entering the stream of commerce. Such products are, at the time of their purchase, not waste at all and therefore cannot be considered RCRA solid or hazardous waste under the FFCA, for the purposes of state regulation.

The second question, which logically follows the preceding analysis, is whether the RCRA statutory definitions of "solid and hazardous waste" and "disposal" limit the applicability of fees like those imposed by California's EWRA, to federal facilities. With reference to RCRA and guiding principles of statutory construction, it is clear that they do.

The purpose of RCRA, as stated in section 1003(a), is to establish a federal system to deal with the management and disposal of solid and hazardous waste in a manner that protects human health and the environment and fosters the conservation of valuable materials and energy resources.[100] RCRA § 1004(27) defines "solid waste" as "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other *discarded* material."[101] RCRA generally includes recyclable materials in the definition of solid waste,[102] and defines "discarded" as any material which is abandoned, recycled, or inherently waste-like.[103] Section 1004(3) defines "disposal" as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters."[104] Accordingly, section 1004(28) defines "solid waste management" as the "systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of *solid waste*."[105] The RCRA definitions of "hazardous waste,"[106] "hazardous waste generation,"[107] and "hazardous waste

[99] This follows an established canon of statutory construction assuming that identical words used in different parts of the same statute are intended to have the same meaning. *See* Estate of Floyd Cowart v. Niklos Drilling Co., 505 U.S. 469, 479 (1992); Sullivan v. Stroop, 496 U.S. 478, 484 (1990); Sorenson v. Sec'y of Treasury, 475 U.S. 851, 865 (1986).
[100] 42 U.S.C. § 6902 (Lexis 2006).
[101] *Id*. § 6903(27) (emphasis added).
[102] 40 C.F.R. § 261.2(a)(2)(ii) (Lexis 2006).
[103] *Id*. § 261.2(a)(2)(i)-(iii).
[104] 42 U.S.C. § 6903(3) (Lexis 2006).
[105] *Id*. § 6903(28) (emphasis added).
[106] *Id*. § 6903(5).
[107] *Id*. § 6903(6).

management"[108] all depend on the underlying definitions of "solid waste" and "disposal" for their regulatory meaning. To fully understand the limits of RCRA's waiver of sovereign immunity, it is necessary to read the waiver in conjunction with the plain meaning of the RCRA definitions.

The plain language of these sections indicates that Congress intended RCRA to regulate discarded or "end of the pipeline" waste. This idea is supported by RCRA §1002, *Congressional Findings*, which speaks specifically to the final disposition and disposal of "scrap, discarded and waste materials."[109]

Substantial case law confirms that RCRA is limited by the plain meaning of its terms to "end of the pipeline" waste and not new or refurbished products. In *American Mining Congress v. EPA* (*AMC I*),[110] the District of Columbia Circuit Court of Appeals specifically considered whether EPA's authority under RCRA was limited to materials that were actually discarded or intended for disposal, and concluded that it was. After a comprehensive analysis of the RCRA definitions and congressional findings, the court held that Congress used the term "discarded" in "its ordinary sense—'disposed of' or 'abandoned'."[111] Additionally, it found the definition of "solid waste" to be "quite specific," including things that were actually discarded and excluding things which were "neither disposed of nor abandoned."[112] The appeals court further found the definition of "disposal" to be "specific and precise," and that it was limited to items "truly discarded, disposed of, thrown away or abandoned."[113] It rejected the EPA's contention that materials destined for reuse within an industry's ongoing production processes could be included in the statutory definition of "solid waste."[114] Similarly, the court determined that the EPA could not "extend the reach" of the terms "solid waste" and "hazardous waste" to reach products that were still in functional reuse.[115]

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[108] *Id*. § 6903(7).
[109] *Id.* § 6901(a)(2).
[110] 824 F.2d 1177 (D.C. Cir. 1987).
[111] *Id.* at 1190.
[112] *Id.*
[113] *Id*.
[114] *Id*.
[115] *Id*. at 1187. *Cf.* United States Brewers Ass'n. Inc. v. EPA, 600 F.2d 974 (D.C. Cir 1979). This case denied a beer brewers association's petition to repeal EPA's guidelines for management of beverage containers. The guidelines at issue in *Brewers* were mandatory for certain federal agencies pursuant to a specific RCRA provision, 42 U.S.C. § 6964. Subsequent treatment of this case, in *AMC I,* stressed that in *Brewers* the court "did not discuss the definition of 'solid waste under section 6903(27).' Nor did the court find that undiscarded materials fell within the definition of discarded materials as EPA suggests." *AMC I,* 824 F.2d at 1193. It is important to note that this case did not involve a federal agency and did not address the question of sovereign immunity. Ultimately, the EPA removed these guidelines in 1999, 64 FR 116 (June 17, 1999),

The holding of *AMC I* was affirmed in the cases of *American Mining Congress v. E.P.A* (*AMC II*),[116] and *American Petroleum Inst. v. EPA*.[117] In both cases, the District of Columbia Circuit Court of Appeals followed the same analysis and came to the same conclusion: EPA's RCRA authority was specifically limited to waste that was actually discarded.[118] The Ninth Circuit Court of Appeals followed the holdings of *AMC I* and *AMC II* in *Safe Air for Everyone v. Meyer*.[119] In *Safe Air*, the appeals court found clear congressional intent to limit RCRA's reach only to "materials that are truly discarded, disposed of, thrown away or abandoned."[120]

Additionally, a number of federal district court cases hold that RCRA's definitions of "disposal," "solid waste," and "hazardous waste" do not include materials in the course of their intended use or materials entering the stream of commerce—a factual distinction not yet considered by the circuit courts.[121] While state regulators may not feel particularly bound by another jurisdiction's precedent, these cases are extremely illustrative of what RCRA does and does not regulate.

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finding them obsolete following Executive Order 12873 and Executive Order 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*. There is no specific RCRA provision requiring federal agency compliance with state imposed charges on the retail sale of computer products.

[116] 907 F.2d 1179 (D.C. Cir. 1990).

[117] 216 F.3d 50 (D.C. Cir. 2000).

[118] *AMC II*, 907 F.2d at 1186 (1990); *American Petroleum Inst.,* 216 F.3d at 55 (2000).

[119] 373 F.3d 1035 (9th Cir. 2004).

[120] *Id*. at 1042.

[121] *See* In Re: Voluntary Purchasing Groups, Inc. Litigation, 2002 U.S. Dist. LEXIS 19819 (N.D. TX) (holding that an industrial chemical spilled during its delivery to a purchaser was not a hazardous waste under RCRA and its manufacturer was "neither a generator or transporter of hazardous waste, as required under RCRA, because when it sold arsenic . . . it was not disposing of a waste, it was selling a product"); Prudential Insurance Company v. U.S. Gypsum, Inc., 711 F. Supp 1244, 1253 (D. N.J. 1989) (holding that the manufacture, processing, marketing distribution, and sale of asbestos containing consumer products did not constitute disposal under the RCRA definition of disposal, as used in the Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA)); Edward Hines Lumber v. Vulcan Materials Co., 685 F. Supp 651, 654 (N.D. Ill. 1988) (holding that the sale of a hazardous substance for use in the wood treatment process did not constitute arranging for the disposal or treatment of a hazardous substance); Jersey City Redevelopment Authority v. PPG Industries, 655 F. Supp 1257, 1260 (D. N.J. 1987) ("The imposition of statutory liability for disposal depends upon examining the transaction with respect to the transfer of a hazardous substance to see if it involved the sale of a product rather than a disposal arrangement."); United States v. A&F Materials Co., 582 F. Supp 842, 845 (S.D. Ill. 1984) (holding that transactions involving the sale of a new useful product containing a hazardous substance are not disposal under RCRA's definition of disposal, as used in CERCLA).

D. Statutory Construction

As the foregoing illustrates, e-waste legislation and resulting regulatory fees geared toward the purchase or sale of electronic equipment are not requirements respecting RCRA solid or hazardous waste for purposes of RCRA's waiver of sovereign immunity. Any other interpretation would render RCRA's definitions, and the parts of the statute that contain them, inoperative. This would violate an established canon of statutory construction that requires a court to give effect to every clause and word of a statute rather than eviscerate an entire section.[122] Additionally, a clear and unambiguous waiver of sovereign immunity depends on a single meaning for terms used in the waiver and throughout the subject statute. Another settled canon of statutory construction assumes that identical words used in different parts of the same act are intended to have the same meaning.[123] Similarly, one must not interpret statutory provisions "in a way which is internally contradictory or that renders other provisions of the same statute inconsistent or meaningless."[124]

E. Military E-Waste Recycling

Finally, it is important to recognize that, unlike most consumers in California, the military is already proactively addressing the problem of e-waste. The Department of Defense (DoD) is fully engaged in addressing the concerns that led California to enact the EWRA. RCRA sections 1008,[125] 6002,[126] and 6004,[127] as well as requirements imposed on federal agencies through executive orders,[128] have compelled military installations to seek alternatives to e-waste disposal.

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[122] *See* Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission, 366 F.3d 692, 700 (9th Cir. 2004); Turtle Island Restoration Network v. National Marine Fisheries Service, 340 F.3d 969 (9th Cir. 2003).

[123] *See* Estate of Floyd Cowart v. Niklos Drilling Co., 505 U.S. 469, 479 (1992); Sullivan v. Stroop, 496 U.S. 478, 484 (1990); Sorenson v. Sec'y of Treasury, 475 U.S. 851, 860 (1986).

[124] *Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission*, 366 F.3d at 700; Turtle Island Restoration Network v. National Marine Fisheries Service, 340 F.3d 969 (9th Cir. 2003).

[125] 42 U.S.C. § 6907 (Lexis 2006) (requiring federal agencies generating solid waste to take action to recover it).

[126] *Id*. § 6962 (requiring federal agencies to procure items, costing an aggregate of $10,000 or more, composed of "the highest percentage of recovered materials practicable").

[127] *Id*. § 6964 (requiring executive agencies of the federal government that generate solid waste to take action to recover it).

[128] *See* Exec. Order No. 13101, 63 Fed. Reg. 49641 (Sep. 16, 1998) (establishing a national policy for all federal agencies to pursue initiatives to maximize pollution prevention, recycling and, as a last resort, environmentally sound disposal).

A good example is the Defense Reutilization and Marketing Service (DRMS),[129] which routinely files with the California DTSC the required "Notice of Intent to Handle Universal Waste Electronic Devices and/or Cathode Ray Tube Materials."[130] In fact, the mission of DRMS includes finding ways to reutilize serviceable electronic devices, including computer monitors and CRTs, and ensuring the proper recycling of hazardous materials found in non-reusable electronic devices.[131] Through its Demilitarized Business Unit, DRMS can account for 100% of the DoD's annual e-waste stream (comprised of computer central processing units, monitors, scanners, printers, and television sets).[132] It directs 80% of that waste stream to recycling and materials recovery and the other 20% to reuse with other federal or state organizations.[133] Unusable computer monitors and CRT materials are shipped to UNICOR Federal Prison Industries, Inc.[134] for demanufacturing, a process which includes disassembling and salvaging the reusable components. In 1999 the White House awarded UNICOR the prestigious "Closing the Circle Award" for the company's electronic recycling activities.[135] UNICOR has a strict no-landfill policy for electrical components.[136]

V. COMMUNICATING WITH STATE REGULATORS

A. Supreme Court Sovereign Immunity Analysis

Communicating the meaning of Supreme Court sovereign immunity cases to state regulators is exceedingly important. As employees whose job requirements rarely bring them into the world of

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[129] The DRMS is an organization within the Defense Logistics Agency that is responsible for the reutilization, transfer, donation, sale, and disposal of materiel that is excess to DoD requirements.

[130] *See* CAL. CODE REGS. tit. 22, §§ 66273.13(d)(2)(A)(1)-(7), 66273.82(a)(1)-(7) (Lexis 2006).

[131] Telephone Interview with Mr. John Barrett, DRMS Demilitarized Business Unit (Sep. 26, 2005) [hereinafter Barrett Interview].

[132] *Id.*

[133] *Id.*

[134] UNICOR Federal Prison Industries is a wholly-owned, federal government corporation established by Congress on June 23, 1934. Its mission is to employ and provide job skills training to the greatest practicable number of inmates confined within the Federal Bureau of Prisons; contribute to the safety and security of our Nation's federal correctional facilities by keeping inmates constructively occupied; produce market-priced quality goods and services for sale to the Federal Government; operate in a self-sustaining manner; and minimize the Federal Prison Industries' impact on private business and labor. FEDERAL BUREAU OF PRISONS, UNICOR, http://www.bop.gov/inmate_programs/unicor.jsp.

[135] Barrett Interview, *supra* note 131.

[136] *Id.*

sovereign immunity analysis, it is possible that they will focus on the broad language of the RCRA FFCA, entirely detached from the rigors of case law. This one-dimensional analysis is bound to leave a regulator thinking that the FFCA is an insurmountable obstacle to federal agencies claiming exemption from state law. To counter this, one must effectively communicate the line of Supreme Court cases that best illustrate the clear statement rule. This will illustrate that the sweeping language of the FFCA has meaningful limitations and that Supreme Court jurisprudence places strict requirements on Congress's statements of waiver.

Explaining the rule of *Dep't of Energy* is essential. Under its analysis, a waiver of sovereign immunity must be unequivocally expressed—clear, plain, and capable of being understood in only one way.[137] A waiver must be "construed strictly in favor of the sovereign,"[138] meaning that, when ambiguities in the statutory text arise, a regulator must ignore subjective interpretations that favor the state and instead favor the sovereignty of federal agencies. *Dep't of Energy* also states that a waiver must not be "enlarged beyond what the [waiver] requires," which means the focus of any state regulation must remain narrowly within the confines of the stated purpose of the federal law and the precise language of the waiver.[139]

Additionally, the interplay between *Dep't of Energy* and *Nordic Village* should not be overlooked. The cases demonstrate that a plausible argument in favor of a waiver of sovereign immunity is not enough to survive the clear statement rule.[140] Finally, while most state regulators may not examine the congressional record to divine the intent and purpose of a federal law, a state attorney may. *Dep't of Energy*, *Nordic Village,* and *Ardestani* all instruct that this is not an area into which the Supreme Court wishes to delve and will not be a fruitful source of argument should the dispute proceed to litigation. Ultimately, this all becomes a matter of explaining that the FFCA (and other waiver provisions) is not the "end of the story," but instead only the beginning—the rest of the tale being told by the courts.

B. The Requirement to Protect the Public Fisc

While a state regulator may not fully comprehend Supreme Court jurisprudence on the subject of sovereign immunity, he or she is likely to understand the limitations placed on the expenditure of federal appropriations. Thus, the military attorney should frame the discussion

[137] Dep't of Energy v. Ohio, 503 U.S. 607, 615 (1992).
[138] *Id*.
[139] *Id.*
[140] Conversely, the *Nordic Village* court held that a plausible argument in favor of sovereign immunity identifies a statutory ambiguity and indicates Congress did not intend to waive sovereign immunity. *See* notes 81-84 and accompanying text.

by pointing out that federal tax dollars are at issue. Federal officials at all levels, including Air Force Installation Commanders, are required to carefully consider what expenses they can and cannot pay on behalf of the United States. In the case of state regulations, such as California's EWRA fee, payment is simply not possible in the absence of a clear and unambiguous waiver of sovereign immunity. Additionally, considering the limitations and sanctions codified by the ADA, payment of this type of regulatory fee may result in administrative or even criminal punishment. As stated earlier, this observation may appeal to state regulators as it identifies the role of federal agency officials in protecting and wisely spending taxpayers' money.

C. The Limits of The Limits of the Resource Conservation and Recovery Act's Federal Facilities Compliance Act of 1992

A close reading of RCRA's definitions and its waiver of sovereign immunity reveals the ambiguity between the broad waiver of the FFCA and the limits imposed on the waiver by RCRA's definitions, purpose, and intent. As discussed above, Supreme Court precedent requires reconciliation of such ambiguity in favor of the federal government. Even still, a state regulator may continue to be unclear on this point. Illustrative of this is California's reliance on the case of *Parola v. Weinberger*,[141] in defense of its EWRA legislation.[142] In *Parola* the court considered a local ordinance that required a military installation in Monterey, California, to use the city's franchised waste hauler even

[141] 848 F.2d 956 (9th Cir. 1988).

[142] Memorandum from the California Board of Equalization, Senior Tax Counsel, to Excise Taxes and Fees Division, *Application of E-Waste Recycling Fee to Federal Instrumentalities Under SB 50* (Feb. 3, 2005). This memorandum cited *Parola* solely in support of the proposition that the EWRA fee applied to military installations in California. The memorandum also stated that military exchanges were exempt from the fee under the principle of sovereign immunity. The memorandum concluded that the EWRA addressed the "consumption and disposal of CEDs in the state, not the retail sale of CEDs that will be used and disposed of in this State. Because waivers of sovereign immunity must be construed strictly in favor of the sovereign and not enlarged beyond what the waiver language requires, it would appear that California cannot impose a fee collection obligation on BXs and PXs for the conduct of making retail sales in California. . . ." *Id.* (citing Dept of Energy v. Ohio, 503 U.S. 607, 617 (1992)). The memorandum concluded that the fee was on the retail sale of the item, so military exchanges engaged in the conduct of retail sales were immune from its application. *Id*. The memorandum did not address the fact that the EWRA places the primary responsibility for payment of the fee upon the consumer under CAL. PUB. RES. CODE § 42464(a), and includes the consumer in its definition of fee payer under CAL. PUB. RES. Code 42464.2.

though the installation could have its garbage hauled for less. In that case, the court stated:

> RCRA § 6001, 42 U.S.C. § 6961, requires that all Federal agencies and instrumentalities, engaged in activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. There can be no dispute that this provision unambiguously subjects Federal instrumentalities to state and local regulation. The crux of the issue, as the defendants point out, is whether Monterey's exclusive franchise ordinance is a "local requirement . . . respecting control and abatement of solid waste" under RCRA § 6001.[143]

The court found that the regulation in question was a requirement respecting control and abatement of solid waste and affirmed a summary judgment for plaintiffs.[144] The court upheld RCRA's application because the regulation at issue controlled the ultimate disposition of solid waste that was actually discarded or disposed of in accordance with RCRA's definitions.[145] However, reliance on this case as precedent in favor of California's EWRA is misplaced. The question at issue in *Parola* was simply who would pick up the garbage, an issue entirely germane to federal agencies under a narrow interpretation of the FFCA.[146] The point in the present case is that a regulator may simply fail to recognize the ambiguity that legislation like California's EWRA creates and the effect that it has on the military's ability to pay the subject fees. One way to illustrate this point is to contrast the outcome in cases like *Parola*, with cases like *AMC I*, *AMC II*, *American Petroleum Inst*., and *Safe Air for Everyone*. The former correctly identifying the type of regulation that the FFCA encompasses and the latter correctly defining its limits.

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[143] *Parola*, 848 F.2d at 960.
[144] *Id*. at 962.
[145] *Id.*
[146] *Id*. at 957.

The courts that have considered the question consistently conclude that RCRA's authority and control reach only materials that are truly discarded, not new products in the stream of commerce or products being reused in an ongoing industrial process. Combining this argument with the plain meaning of RCRA § 1004's definitions and the Supreme Court's line of sovereign immunity cases cited herein results in a narrowing of what may first appear to be an unlimited waiver in the FFCA. RCRA's waiver of sovereign immunity cannot be broader than its definitions of "solid waste" and "hazardous waste" allow.[147]

D. Statutory Construction

In most communications with state regulators dealing with the application of state law to federal facilities, proper statutory construction is generally not the most effective area of argument, and one should not expect to win the day by appealing to the established canons. Nonetheless, the holdings of the relevant Supreme Court cases are necessary in understanding why the fee structure of California's EWRA and similar laws cannot apply to agencies of the federal government. These cases are the "glue" that binds the argument together, linking RCRA's definitions of solid waste, hazardous waste, and disposal (and other RCRA definitions dependent on those terms) to the meaning of the FFCA. RCRA's definitions of solid waste, discarded, and disposal all have specific meanings. Requiring the same meaning of these words in the FFCA illustrates that a fee structure like that of California's EWRA exceeds what RCRA's waiver of sovereign immunity requires.

E. Military E-Waste Recycling

Finally, when addressing this issue, it is important to impress upon state regulators that the DoD already recycles or reuses the vast majority of its e-waste through the DRMS recycling and reuse program. This fact may carry with it a legal basis for exemption from fees arising under e-waste legislation through a "fee/tax" analysis, an aspect not within the scope of this article. On a factual level, it means that military installations in any particular state are likely contributing far less, if at all, to a state's e-waste volume and are already expending federal tax dollars to remedy its e-waste problem. This point may help calm state regulators' fears about not pursuing the application of their state's e-

[147] The EPA has proposed removing used CRTs from the RCRA definition of solid waste entirely. *See* 67 Fed. Reg. 40507, 40510–40514 (2002). This would have the odd effect of leaving California attempting to impose the EWRA's fee structure against agencies of the federal government for at least some materials which are specifically not RCRA solid or hazardous wastes.

waste program fees against military facilities, if they are convinced that this waste stream is already largely controlled.

VI. CONCLUSION

The sheer volume of pending legislation in almost half of the states indicates that the issue of e-waste management will only grow in the future. This makes it extremely important for the military attorney to not only be aware of the nature of legislation or regulation facing his or her facility in a particular state, but also to be familiar with the range of issues affecting the applicability of such initiatives to federal agencies. Additionally, familiarization with the role of the federal government in developing waste reduction, reuse and recycling initiatives can serve to calm state regulators' fears of material non-compliance with what they understandably feel is an important state program. By familiarizing oneself with RCRA's purpose, definitions, and waiver of sovereign immunity and by understanding the narrow view of sovereign immunity waivers and their purpose under Supreme Court jurisprudence, the environmental attorney can arm him or herself with the arguments necessary to protect DoD facilities and taxpayer dollars in the face of adverse e-waste legislation.

IT'S NOT EASY BEING GREEN: ARE DOD INRMPS A DEFENSIBLE SUBSTITUTE FOR CRITICAL HABITAT DESIGNATION?

MAJOR LORI L. MAY & MAJOR JONATHAN P. PORIER

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I. INTRODUCTION

The Department of Defense (DoD) is responsible for managing approximately 25 million acres of land on more than 425 military installations in the United States.[1] The DoD is the third largest federal land manager, behind the Departments of Interior and Agriculture.[2] On these lands, there are more than 300 species listed as threatened or endangered.[3]

Conservation is an idea which has long been a part of our nation's history. In 1832, as George Catlin arrived in present-day South Dakota, he wrote in his journal about "a nation's Park" which would preserve both the buffalo and the Indians who inhabited the plains.[4] The first application of the park concept was seen in 1864 when the United States granted Yosemite Valley to California to manage it for preservation.[5] In 1872, Congress created the first national park.[6] By the legislation, they "dedicated and set apart as a public park or pleasuring ground for the benefit and enjoyment of the people" Yellowstone National Park.[7] As the nation's principal conservation agency, the Department of Interior has as a primary mission the conservation and protection of natural resources, to include endangered species.[8] Similarly, the Forest Service, as the primary land manager within the Department of Agriculture, has an environmental mission that can logically be extended to include protection of endangered species.[9]

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[1] DEPT OF DEFENSE FACT SHEET: THE ENDANGERED SPECIES ACT'S CRITICAL HABITAT PROVISION, http://www.denix.osd.mil/denix/Public/Library/Sustain/RRPI/Documents/es_fact_sheet_f.doc (last visited June 16, 2006) [hereinafter DOD FACT SHEET].

[2] MICHELE LESLIE ET AL., CONSERVING BIODIVERSITY ON MILITARY LANDS: A HANDBOOK FOR NATURAL RESOURCE MANAGERS § 1.2, n.5 (1996), *available at* https://www.denix.osd.mil/denix/Public/ES-Programs/Conservation/Biodiversity/footnotes. The Department of the Interior and the Department of Agriculture are first and second, managing 504 million acres and 191 million acres, respectively. *See* DEPT OF INTERIOR QUICK FACTS, *available at* http://www.doi.gov/facts.html [hereinafter DOI QUICK FACTS] (last visited Mar. 1, 2006); ABOUT US—MEET THE FOREST SERVICE, https://www.fs.fed.us/aboutus/meetfs.shtml (last visited Mar. 1, 2006).

[3] *Id*.

[4] GEORGE CATLIN, *An Artist Proposes a National Park*, *in* AMERICAN ENVIRONMENTALISM: READINGS IN CONSERVATION HISTORY 31 (Roderick Nash ed., 3d ed. 1990).

[5] *See* Pub. L. No. 101-417, 104 Stat. 904 (1990) (commemorating the Centennial of Yosemite National Park).

[6] Yellowstone Park Act of 1872, 16 U.S.C. § 21 (Lexis 2006). For a discussion of the Yellowstone ecosystem, see CHARLES F. WILKINSON, *The Yellowstone Ecosystem and an Ethic of Place*, *in* THE EAGLE BIRD: MAPPING A NEW WEST 162-85 (1992).

[7] Yellowstone Park Act of 1872, 16 U.S.C. § 21 (Lexis 2006).

[8] DOI QUICK FACTS, *supra* note 2.

[9] The mission of the Forest Service is "sustain the health, diversity and productivity of the Nation's forests and grasslands to meet the needs of present and future generations."

But, unlike the Department of the Interior and the Department of Agriculture, the DoD's primary mission is to train and equip combat forces, not to function as a federal land manager.[10] The conservation ideal, however, has occasionally been included in the congressional guidance for the management of the DoD. For example, in 1992, Congress established the Legacy Program, which provided the military with additional funding for conservation efforts.[11] It set aside $ 10,000,000 of the Legacy funds for use only in implementing cooperative agreements to identify, document, and maintain biological diversity on military installations.[12] Unfortunately, conservation related to endangered species has become a significant threat to the DoD's ability to train military personnel and test weapons and equipment.

To aid in the recovery of threatened and endangered species, the Department of the Interior is required to designate critical habitat.[13] Once designated, this habitat receives special protection, and cannot be freely used for purposes that may harm the species and slow its recovery.[14] Designation of critical habitat on DoD lands can significantly increase restrictions on military training by making the designated land unusable for military training.[15] If resources are not managed wisely, the DoD's responsibility to protect and preserve endangered species and their habitats will diminish the DoD's ability to accomplish its primary mission. Environmental restrictions on the services' ability to train personnel and test weapons and other equipment are often referred to as "encroachment."[16] In addition to endangered species-related land-use restrictions, other types of encroachment that impact training and testing activities are urban growth, incompatible development near military bases, and restrictions imposed by other environmental legislation, including the Clean Air Act and the Marine Mammal Protection Act.[17]

DoD efforts to deal with encroachment have taken many forms in recent years. Some of these efforts have been used by all services and others have been more applicable to a single service. One extreme

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See FOREST SERVICE, ABOUT US—MISSION, https://www.fs.fed.us/ aboutus/meetfs.shtml (last visited Mar. 1, 2006).

[10] *See generally* U.S. DEP'T OF DEFENSE, DIR. 5100.1, FUNCTIONS OF THE DEPARTMENT OF DEFENSE AND ITS MAJOR COMPONENTS (1 Aug. 2002).

[11] Department of Defense Appropriations Act, Pub. L. No. 102-172, 105 Stat. 1150, 1155-56 (1992).

[12] *Id.*

[13] 16 U.S.C. § 1533(a)(3)(A)(i) (Lexis 2006).

[14] *Id.* § 1538(a)(1)(b).

[15] DOD FACT SHEET, *supra* note 1.

[16] *See generally* GOVERNMENT ACCOUNTABILITY OFFICE, IMPLEMENTATION STRATEGY NEEDED TO INCREASE INTERAGENCY MANAGEMENT FOR ENDANGERED SPECIES AFFECTING TRAINING RANGES, http://www.gao.gov/new.items/d03976.pdf (last visited Aug. 3, 2006).

[17] *Id*. at 1 n.2.

method of dealing with encroachment has been base closure.[18] More often, however, the efforts involve some type of land use planning. An early tool used by the Air Force to fight encroachment was the "Greenbelt" concept.[19] Initiated in 1970, Greenbelt sought to purchase property around airfields to create a buffer zone.[20] Unfortunately, the program proved too costly.[21] The DoD also uses its own tools, such as the Air Use Installation Compatible Use Zone (AICUZ), which is used by all military services.[22] The purpose of AICUZ is to achieve compatible use of public and private lands in the vicinity of military airfields.[23] In 1995, in Fort Bragg, North Carolina, The Nature Conservancy and the Army Environmental Center signed a cooperative agreement that enabled the agencies to use "cost-sharing" to protect land in the vicinity of Fort Bragg.[24] The lands selected for protection were critical to the survival of the federally endangered red-cockaded woodpecker.[25]

Since September 11, 2001, the DoD has sought certain modifications to environmental laws under its Readiness and Range

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[18] Encroachment in the form of urban development led to the closure of Lowry Air Force Base, CO and Chanute Air Force Base, IL. U.S. DEP'T OF AIR FORCE, HANDBOOK 32-7084, AICUZ PROGRAM MANAGER'S GUIDE ¶ 1.1.1. [hereinafter AFH 32-7084] (1 Mar. 1999).

[19] AFH 32-7084, *supra* note 18, at ¶¶ 1.4–1.4.1.2. There were even earlier efforts dealing solely with noise problems. Air Force studies on community reaction to noise from aircraft operations began as early as 1957, and by 1964 the Air Force recognized the link between aircraft noise and land use planning. *Id.* at ¶ 1.4.1.

[20] C.V. Glines, *Closing in on the Airfields*, AIR FORCE MAGAZINE, Jan. 1989, at 74. The "Greenbelt" buffer was a rectangular area of about one mile on each side and two and a half miles from the end of base runways. *Id.*

[21] AFH 32-7084, *supra* note 18, at ¶ 1.4.1.2.

[22] U.S. DEP'T OF DEFENSE, INSTR. 4165.57, AIR INSTALLATIONS COMPATIBLE USE ZONES, (8 Nov. 1977). Additional authority for the program comes from OFFICE OF MANAGEMENT AND BUDGET, FEDERAL MANAGEMENT CIRCULAR 75-2, COMPATIBLE LAND USES AT FEDERAL AIRFIELDS. In addition to requiring federal agencies that operate an airfield to work with state and local authorities to achieve compatible land use planning, this circular also requires other federal agencies to ensure their programs foster compatible land use. *Id.*

[23] AFH 32-7084, *supra* note 18, at ¶ 1.1.

[24] Scott M. Farley & Scott C. Belfit, *Addressing Encroachment with Cooperative Agreements and Conservation*, FEDERAL FACILITIES ENVIRONMENTAL JOURNAL, Summer 2001, at 33-44. For general discussions of the use of cooperative agreements to preserve ecosystems, see AMY IRVINE, MAKING A DIFFERENCE: STORIES OF HOW OUR OUTDOOR INDUSTRY AND INDIVIDUALS ARE WORKING TO PRESERVE AMERICA'S NATURAL PLACES (2001) and LAND CONSERVATION THROUGH PUBLIC/PRIVATE PARTNERSHIPS (Eve Endicott ed., 1993).

[25] On June 6, 2006, the FWS announced the recovery of the federally-endangered red-cockaded woodpecker five years earlier than anticipated. Press Release, U.S. Fish & Wildlife Service, Fort Bragg Reaches Recovery Milestone for the Endangered Red-cockaded Woodpecker Five Years Earlier than Expected (June 6, 2006).

Preservation Initiative.[26] This initiative was designed to enable the DoD to meet its primary mission, while remaining a responsible steward of the natural resources on its lands.[27] One piece of new legislation authorized the DoD to cooperate more effectively with third parties on land transfers for conservation purposes.[28] In 2003, the DoD obtained a modification allowing military installations to supplant critical habitat designation for listed species through the use of an Integrated Natural Resource Management Plan (INRMP) that provides a conservation benefit to the species.[29] This article will look at endangered species on DoD land, INRMPs, and critical habitat designation. This article makes recommendations for the military departments within the DoD to follow in preparing and revising INRMPs in the future. The recommendations fall into two categories: (1) procedures to follow in preparing INRMPs, and; (2) recommendations for broadening the scope of INRMPs. This article concludes that the INRMP is an acceptable substitute for critical habitat designation, as long as it is thoroughly prepared and funded adequately. As ecosystem-based management tools, INRMPs that encompass a wide variety of natural resources concerns can be a great asset to the DoD.

II. BACKGROUND

A. Endangered Species on DoD Lands

DoD land holdings are generally large tracts, which often have a disproportionate natural resources value because higher concentrations of endangered species inhabit them.[30] DoD lands are distributed throughout the country and include ecosystems that are underrepresented or unrepresented in other federal agencies' land holdings.[31] Often, DoD lands are isolated from other federal land holdings.[32] This remote geographic location often adds to its natural resources value. Additionally, development around military installations has driven many species to seek refuge on the

[26] Overview, 2003 Readiness and Range Preservation Initiative, https://www.denix.osd.mil/denix/Public/Library/Sustain/RRPI/Documents/overview_f.doc.
[27] *Id.*
[28] This authority comes from the Bob Stump National Defense Authorization Act for Fiscal Year 2003, Pub. L. No. 107-314, § 2811, 116 Stat. 2458, 2705-07 (2002) (codified at 10 U.S.C. 2684a (2004)).
[29] National Defense Authorization Act for Fiscal Year 2004, Pub. L. No. 108-136, § 318(a)(3), 117 Stat. 1392, 1432-1433 (2003) [hereinafter FY2004 Authorization Act] (codified at 16 U.S.C. § 1536(b)(3)(B)).
[30] *See* LESLIE ET AL., *supra* note 2, § 1.2.
[31] *Id.*
[32] *Id.*

installations.[33] Due to access restrictions designed to ensure public safety and security of military assets, the land often offers more natural conditions as habitat for the species than lands managed by other federal agencies.[34] Military lands also may contain the invaluable habitat for some species that have been endangered or threatened due to loss of nearby public or private lands.[35] In some cases, military bases have become *de facto* refuges for threatened and endangered species that are either fleeing urban sprawl outside the base, or remaining within their historic habitat that has been preserved on the base.[36]

B. The Endangered Species Act and DoD Applicability

The Endangered Species Act (ESA) is designed to prevent the extinction of species of plants and animals by protecting species listed as "endangered" (in danger of extinction) or "threatened" (likely to become endangered in the foreseeable future).[37] It also attempts to "recover" species so that the species no longer needs protection from the ESA.[38]

The ESA prohibits any person from "taking" any species of fish or wildlife on the endangered or threatened lists.[39] The definition of "person" includes "any officer, employee, agent, department, or instrumentality of the Federal Government."[40] "Federal agency" is defined as "any department, agency, or instrumentality of the United States."[41] As a "person" and as a federal agency, the DoD must meet several requirements under the ESA. The prohibition against "taking" is very broad. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting any of these things.[42] "Harm" is also broadly defined. By regulation, it is defined to include destruction of habitat that kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering.[43] These broad definitions

[33] BETSY A. CODY, CONG. RESEARCH SERV., MAJOR FEDERAL LAND MANAGEMENT AGENCIES: MANAGEMENT OF OUR NATION'S LANDS AND RESOURCES, REP. NO. 95-599, http://www.ncseonline.org/NLE/CRS/abstract.cfm?NLEid=765 (last visited June 23, 2006).
[34] *Id*.
[35] *Id*.
[36] Louis J. Puleo, *Conservation Issues on Military Lands: Some Thoughts on a Framework for Successful Mission Integration*, 17 J. LAND USE & ENVTL. L. 431, 434 (2002).
[37] 16 U.S.C. § 1532(6), (20) (Lexis 2006).
[38] *Id.* §§ 1531(b), (c)(1), 1532(3), 1536(a).
[39] *Id.* § 1538(a)(1)(B); 50 C.F.R. § 17.31 (Lexis 2006).
[40] 16 U.S.C. § 1532(13) (Lexis 2006).
[41] *Id.* § 1532(7).
[42] *Id.* § 1532(19).
[43] 50 C.F.R. § 17.3 (Lexis 2006).

constrain the DoD's conduct when listed species of plants and animals, or their habitat, are present.

The DoD must not approve, fund, or carry out actions that might jeopardize the continued existence of any endangered or listed species, or might result in the destruction or adverse modification of habitat designated as critical to an endangered or listed species.[44] To meet this requirement, the DoD must consult with the Fish and Wildlife Service (FWS) or the National Marines Fisheries Service (NMFS), prior to taking any action that may adversely affect any endangered or listed species.[45]

Further, the DoD must insure that it utilizes its authority "in furtherance of the purposes of" the ESA.[46] One of these purposes is to "conserve" species, meaning that the species be restored to the point where it no longer needs ESA protection.[47] Thus, the DoD is required to use its authority and resources as a federal agency to conserve endangered species. This can preclude the DoD from undertaking an action which incidentally results in or causes the taking of a species, or causes damage or substantial modification to a species' habitat on the installation.

But, the ESA does not totally prohibit activities in which the DoD might be involved in a "taking" of an endangered species. The consultation process mentioned above allows for the taking of a limited number of members of a listed species if the FWS concludes that the DoD action poses "no jeopardy" to the continued existence of the species.[48] The FWS may also require the DoD to adopt reasonable and prudent alternatives to the original proposed action, in order to reduce the impact to the endangered species.[49]

If the DoD and the FWS cannot resolve between themselves whether or not an exemption should be granted for a proposed DoD action, there is an exemption process.[50] The Endangered Species Committee may be convened to consider a possible exemption from the ESA for a particular DoD action.[51] An exemption cannot be granted if the Secretary of State certifies that the exemption would violate a treaty or other international obligation.[52] But, notwithstanding any other

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[44] 16 U.S.C. § 1536(a)(2) (Lexis 2006).
[45] *Id*. FWS and NMFS both have responsibility for administering the Endangered Species Act, depending on whether the species in question is land-based or water-based. For the remainder of this article, the term FWS will be used. Unless otherwise stated, statements made about FWS apply equally to NMFS.
[46] 16 U.S.C. § 1536(a)(1) (Lexis 2006).
[47] *Id.* § 1531(b); 16 U.S.C. § 1532(3) (Lexis 2006).
[48] 50 C.F.R. § 402 (Lexis 2006).
[49] 16 U.S.C. § 1536(b)(3)(A) (Lexis 2006).
[50] *Id.* § 1536(h).
[51] *Id.* § 1536(e)-(p).
[52] *Id.* § 1536(i).

provision of the ESA, the exemption must be granted if the Secretary of Defense finds the exemption is necessary for national security reasons.[53]

When a species is listed as endangered or threatened, the Secretary of the Interior must concurrently designate "critical habitat" that is necessary for the recovery of the species.[54] The critical habitat designation is designed to assist the species by ensuring that the species has a suitable environment in which to recover. An area may be excluded from critical habitat designation if the Secretary determines that the benefit of the exclusion outweighs the benefit of designating the area as critical habitat.[55] The requirement to designate critical habitat has been the subject of much controversy. The manner in which critical habitat has been dealt with on DoD installations will be discussed at length below.

C. The Sikes Act

Predating the ESA, which was passed in 1973, the Sikes Act has long been the primary authority under which the DoD manages the natural resources on its installations.[56] Initially adopted in 1960, the Sikes Act provided for cooperation among the Secretaries of Defense and Interior, along with State agencies, to plan, develop and maintain fish and wildlife resources on military reservations in the United States.[57] In 1986, the Sikes Act was amended, requiring more comprehensive management of fish and wildlife resources on DoD lands.[58] It required the DoD to manage the fish and wildlife resources on its lands using trained professionals, and required that fish and wildlife agencies be given priority in management of fish and wildlife activities on military reservations [59]

The Sikes Act was further amended and significantly changed in 1997.[60] The 1997 Amendments replaced discretionary authority to manage natural resources with a mandatory requirement that each DoD installation prepare an INRMP,[61] and that the FWS concurrence in the

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[53] *Id.* § 1536(j).
[54] *Id.* § 1533(a)(3)(A)(i).
[55] *Id.* § 1533(b)(2).
[56] *H.R. 1497, A Bill to Reauthorize Title I of the Sikes Act: Hearings Before the Subcomm. on Fisheries, Conservation, Wildlife, and Oceans, House Res. Comm.*, 108th Cong. (Apr. 10, 2003) (statement of Raymond F. DuBois Jr., Deputy Undersecretary of Defense, Installations and Environment) [hereinafter DuBois Testimony], *available at* http://resourcescommittee. house.gov/archives/108/testimony/raymonddubois.htm.
[57] U.S. FISH & WILDLIFE SERVICE, DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST: SIKES ACT, http://www.fws.gov/laws/lawsdigest/sikes.html (last visited Feb. 28, 2006).
[58] *Id.*
[59] *Id*.
[60] *Id.*
[61] 16 U.S.C. § 670a(a)(1)(B) (Lexis 2006).

INRMP be obtained.[62] The Act now requires the DoD installations to carry out a resource management program that will conserve and rehabilitate natural resources on the installation, sustain multipurpose use of the resources on the installation (including hunting, fishing, trapping, and nonconsumptive use), and allow public access to the resources, subject to safety and military security requirements.[63]

The required scope of the INRMP is far more comprehensive than provided for in the original Sikes Act. INRMPs are required to address: fish and wildlife management; land management; forest management; fish and wildlife oriented recreation; enhancement of fish and wildlife habitat; and restoration and enhancement of wetlands.[64] INRMPs must establish specific natural resources goals and objectives, with time frames for proposed action.[65] They must also allow for sustainable use by the public of natural resources, not inconsistent with the needs of fish and wildlife resources.[66] In addition, INRMPs must provide for enforcement of natural resources laws.[67] All of these requirements must be satisfied while incurring no net loss in the installation's ability to support its military mission.[68] INRMPs were to be prepared for all military installations with significant natural resources by November 18, 2001, unless there was already a satisfactory plan in place.[69] The DoD was required to prepare and coordinate more than 373 INRMPs, most of which were completed by the deadline.[70] To meet the Sikes Act's standards, INRMPs must be reviewed every five years.[71] DoD policy, however, requires an annual review.[72]

III. CRITICAL HABITAT

A. Designation of Critical Habitat by FWS

Despite the ESA's requirement to designate critical habitat[73] concurrently with listing a species as endangered, the FWS has not

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[62] *Id.* § 670a(a)(2).
[63] *Id.* § 670a(3).
[64] *Id.* § 670a(b)(1) (Lexis 2006).
[65] *Id.*
[66] *Id.* § 670a(b)(1)(F).
[67] *Id.* § 670a(b)(1)(H).
[68] *Id.* § 670a(b)(1)(I).
[69] DuBois Testimony, *supra* note 56.
[70] *Id.*
[71] 16 U.S.C. § 670a(b)(2) (Lexis 2006).
[72] Memorandum from Alex A. Beehler, Assistant Deputy Under Secretary of Defense (Environment, Safety & Occupational Health), Implementation of Sikes Act Improvement Amendments: Supplemental Guidance Concerning INRMP Reviews [hereinafter Beehler Memo] (Nov. 1, 2004), https://www.denix.osd.mil/denix/Public/Library/NCR/Documents/Supplemental-Sikes-signed-2004.pdf.
[73] 16 U.S.C. § 1532 (5)(A) (Lexis 2006).

always done so. The FWS has taken the position that the present system for designating critical habitat is counterproductive to restoring endangered species.[74] According to the FWS, the current system yields little conservation benefit compared to the huge "social and economic costs."[75] The ESA, however, contains a citizen suit provision whereby citizens can sue the FWS to enforce provisions of the Act.[76] As a result of several lawsuits, the FWS has been ordered to designate critical habitat for listed species.[77]

Once designated, critical habitat must be managed in a very protective manner. As stated above, a federal agency action that does not jeopardize the continued existence of a listed species is allowed to proceed with a proposed action, following consultation with the FWS.[78] But, the standard for protecting critical habitat is higher than "not jeopardizing" the species.[79] Critical habitat may be designated in locations where the species in question does not live.[80] It may encompass broad areas of land where the species may live in the future.[81] And, critical habitat must be managed to restore the species to the point it is no longer endangered, not merely prevent the species from being in jeopardy.[82] This higher management standard places greater restrictions on what can be done on lands designated as critical habitat. Considering the number of endangered species on DoD lands, and DoD's need to use its lands for military readiness training, the two uses of the land are bound to conflict.

B. *Center for Biological Diversity v. Norton*

As previously discussed, the FWS has not always designated critical habitat, as prescribed by the ESA.[83] On the DoD lands, the FWS has often relied on a provision in its own regulations that excluded land from critical habitat if the land was already under a special management

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[74] *Critical Habitat Designations Under the Endangered Species Act: Hearings Before the Subcomm. on Fisheries, Wildlife, and Water, Senate Comm. on Env't & Pub. Works*, 108th Cong. (Apr. 10, 2003) (statement of Craig Manson, Assistant Secretary of the Interior [hereinafter Manson Testimony]), *available at* http://epw.senate.gov/hearing_statements.cfm?id=213437.
[75] *Id.*
[76] 16 U.S.C. § 1540(g) (Lexis 2006).
[77] *See* Catron County Bd. of Comm'rs v. U.S. Fish & Wildlife Serv., 75 F.3d 1429 (10th Cir. 1996); Natural Res. Def. Council v. U.S. Dep't of the Interior, 113 F. 3d 1121 (9th Cir. 1997); Forest Guardians v. Babbitt, 164 F.3d 1261, (10th Cir. 1998); N.M. Cattle Growers Ass'n v. U.S. Fish & Wildlife Serv., 248 F.3d 1277, 1283 (10th Cir. 2001).
[78] *See* notes 45-49 and accompanying text.
[79] 16 U.S.C. § 1536(a) (Lexis 2006).
[80] *Id.* § 1532 (5)(a)(ii).
[81] *Id*.
[82] Sierra Club v. U.S. Fish & Wildlife Serv., 245 F.3d 434 (5th Cir. 2001).
[83] *See* notes 74-77 and accompanying text.

plan, such as an INRMP.[84] This approach ended in a 2003 court decision, *Center for Biological Diversity v. Norton*.[85] The Southwest Center for Biological Diversity sued the FWS challenging its interpretation of the ESA that allowed it to exclude from critical habitat areas that are covered by "adequate management or protections already exist[ing] on those lands."[86] The FWS had excluded Forest Service lands from critical habitat designation, based on the lands being managed under a land and resource management plan (LRMP) developed by the Forest Service.[87] The U.S. District Court in Arizona held that land managed under an LRMP, which is similar to a DoD INRMP, should not be excluded from critical habitat designation.[88] The court said that the fact that lands require special management necessitates their *inclusion* as critical habitat, not their *exclusion* from it.[89] According to the court, the FWS's interpretation of the ESA was equivalent to inserting the word "additional" into the statute between the words "require" and "management," and this type of definitional change could only be made by Congress.[90] Because of the similarity of Forest Service LRMPs and DoD INRMPs, the decision had a major impact on designation of DoD land as critical habitat. Following *Norton,* the FWS could no longer use INRMPs to justify not designating critical habitat on DoD lands.

C. Range Readiness Preservation Initiative

In response to the tension between military readiness training and protecting natural resources, the DoD sought assistance from Congress. The Readiness and Range Preservation Initiative (RRPI) was a legislative proposal designed to help the DoD meet its primary mission of training and equipping for combat, while remaining a responsible steward of natural resources.[91] A prime example of the type of situations precipitating the change was the endangered species at the Barry M. Goldwater Range, near Luke Air Force Base, Arizona.[92]

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[84] *See* Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl, 66 Fed. Reg. 8530, 8537 (Feb. 1, 2001).
[85] 240 F. Supp. 2d 1090 (D. Ariz. 2003).
[86] *Id.* at 1097–1103.
[87] *Id*. at 1094–1096.
[88] *Id*. at 1099–1100.
[89] *Id*. at 1099.
[90] *Id*.
[91] DEPT OF DEFENSE, OVERVIEW, 2003 READINESS AND RANGE PRESERVATION INITIATIVE (RRPI), https://www.denix.osd.mil/denix/Public/Library/Sustain/RRPI/Documents/overview_f.doc (last visited Aug 3, 2006).
[92] The range is operated by the 56th Fighter Wing Range Management Office at Luke AFB. Luke AFB, AZ, http://www.luke.af.mil/StaffAgencies/RMO/RMO.asp (last visited Aug. 3, 2006). The U.S. Air Force and the U.S. Marine Corps use it to test armament, train for aerial gunnery, practice tactical maneuvering and air support.

As an airspace and land range, the Goldwater Range supports both air-to-air and air-to-ground tactical aviation for the Marine Corps and the Air Force.[93] A series of laws and executive orders dating from 1941-1943 withdrew over 2.1 millions acres of the range from public lands for use as an aviation training area.[94] Since that time, range management has restricted surface impacts to targets scattered over the tactical and manned ranges.[95] By keeping those targets in the same locations for decades, range officials have allowed most of the surrounding land to function purely as a safety buffer.[96] It is this management and the exclusion of most other land uses that has led to the Goldwater Range's recognition as a rich island of biodiversity.[97] While the bulk of encroachment pressures around Luke Air Force Base come from urban growth and incompatible development, the threats to the range are land management restrictions required for compliance with environmental laws. As a wildlife resource, the Barry M. Goldwater Range is significant as the primary U.S. habitat of the endangered Sonoran pronghorn antelope, a significant habitat for desert bighorn sheep, and a relatively well-protected expanse of Sonoran Desert in which natural ecological processes are predominant.[98] The preservation of pristine habitat has resulted in an additional burden for the military as range operations are now hampered by many restrictions designed to protect endangered species.[99] General Donald G. Cook, Commander of Air Education and Training, summarized the specific impacts on the Goldwater Range in his statement before the Subcommittee on Military Readiness of the House Armed Services Committee on March 8, 2002:

> Here, the courts could issue an injunction to halt range operations if concerns from environmental groups are not satisfied. In fact, one environmental group has filed three lawsuits over the past six years over a subspecies of

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GlobalSecurity.org, Barry M. Goldwater Range, [hereinafter GlobalSecurity.org] http://www.globalsecurity.org/ military/facility/goldwater.htm (last visited Aug. 3, 2006).

[93] GlobalSecurity.org, *supra* note 92.

[94] *Id.*

[95] *Id.*

[96] 944TH FIGHTER WING, FACT SHEET, BARRY M. GOLDWATER RANGE, http://www.944fw.afrc.af.mil/library/factsheets/factsheet.asp?id=3550 (last visited Aug. 14, 2006).

[97] ARIZONA BUREAU OF LAND MANAGEMENT, SONORAN DESERT NATIONAL MONUMENT PROCLAMATION, http://www.blm.gov/az/sonoran/sdproc.htm (last visited Aug. 14, 2006).

[98] *Hearing on Military Training Capabilities/Shortfalls Before the S. Comm. on Military Readiness*, 107th Cong. (Mar. 8, 2002) (statement of General Donald G. Cook, Commander, Air Education and Training Command), *available at* http://www.house.gov/hasc/openingstatementsandpressreleases/107thcongress/02-03-08cook.html (last visited Mar. 1, 2006).

[99] *Id.*

> Pronghorn antelope. These lawsuits and a Biological Opinion concerning the antelope have forced the Air Force to restrict the employment of training or live ordnance in the proximity of any Pronghorn sighting. To fulfill this requirement, four biologists had to be hired at great expense as spotters for each day's range activities. If Pronghorn are seen, portions of ranges are closed. In the past three years, more than 30% of the scheduled live drop missions were either cancelled or moved to alternate target areas. Explosive Ordnance Team clean up of expended munitions in target areas are similarly restricted. Thus, already limited air space is further constrained and impedes Air Force training objectives.[100]

Recognizing that military readiness was in tension with the designation of critical habitat, Congress modified the ESA in the National Defense Authorization Act of 2004. A portion of the ESA, 16 U.S.C. § 1533(a)(3), was changed to state that critical habitat shall not be designated on DoD lands that are subject to an INRMP, if the Secretary of the Interior determines in writing that the INRMP provides a "benefit to the species" for which critical habitat is proposed for designation.[101] Another section, 16 U.S.C. § 1533(b)(2), was also changed to include "the impact on national security" as an additional specific factor to be considered by the FWS when conducting the balancing test to determine whether critical habitat should be designated.[102]

D. Response from Environmental Organizations

Before the changes to the INRMP provisions were approved, environmental groups voiced their disapproval of the proposed changes. A main objection is that, in their view, INRMPs do not adequately protect the resources they cover.[103] As evidence, they cite multiple

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[100] *Id.*

[101] FY 2004 Authorization Act, *supra* note 29, § 318(a)(3).

[102] *Id*. § 318(b). The balancing test required the Secretary of the Interior to designate critical habitat based on the best scientific data available after considering economic impact, and other relevant impact of designating an area to be critical habitat. 16 U.S.C. § 1533 (b)(2) (Lexis 2006). If the benefits of designating the land as critical habitat were outweighed by the economic and other relevant impact, the Secretary could decline to designate the land as critical habitat. *Id.* National security concerns could have been considered as an "other relevant impact," but were not specifically listed in the statute. The FY 2004 National Defense Authorization Act added "the impact on national security" as a specifically enumerated consideration, along with the economic impact of designation. FY 2004 Authorization Act, *supra* note 29, § 318(b).

[103] NAT'L WILDLIFE FEDERATION FACTSHEET, FWS'S CASE-BY-CASE REVIEW OF INRMPS IS ESSENTIAL FOR CONSERVING IMPERILED WILDLIFE: REJECT DEFENSE

instances of the FWS declaring particular INRMPs inadequate.[104] Another of their concerns is a finding by the DoD Inspector General that there is no documented evidence of implementation of INRMPs.[105] The environmental community wants to be sure that progress is made and monitored regarding the recovery of the species and the habitat management. The Center for Biological Diversity, the plaintiff in the case that invalidated the FWS interpretation of the ESA, claimed that changing the ESA in this way would be like "issu[ing] a blank check to the DoD, allowing the Pentagon to substitute its own Integrated Natural Resource Management Plans which are often never funded or implemented for the designation of critical habitat to ensure the survival of endangered species on military lands."[106]

Environmental organizations have other concerns, as well. They are concerned that the decision to forego critical habitat designation in favor of an INRMP is a one-time decision.[107] Once the FWS has declared the INRMP to be valid, the FWS is out of the picture and unavailable to take enforcement action, should it be needed.[108] There are no provisions for adaptive management techniques that require the INRMP be evaluated for results and adjusted accordingly.[109] In their view, because the DoD has the obligation under the ESA to use its resources to preserve endangered species and their habitats, the authority granted to the DoD by the FY 2004 National Defense Authorization Act (NDAA) should be used wisely, and should address the concerns raised by environmental organizations.[110]

On April 13, 2004, the FWS excluded Vandenberg Air Force Base from critical habitat designation pursuant to the Endangered Species Act for the threatened California red-legged frog.[111] In doing so, the FWS cited Vandenberg's 1997 INRMP as already providing the

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DEPARTMENT'S PROPOSED EXEMPTION FROM THIS ACCOUNTABILITY, http://epw.senate.gov/108th/FWS_Review.doc (last visited Feb. 27, 2006).

[104] *Id.*

[105] *Critical Habitat Designations Under the Endangered Species Act: Hearings Before the Subcomm. on Fisheries, Wildlife, and Water, Senate Comm. on Env't & Pub. Works*, 108th Cong. (Apr. 10, 2003) (statement of John F. Kostyack, National Wildlife Federation Senior Counsel), *available at* http://epw.senate.gov/hearing_statements.cfm?id=213437.

[106] Press Release, Ctr. for Biological Diversity, House Republican Radicals May Undo Bipartisan Senate Compromise on Military Environmental Exemptions (Aug. 21, 2003), *available at* http://www.sw-center.org/swcbd/press/dod8-21-03.htm (last visited Feb. 27, 2006).

[107] Telephone Interview with John F. Kostyack, Senior Counsel, National Wildlife Federation (May 26, 2005).

[108] *Id*.

[109] *Id*.

[110] *Id*.

[111] Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the California Red-legged Frog (Rana aurora draytonii), 69 FR 19620, 19629 (Apr. 13, 2004).

necessary conservation benefit to the species, thereby negating the need to designate critical habitat.[112] The FWS noted that INRMP "does provide conservation measures for the California red-legged frog, as well as for the management of important wetland habitats across the base."[113] These measures included monitoring, periodic surveys of species status, and implementation of conservation measures recommended by the FWS during active consultation by the Air Force with the FWS.[114]

IV. INRMP VS. CRITICAL HABITAT DESIGNATION

A. DoD Position that INRMP is Superior

The DoD has argued that INRMPs are better environmental management tools than critical habitat designation. Prior to the FY 2004 NDAA, which prohibited critical habitat designation on DoD INRMP-managed lands, the DoD made clear its position that INRMPs are superior.[115] The DoD believed that critical habitat designations on military installations are duplicative because INRMPs already provided the "special management considerations or protection" needed to aid in survival and recovery of threatened and endangered species.[116] The DoD also stated that critical habitat designations, layered on top of INRMPs, unnecessarily limited a military commander's ability to meet the dual objectives of military readiness and natural resource protection.[117]

The DoD advanced several theories to support its request that lands on a military installation be excluded from a critical habitat designation where the installation had an approved INRMP.[118] First, INRMPs are adequate for conserving and rehabilitating natural resources on military bases, including habitats needed for recovery of threatened and endangered species.[119] Second, INRMPs are prepared in cooperation with the FWS and require the mutual input of the DoD, the FWS, and State fish, game and wildlife agencies concerning conservation, protection, and management of natural resources.[120] Finally, most INRMPs covering military installations that are home to threatened or endangered species will require a Section 7 ESA consultation with the FWS, or will incorporate existing plans that were

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[112] *Id*.
[113] *Id*.
[114] *Id.*
[115] *Id.*
[116] Dubois Testimony, *supra* note 56.
[117] *Id*.
[118] *Id*.
[119] *Id*.
[120] *Id.*

generated as a result of a section 7 ESA consultation.[121] According to the DoD, INRMPs are better management tools because they do more than focus solely on the recovery of a species—they consider the health of the entire ecosystem.[122]

B. FWS Position that Critical Habitat Process is Broken

According to the FWS, designation of critical habitat as required by ESA does not offer significant additional protection beyond listing the species as threatened or endangered.[123] By listing a species, however, other sections of the ESA are triggered, providing protection to the species. Specifically, the Section 4 recovery process,[124] the Section 9 prohibition against unauthorized takings of the species,[125] Section 6 State funding,[126] and Section 7 federal agency responsibilities[127] are all triggered.[128] These protections are what the FWS believes contribute to survival and recovery of a species.[129] The actual designation of critical habitat does not add significant extra protection.

Further, the FWS believes that the critical habitat designation process has required the FWS to spend an inordinate amount of its available resources.[130] Responding to court-imposed deadlines to designate critical habitat has left the FWS with almost no ability to confirm the scientific data generated in its administrative record before making listing and critical habitat designations.[131] They have been unable to properly prioritize the workload and resources available to accomplish it.[132] They have had to delay high priority listings due to resources being consumed in litigation.[133] As of April 2003, the FWS projected that budget money that was supposed to fund the entire critical habitat program was already dedicated to complying with existing court orders and court-approved settlement agreements well into Fiscal Year 2008.[134] Between lawsuits from environmental groups suing to force critical habitat designations, and lawsuits from those adversely affected

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[121] *Id*.
[122] *Id.*
[123] Manson Testimony, *supra* note 74.
[124] 16 U.S.C. § 1533(f)(1) (Lexis 2006).
[125] *Id.* § 1538(a)(1)(B).
[126] *Id.* § 1535(d)(1).
[127] *Id.* § 1536.
[128] Manson testimony, *supra* note 74.
[129] *Id*.
[130] *Id*.
[131] *Id*.
[132] *Id.*
[133] *Id*.
[134] *Id*.

by critical habitat designation, the FWS has been tied up in litigation over this issue to the point that the program is ineffective: "It cannot be overstated that managing the endangered species program through litigation is ineffective in accomplishing the purposes of the ESA."[135]

To avoid years of litigation regarding the INRMP-managed/critical habitat-excluded lands, the DoD should ensure that its INRMPs are thoroughly and responsibly done. There will likely be lawsuits trying to force critical habitat designation affecting military lands. DoD success in the courts in early cases will serve to slow down or prevent later lawsuits. More importantly, an INRMP done properly and thoroughly enough to survive legal challenges will meet the goals espoused by the DoD with respect to the INRMP being a better management tool than critical habitat designation.

V. PROCEDURAL RECOMMENDATIONS

As a result of the recent amendment to the ESA, the DoD now has greater authority and wider responsibility with respect to managing the natural resources on its lands. Because environmental organizations object to the new paradigm of critical habitat designation on DoD lands, the DoD and the FWS would be wise to proceed responsibly. What follows is an analysis of some perceived "weak spots" in the procedure for using INRMPs, instead of critical habitat designation, on DoD land. Suggestions to strengthen the INRMPs are also made.

A. Definition of "Benefit to the Species"

In order for the DoD to get an INRMP-managed installation excluded from critical habitat designation, the FWS must certify that the INRMP provides a "benefit to the species" for which the critical habitat would otherwise be designated.[136] This is the standard that triggers the recently authorized critical habitat exclusion for DoD lands. The meaning of "benefit to the species" will likely be the subject of litigation. Because the legislation did not define "benefit to the species," the FWS will have to make its own determination. If the FWS makes a reasonable determination, it will be entitled to deference in any litigation. But, the FWS has no plans to issue a standard definition through the administrative process.[137]

Prior to the FY2004 NDAA, "benefit to the species" was part of the FWS analysis to determine whether an INRMP could be used in lieu

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[135] *Id*.
[136] FY 2004 Authorization Act, *supra* note 29, § 318(a).
[137] Telephone Interview with Lewis Gorman, U.S. Fish & Wildlife Serv. (Jun. 10, 2005).

of critical habitat designation.[138] A military installation could have its INRMP qualify as "adequate special management" if the FWS determined that the INRMP: provided a conservation benefit to the species; provided certainty that the management plan would be implemented; and provided certainty that the conservation effort would be effective.[139] In evaluating the "conservation benefit to the species" criteria, the FWS would look to see if the cumulative benefits of the activities and plans in the INRMP maintained or provided for an increase in a species' population, or the enhancement or restoration of the species' habitat—within the areas deemed essential to the conservation of the species.[140] FWS guidance stated that a conservation benefit may result from "reducing fragmentation of habitat, maintaining or increasing populations, insuring against catastrophic events, enhancing and restoring habitats, buffering protected areas, or testing and implementing new conservation strategies."[141] These standards can provide guidance to future FWS determinations, but should not be relied upon to the exclusion of the adoption of a new official standard in a regulation. A new regulation is appropriate to reflect the changes in the underlying statute.

Because the "adequate special management" analysis looked at all of three criteria and the FY2004 NDAA provision only requires a "benefit to the species" analysis, it is possible that a lower hurdle must now be cleared for the FWS to approve an INRMP that will substitute for a critical habitat designation. This lower hurdle may end up being problematic for the FWS, particularly in light of its concerns that the critical habitat designation program has been controlled by litigation.

Although Congress did not define "benefit to the species," there is some indication of Congressional expectations in the Conference Committee Report.[142] In the version of the critical habitat exclusion offered by the House of Representatives, critical habitat designation was precluded on lands subject to an INRMP when the Secretary of the Interior determined that the INRMP "addresse[d] special management considerations or protection of endangered or threatened species."[143] In the Senate version, designation would have been precluded when the Secretary of the Interior certified in writing that: "(1) the management activities identified in the [INRMP] will effectively conserve threatened

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[138] Memorandum from Marshall P. Jones, Jr., U.S. Fish & Wildlife Serv. Acting Director, Guidance for Coordination on Department of Defense Sikes Act Integrated Natural Resource Management Plans (June 8, 2001) [hereinafter FWS Memo], *available at* http://www.fws.gov/ habitatconservation/SAIA%202001%20Guidance%20FWS.pdf (last visited Feb. 27, 2006).
[139] *Id*.
[140] *Id*.
[141] *Id*.
[142] H.R. CONF. REP. NO. 108-354, at 667 (2003).
[143] *Id*.

and endangered species; and (2) that adequate funding will be provided for such management activities."[144] Further, the conferees in the Committee resolving the differences between the two stated that they expect an INRMP to be assessed for its "potential contribution to species conservation, giving due regard to those habitat protection, maintenance, and improvement projects . . . that address the particular conservation and protection needs of the species for which critical habitat would otherwise be proposed."[145] To take this language seriously, the FWS should do more than a case-by-case determination of whether an INRMP provides a "benefit to the species."

The FWS should promulgate a standard definition of "benefit to the species," using standard notice and comment procedures. The definition should include the three elements in the pre-FY 2004 NDAA analysis, as well as the language from the Conference Committee. Ultimately, the definition must be good enough to warrant deference when it is challenged. The DoD should encourage the FWS to promulgate the definition as soon as the FWS is able.

B. Public Input when Developing INRMPs

Once an INRMP demonstrably provides a "benefit to the species," however that is ultimately defined, it becomes a substitute for critical habitat designation. Because of the scope of a successful INRMP, and its effect on the entire ecosystem of a military installation, it is arguably a major federal action significantly affecting the quality of the human environment, requiring analysis under the National Environmental Policy Act (NEPA).[146] Currently, DoD policy does not require that an INRMP, or an INRMP revision, be subject to the NEPA process; although such analysis is permitted, especially if the changes will result in biophysical consequences materially different from the existing INRMP and its NEPA document.[147]

The DoD would be prudent to require a NEPA analysis for all INRMPs, and for all future revisions to existing INRMPs, particularly if the INRMP is being used as a substitute for critical habitat designation. Using NEPA would allow for public input into the process, along with notice and comment procedures, and would make a FWS decision that the INRMP provides a "benefit to the species" more defensible in court. Further, the NEPA public participation would fulfill the public input requirements of the Sikes Act.[148]

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[144] *Id*.
[145] *Id*.
[146] 42 U.S.C. § 4332(C) (Lexis 2006).
[147] DuBois Memo, *supra* note 56. When NEPA is not used, DoD policy is to give the public a 30-day period to review and comment on an INRMP. *Id*.
[148] 16 U.S.C. § 670a(a)(2) (Lexis 2006).

Although the Sikes Act requires that INRMPs be reviewed every five years, DoD policy requires an annual review.[149] DoD policy is to invite public comment on changes resulting from these reviews only when the comments would otherwise be required by NEPA.[150] The DoD would be prudent to consider changing this policy to one that invites public comment for every Sikes Act five-year review, and any time the INRMP is revised. This would allow the public to submit inputs that have arisen during the previous period of INRMP-based management.

Using NEPA procedures to develop and renew INRMPs will standardize the way in which INRMPs are created and amended. This practice will help insure that INRMPs are as effective as critical habitat designation at conserving and protecting endangered species.

C. Unfunded INRMPs

Any INRMP is only as good as its funding. Therefore, its substitution for critical habitat designation should be dependent on the underlying funding. DoD policy requires that natural resources compliance requirements be categorized and funded based upon a priority system.[151] The category of "must fund" projects and actions covers those that meet the FWS "special management criteria" for threatened and endangered species management, provide for qualified natural resources personnel, and prevent loss or degradation of resources that may affect military readiness.[152] Not all actions and projects covered in an INRMP fall into the "must fund" category.[153] Understandably, the natural resources priorities are prioritized according to their impact on military readiness. An area for improvement is the manner in which INRMPs are funded. The discretion of military commanders to determine military readiness needs, and the natural resources categories being tiered according to impact on military readiness may lead to some portions of INRMPs never being implemented due to lack of funds.

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[149] Beehler Memo, *supra* note 72.

[150] *Id*. In other words, whenever the changes result in significant biophysical consequences materially different from those covered in the initial INRMP.

[151] DOD INSTRUCTION 4715.3, ENVIRONMENTAL CONSERVATION PROGRAM (May 3, 1996). Class 0 contains INRMP actions necessary to rehabilitate or prevent degradation of resources that may affect military readiness. Class 1 covers current management of species and habitats of concern necessary to prevent the listing of a species that could impact military readiness. Class 2 covers requirements. Class 3 covers natural resources enhancement projects beyond those required for compliance. DuBois Memo, *supra* note 56.

[152] DuBois Memo, *supra* note 56.

[153] *Id*.

In the pre-*Norton* situation, the FWS required adequate funding of INRMPs in order to determine whether an INRMP met the "provides adequate special management" standard that allowed the INRMP to substitute for critical habitat designation.[154] In order to make such a determination, the FWS required that an INRMP provide a conservation benefit to the species, provide certainty that the management plan will be implemented, and provide certainty that the conservation effort will be effective.[155] Proof of adequate funding was required to get the designation.

The DoD would be prudent to ensure that INRMPs are adequately funded every year. Without a definition of "benefit to the species" in place, it is possible that an INRMP could be approved by the FWS, and then not be adequately funded in subsequent fiscal years, reducing the INRMP's effectiveness.

VI. SUBSTANTIVE RECOMMENDATIONS

For the INRMP to fulfill its purpose, it should be broad-based and integrative. It should look at the ecosystem(s) on the installation, as well as the ecosystem(s) on adjacent lands. In seeking and obtaining from Congress the change to the ESA that precluded critical habitat designation, the DoD trumpeted the benefits of using INRMPs, rather than critical habitat designation, for natural resource management on military installations.[156] INRMPs embrace current scientific principles relating to ecosystem management and biodiversity protection, broadly focusing on the health of a whole ecosystem rather than just on a specific species within that ecosystem.[157] By using broadly-scoped INRMPs that consider the ecosystems on military installations and the surrounding lands, the DoD can monitor the health of the ecosystems and the improvement of endangered species and their habitats. Just as importantly, the DoD can ensure that it does not end up bearing a disproportionate share of the responsibility and cost of these tasks in the region where the military installation is located.

Several considerations for INRMPs are discussed below. They consist of environmental obligations from other environmental laws, or on other lands that are adjacent to DoD lands. A successful INRMP should include a discussion of each of the following, if they exist in a particular case.

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[154] *See* FWS Memo, *supra* note 138.
[155] *Id*.
[156] Dubois Testimony, *supra* note 56.
[157] *Id.*

A. Reasonable and Prudent Measures from Individual Biological Opinions

As part of its ESA obligations, an individual military installation may have to meet requirements imposed by consultations with the FWS.[158] When the DoD takes an action that may adversely affect a listed or proposed species, certain steps must be taken.[159] The DoD is responsible for submitting a biological assessment of the proposed action to the FWS, including an assessment of the action's effects on species and habitat, for determination of whether a formal consultation must be conducted.[160] It is up to the DoD to determine the contents of the biological assessment.[161]

The FWS will respond to the biological assessment with a biological opinion (BO).[162] There are three main options for the BO. It may find: that the proposed DoD action is not likely to jeopardize a listed species and is not likely to destroy/modify critical habitat (a "no jeopardy" opinion); that the action is likely to jeopardize a listed species or destroy/modify critical habitat (a "jeopardy" opinion); or that the action is likely to jeopardize a listed species or destroy/modify critical habitat, but that there are reasonable and prudent alternatives to the action.[163]

In cases in which the FWS finds that the DoD action (or reasonable prudent alternative) will result in a "take"[164] of a listed species, and that the "take" does not violate ESA § 7(a)(2)[165], the FWS will issue an incidental take statement (ITS) along with the biological opinion.[166] The ITS will specify: the impact of the incidental takes; the reporting conditions for each individual instance of a take; handling and disposal procedures for each take; and "reasonable and prudent

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[158] 16 U.S.C. § 1536 (Lexis 2006).
[159] 50 C.F.R. § 402.10(a) (Lexis 2006).
[160] *Id.* § 402.12(a).
[161] *Id.* § 402.12 (f). The following may be considered for inclusion in the biological assessment: the results of an on-site inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally; The views of recognized experts on the species at issue; A review of the literature and other information; An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies; An analysis of alternate actions considered by the federal agency for the proposed action. *Id*.
[162] *Id.* § 402.12(k)(2).
[163] *Id.* § 402.14(h)(3).
[164] "Take" is defined broadly. It means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. 16 U.S.C. § 1532(19) (Lexis 2006).
[165] ESA § 7(a)(2) says that a federal agency action may not jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat for the species. 16 U.S.C. § 1536(a)(2) (Lexis 2006).
[166] 50 C.F.R. § 402.14(i)(1) (Lexis 2006).

measures" (RPMs) that must be taken by the DoD to minimize the impact of the takes.[167] RPMs can only impose minor changes on the DoD action, but they must be complied with by the DoD. Because the RPMs are a result of consultation with the FWS regarding threatened or endangered species and habitat, any conditions placed upon an installation as a result of RPMs should be included in the underlying INRMP.

B. Recovery Plans

A recovery plan should be included in an INRMP. Once a species is listed as threatened or endangered, ESA requires that a recovery plan be developed for the species.[168] In developing recovery plans, the FWS can consult public and private agencies, and must prioritize which species will most likely benefit from the plan.[169]

A conservation plan must contain a description of site-specific management actions necessary to achieve the goal of the plan—objective, measurable criteria that, when met, warrant the species being de-listed—and time and cost estimates for obtaining the plan's goal, as well as intermediate steps along the way.[170] And, most significantly for INRMP considerations, any new or revised recovery plan must provide public notice and opportunity for comment.[171] All information gained through the public comment process must be considered by the FWS before approving the plan and by any federal agency prior to implementing the plan.[172]

Within a recovery plan, a variety of actions may be required. They utilize the best scientific and commercial data available and may require the creation of new habitat, the restoration of existing habitat, or reintroduction of the species into suitable habitat.[173] There are many threatened and endangered plants that exist almost wholly on DoD lands.[174] If these plant populations continue to dwindle on other lands, the focus on their recovery on DoD lands will likely intensify, to prevent them from disappearing altogether. A successful INRMP should encompass recovery plans for any endangered or threatened species on the installation. Also, if NEPA notice and comment procedures are used, as recommended above, the notice and comment

[167] 50 C.F.R. § 402.14(i)(1)(i)-(v) (Lexis 2006).
[168] 16 U.S.C. § 1533 (f)(1) (Lexis 2006).
[169] *Id.* § 1533 (f)(1)(A), (f)(2).
[170] *Id.* § 1533 (f)(1)(B)(i)-(iii).
[171] *Id.* § 1533 (f)(4).
[172] *Id.* § 1533 (f)(4), (5).
[173] U.S. FISH & WILDLIFE SERV., RECOVERY REPORT TO CONGRESS, FISCAL YEARS 2001-2002 2, *available at* http://endangered.fws.gov/recovery/reports_to_congress/2001-2002/ report_text.pdf (last visited Feb. 27, 2006).
[174] *Id*. at 14.

requirements surrounding conservation plans can be dealt with at the same time.

C. Section 7(a)(1) Conservation Planning

The next issue that should be addressed in a successful INRMP is ESA § 7(a)(1) conservation planning. This section requires that the DoD, through consultation with the FWS, be proactive in furthering the purposes of the ESA, by planning for and carrying out conservation programs for listed species.[175] Under this section, federal agencies often enter into partnerships and Memoranda of Understanding (MOUs) with the FWS for implementing and funding conservation agreements, management plans, and recovery plans developed for listed species.[176] Any MOUs that have been implemented for a DoD installation should be included within the INRMP.

D. Mitigation and Monitoring Requirements from NEPA Process

Earlier, this article recommended that the DoD require NEPA procedures be used when initially developing and implementing the INRMP for all installations. Currently, NEPA procedures may be used. When NEPA has been used to establish an INRMP, the final Record of Decision is likely to contain mitigation and monitoring requirements for the proposed action.[177] Mitigation consists of methods to minimize or eliminate adverse impact from a proposed action. It includes not taking certain parts of an action; limiting the degree or magnitude of an action; repairing, rehabilitating, or restoring the affected environment to rectify adverse impact; conducting preservation and maintenance operations over the life of the action; and replacing or providing substitute resources or environments to offset any adverse environmental impacts.[178] When NEPA has been used to develop an INRMP, any

[175] 16 U.S.C. § 1536(a)(1) (Lexis 2006). The purposes of the ESA are to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of various treaties and conventions providing for the protection of animal and plant species. *Id.* § 1531(b).

[176] U.S. FISH & WILDLIFE SERV., FINAL ESA SECTION 7 CONSULTATION HANDBOOK 1-1 (1998), *available at* http://endangered.fws.gov/consultations/s7hndbk/ch1-3.pdf (last visited Feb. 28, 2006).

[177] *See* COUNCIL ON ENVTL. QUALITY, NEPA'S 40 MOST ASKED QUESTIONS, 46 Fed. Reg 18026 (1981), *available at* http://ceq.eh.doe.gov/nepa/regs/40/30-40.HTM#39 (last visited Feb. 28, 2006).

[178] *See* COUNCIL ON ENVTL. QUALITY, REGULATIONS FOR IMPLEMENTING NEPA, § 1508.20, 46 Fed. Reg. 18026 (1981), *available at* http://ceq.eh.doe.gov/Nepa/regs/ceq/toc_ceq.htm (last visited Feb. 28, 2006).

mitigation and monitoring requirements that come out of the NEPA process should be incorporated into the INRMP.

E. Federal Land Policy Management Act and National Forest Management Act Resource Management Plans

The above recommendations for inclusion into INRMPs have all focused on environmental issues on a military installation. There are also several environmental planning tools that operate on lands outside a military installation that ought to be considered as part of a successful INRMP. The border of a particular ecosystem will not usually coincide with the border of the military installation on which it is located. To properly manage the ecosystem, the lands outside the installation should be considered.

The Federal Land Policy Management Act requires the Bureau of Land Management (BLM) to "develop, maintain, and when appropriate, revise" land use plans for lands under BLM jurisdiction.[179] These resource management plans account for natural resources on BLM lands and regulate activities on them. For example, the plans designate areas that are acceptable for oil and gas leasing and development, establish routes for off-road vehicles, and identify areas in need of special protection. The areas in need of special protection are designated "areas of critical environmental concern."[180] Through the resource management plans, BLM lands are actively managed to allow multiple uses without degrading overall environmental quality.

Similar plans are required by the National Forest Management Act. The Forest Service must develop resource management plans for the National Forest System.[181] Both the BLM and Forest Service plans are subject to public notice and comment prior to being finalized.[182]

When a military installation is bordered by BLM land or Forest Service land, they will almost always share land that is part of the same ecosystem. As an ecosystem management tool, the INRMP should consider and possibly adopt measures equivalent to those in adjacent Resource Management Plans.

F. Comprehensive Wildlife Conservation Strategies

In addition to federally managed lands that border DoD lands, there may also be state-managed wildlife conservation strategies to consider. Congress has established a program for all fifty states and six territories to develop Comprehensive Wildlife Conservation Strategies

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[179] 43 U.S.C. § 1712(a) (Lexis 2006).
[180] *Id.* § 1702(a).
[181] 16 U.S.C. § 1604(a) (Lexis 2006).
[182] 43 U.S.C. § 1713(f) (Lexis 2006); 16 U.S.C. § 1604(d) (Lexis 2006).

(CWCS).[183] The plans were submitted by all fifty states and six territories by the October 1, 2005 deadline.[184] Once the plans are approved, they will receive significant federal funding.[185] The CWCS will be the first national approach to wildlife conservation.[186] A successful INRMP will consider how the state CWCS affects the land surrounding the installation.

G. Adjacent Private Lands

In addition to considering other federal and state lands adjacent to military installations, the DoD should also address private lands in an INRMP. The FWS has several arrangements available to private landowners to help them manage endangered species on their own land.

1. *Habitat Conservation Plans*

Private landowners who wish to carry out actions that may "take" an endangered species must obtain a permit from the FWS.[187] An incidental take permit lets a landowner lawfully use his property, even if his actions accidentally take an endangered species.[188] This is accomplished through an incidental take permit.[189] For an individual private landowner to receive an incidental take permit for his own property, the landowner must prepare and submit a Habitat Conservation Plan (HCP).[190]

The HCP must include information on the impact of an incidental take; steps taken to minimize and mitigate the impacts, along

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[183] TEAMING WITH WILDLIFE, STATE WILDLIFE CONSERVATION STRATEGIES, *available at* http://www.teaming.com/pdf/State%20Strategies%20Overview.pdf (last visited Feb. 28, 2006). The six territories are: American Samoa, the District of Columbia, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. *See* STATE BY STATE INFORMATION, *available at* http://www.teaming.com/state_pages.htm (last visited February 28, 2006).

[184] THEODORE ROOSEVELT CONSERVATION PARTNERSHIP, IMPROVING FISH AND WILDLIFE MANAGEMENT THROUGH STATE WILDLIFE ACTION PLANS http://www.trcp.org/if_fundingstatewildlifegrants.aspx (last visited Aug. 14, 2006).

[185] *Id*. OMB plans to give $350M annually to the plans. *Id*. As of December 12, 2005, the following state/territory plans had been approved: Alabama, Georgia, Hawaii, Illinois, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Nebraska, Nevada, North Carolina, Oklahoma, Utah, Vermont, Washington, Wisconsin, and Wyoming. *See* STATE WILDLIFE ACTION PLANS, *available at* http://www.teaming.com/state_wildlife_strategies.htm (last visited February 28, 2006).

[186] TEAMING WITH WILDLIFE, STATE WILDLIFE CONSERVATION STRATEGIES, *available at* http://www.teaming.com/pdf/State%20Strategies%20Overview.pdf (last visited Feb. 28, 2006).

[187] 16 U.S.C. 1539 (Lexis 2006).

[188] *Id.*

[189] *Id.* § 1539(a)(1)(B).

[190] *Id.* § 1539(a)(2)(a).

with funding for these steps; alternative actions considered by the applicant and why they are not being pursued; and other relevant information specified by the FWS.[191] Following a public notice and comment period, the FWS will issue the permit if three conditions are met. First, the FWS must find that the taking will be incidental.[192] Second, the FWS must find that the effects of the taking will be minimized and mitigated, to include proper funding for doing so.[193] Finally, the FWS must find that the taking will not appreciably reduce the likelihood of survival and recovery of the species.[194] When compiling the HCP application, the landowner consults individual scientists, as necessary, to propose the appropriate minimization and mitigation measures.[195] When a HCP covers a species about which there are gaps in the biological data, adaptive management provisions are included in the HCP.[196] Adaptive management is important because it provides measurable biological goals and objectives through research and monitoring, combined with future adjustments to the conservation management plan when new data warrants it.[197]

A successful INRMP will consider HCPs on the adjacent lands. In particular, adaptive management principles that have been adopted by adjacent landowners may provide needed information or suggestions to INRMP planners.

2. *Safe Harbor Agreements*

A Safe Harbor Agreement (SHA) is an agreement between a private landowner and the FWS that protects habitat that comprises the ecosystem for a listed species, while preventing future additional regulation of the private lands.[198] A private landowner can seek to establish a SHA on his property. The FWS will gather information from the landowner, evaluate the habitat and conditions on the lands, and develop a conservation plan.[199] If the FWS determines there will be a "net conservation benefit" from the agreement's management plan, they will issue the agreement.[200] Under the SHA, the landowner agrees to

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[191] *Id.* § 1539(a)(2)(A)(i)-(iv).
[192] *Id.* § 1539(a)(2)(B)(i)-(v).
[193] *Id.*
[194] *Id.*
[195] U.S. FISH & WILDLIFE SERV., "NO SURPRISES," QUESTIONS AND ANSWERS, *available at* http://endangered.fws.gov/hcp/NOSURPR.HTM (last visited Feb. 28, 2006).
[196] *Id.*
[197] *Id.*
[198] 50 C.F.R. § 13.21 (Lexis 2006); 50 C.F.R. § 17.22 (Lexis 2006).
[199] *See generally* U.S. FOREST SERVICE, SAFE HARBOR AGREEMENTS FOR PRIVATE LANDOWNERS, http://www.fws.gov/endangered/recovery/harborqa.pdf#search='safe%20harbor%20agreement'.
[200] *Id.*

voluntarily undertake management activities on his property to enhance, restore, or maintain habitat for threatened and endangered species and the FWS agrees not to impose future land-use restrictions on the property in the future.[201] Public hearings and comments are required before a Safe Harbor Agreement can be issued.[202] Any existing SHAs covering private lands in the vicinity of the military installation should be considered in a successful INRMP.

3. *Candidate Conservation Agreements*

A Candidate Conservation Agreement (CCA) is a formal agreement between the FWS and a private landowner to help preserve species that are not yet listed as endangered or threatened, but are either proposed to be listed, or are likely to become listed.[203] The landowner agrees to take certain actions to reduce the threats to these species, so that listing will not be necessary.[204] In return, the landowner receives an incidental take permit to allow a taking or habitat modification to achieve the conditions set out in the agreement.[205] CCAs do not preclude further land use restrictions in the future, however. Although there are many CCAs in force, the most common agreement of this type is a Candidate Conservation Agreement with Assurances. Public hearings and comments are required before a CCA and permit can be issued.[206] Any existing CCAs should be addressed in a successful INRMP.

4. *Candidate Conservation Agreements with Assurances*

A Candidate Conservation Agreement with Assurances (CCAWA) is the same type of agreement as the Candidate Conservation Agreement, but it includes provisions in which the FWS agrees not to enact further land use restrictions on the private property in the future.[207] A CCAWA also requires a public notice and comment period.[208]

For military installations adjacent to private lands affected by an HCP, a SHA, a CCA or a CCAWA, the INRMP should evaluate whether or not the ecosystem on the installation is connected to those on the private lands. If there are habitat impacts on the installation that

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[201] *Id*.
[202] 50 C.F.R. § 17.32(c)(2) (Lexis 2006).
[203] *Id.*§ 17.22(d).
[204] *Id*.
[205] *Id*.
[206] *Id*.
[207] *Id*.
[208] *Id.*

affect the adjacent private lands, these should be addressed in the INRMP.

H. Memorandum of Agreement as Required by Migratory Bird Treaty Act Executive Order

On January 10, 2001, President Clinton signed Executive Order 13186, requiring that all federal agencies incorporate measures to conserve and protect migratory birds into their activities.[209] The executive order was signed to ensure that federal agencies help the United States meet its obligations under the Migratory Bird Treaty Act.[210] The executive order requires all federal agencies to enter into a Memorandum of Agreement with the FWS, covering how the agency will promote conservation of migratory birds.[211] Any obligations that the DoD has with respect to conserving and protecting migratory birds as a result of Memorandums of Agreement pursuant to Executive Order 13186 should be encompassed by an INRMP.

VII. CONCLUSION: A GOOD INRMP IS A GOOD SUBSTITUTE FOR CRITICAL HABITAT DESIGNATION

The INRMP is more than a defensible substitute for critical habitat designation, if it is done responsibly and comprehensively. The DoD should use its newly gained authority to demonstrate its commitment to conserving healthy ecosystems on its installations and to demonstrate its ability to meet its primary mission, without unnecessarily threatening the natural resources on DoD lands.

Because of continued encroachment by surrounding communities, the DoD should be proactive and actively manage these plans. To help build rapport, and to be a good neighbor, the DoD should require NEPA procedures for all INRMPs, to ensure adequate public notice and comment.

Outside pressure will continue to increase if the DoD does not successfully manage its natural resources using INRMPs. This is particularly true regarding the installations that contain large areas of habitat for species that no longer thrive in other areas. The procedural and substantive recommendations made in this paper will help the DoD to develop and use "green" INRMPs. They should be "green" in that they protect the ecosystems and recover the species they protect. And, they should be "green" in that they should be consistently funded with enough money to accomplish their environmental goals.

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[209] Exec. Order No. 13186, 3 C.F.R. 13186 (Jan. 10, 2001).
[210] *Id*.
[211] *Id*.

By responsibly developing and funding INRMPs, the DoD will ensure that it can continue to meet its primary mission, as well as protect the natural resources on its lands. It is very likely that the DoD's ability to do this will be challenged in the courts. Early success in court will breed later success and will solidly establish the DoD's credibility on environmental issues. Early failure in court will give the DoD's critics ammunition. The DoD would be prudent to consider adopting these procedural and substantive changes to ensure the future success of its INRMPs and of its primary mission of national defense.

FEDERAL SOVEREIGN IMMUNITY VERSUS STATE ENVIRONMENTAL FINES

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I. INTRODUCTION

Over the past several decades, Congress has enacted numerous laws designed to protect human health and the environment. All major environmental statutes provide a mechanism for individual states to assume the primary responsibility for enforcing these laws and regulations. In order for a state to receive the delegation of authority to run a particular environmental program, the state must first enact adequate laws and regulations to satisfy the U.S. Environmental Protection Agency (EPA) that the state can properly enforce environmental standards as least as stringent as those imposed by federal law. "Cooperative federalism" is a system whereby the federal government establishes statutory minimum standards and procedural requirements and then the states enact implementation and enforcement programs subject to EPA approval and oversight.[1] The delegation of primary responsibilities to the states has led to a complex system of intertwining federal and state environmental statutes and regulations.

Congress has amended most federal environmental statutes several times over the years to improve upon or expand the original design of the environmental protection schemes. Congress has also amended environmental laws to clarify its intent in the face of contrary court opinions.[2] This is particularly true with regard to waivers of federal sovereign immunity.[3] Without a clear and unambiguous waiver

[1] Connecticut v. EPA, 696 F.2d 147, 151 (2d Cir. 1982). EPA retains parallel authority to enforce federal standards even though a program has been delegated to a state. However, for delegated programs, it is EPA policy to take enforcement action only when the state fails to take timely and appropriate action, the state requests EPA to take the lead or participate in a joint action, or other limited circumstances are present, as outlined in the *Policy Framework for Implementing State/EPA enforcement Agreements* (July 1993). EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, THE YELLOW BOOK: GUIDE TO ENVIRONMENTAL ENFORCEMENT AND COMPLIANCE AT FEDERAL FACILITIES V-18 (1999).

[2] "Though this was the intent of the Congress [to waive sovereign immunity] in passing the 1972 Federal Water Pollution Control Act Amendments, the Supreme Court, encouraged by Federal agencies, has misconstrued the original intent." S. Rep. No. 370, 95th Cong., 1st Sess. 67 (1977), *reprinted in* 1977 U.S.C.C.A.N. 4326, 4392. *See* Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 116, 91 Stat. 711 (1977); *see also* Clean Water Act Amendments of 1977, Pub. L. 217, §§ 60, 61(a), 91 Stat. 1597, 1598 (1977).

[3] All major environmental statutes contain waivers of sovereign immunity; however, the Supreme Court reads these waivers very narrowly. *See* Lane v. Pena, 518 U.S. 187, 192-93 (1996). For examples of where Congress waived sovereign immunity in other contexts, see The Tucker Act, 24 Stat. 505 (1887), *as amended*, 28 U.S.C. §§ 1346(a), (b), (d) (1964) and The Federal Torts Claim Act, 28 U.S.C. §§ 2671-80 (1988).

of sovereign immunity, federal law prohibits agencies from expending funds to comply with state environmental laws and regulations.[4]

Federal facilities take a particularly staunch stance on this concept when it comes to the payment of state environmental fines and penalties. States are clearly responsible for the majority of environmental enforcement actions[5] and some argue that federal facilities are among the worst at environmental compliance.[6] One of the primary goals of environmental enforcement is deterrence.[7] Conceptually, the fear that they will be substantially fined if they are caught is a deterrent to violating environmental laws. It is not difficult to see the conflict between the states' responsibility to enforce environmental compliance and a federal facility's claim that it does not have to pay fines for particular environmental violations.[8]

States assert that, without the authority to impose monetary fines against federal facilities, they are powerless to ensure environmental compliance. Such claims imply that federal facilities will not comply with environmental laws absent the threat of a punitive fine. This implication is erroneous. Over the years, federal facilities have worked hard to correct violations cited in enforcement actions, and the vast majority of these had no fines associated with them. The availability of sovereign immunity as a defense against punitive fines only acts as a shield to the payment of the fine, not as a sword against complying with the underlying statute. The implication also ignores the fact that federal employees are still subject to criminal prosecution.[9]

This article addresses the current status of the ever-changing nature of the law regarding federal sovereign immunity as it relates to

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[4] Matter of: Veterans Administration - False Alarm Charges, B-219532, 65 Comp. Gen. 61 (1985) [hereinafter B-219532].

[5] ARNOLD W. REITZE, JR., AIR POLLUTION LAW § 20-3(a)(3) (1995).

[6] U.S. Dep't of Energy v. Ohio, 503 U.S. 607, 630 (1992) (White, J., dissenting). *See* Rebecca Heintz, Note*: Federal Sovereign Immunity and Clean Water: A Supreme Misstep*, 24 ENVTL. L. 263 (1994); *see also* Kyle Bettigole, *Defending Against Defense: Civil Resistance, Necessity and the United States Military's Toxic Legacy*, 21 B.C. ENVTL. AFF. L. REV. 667 (1994).

[7] The other goals are: (1) correction of violations to protect public health and welfare; (2) equitable treatment of polluters to prevent violators from gaining an economic advantage and to protect the basic enforcement mechanism of self-policing; (3) punishment; and (4) maximize enforcement by effective use of limited resources. REITZE, *supra* note 5, § 20-1 (1995).

[8] *See* Donald W. Stever, *Perspectives on the Problem of Federal Facility Liability for Environmental Contamination,* 17 ENVTL. L. REP. (ENVTL. L. INST.) 10, 114 (1987).

[9] *See* Margaret K. Minister, *Federal Facilities and the Deterrence Failure of Environmental Laws: The Case for Criminal Prosecution of Federal Employees*, 18 HARV. ENVTL. L. REV. 137 (1994); *see also* Stephen Herm, *Criminal Enforcement of Environmental Laws on Federal Facilities*, 59 GEO. WASH. L. REV. 938 (1991).

the payment of state-imposed environmental fines.[10] Prior to exploring the current status of the law in this area, the article provides background information regarding the doctrine of sovereign immunity. The review of the major environmental legislation is organized into three categories: those not subjecting federal facilities to state fines, those that do, and those where the issue is unsettled. Federal facilities are not subject to punitive state fines under the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Emergency Planning and Community Right-to-Know Act, and the Pollution Prevention Act. Federal facilities are subject to state fines for violations of hazardous waste regulations under the Resource Conservation and Recovery Act including its Underground Storage Tank provisions, the Safe Drinking Water Act, and the Toxic Substances Control Act's lead-based paint provisions.

Lastly, the authority for states to fine federal facilities under the Clean Air Act is in active litigation. After reviewing the current state of the law, it will become apparent that the trend is toward greater state authority. In that regard, another one of the great timbers in the sovereign immunity palisade will soon fall as federal facilities begin paying state fines for Clean Air Act violations.

II. BACKGROUND

A. Fiscal Law Concerns

When faced with having to pay a relatively minor fine for an undisputable environmental violation, installations often would prefer to just pay the fine to achieve a quick solution, without regard to sovereign immunity. The primary reason for this attitude is that installations value existing goodwill with the regulatory agencies and fear damaging the relationship if they balk at paying the fine. However, when installations explain why federal law prevents payment of the fine, usually good installation-regulator relationships remain intact. That is not to say, however, that state regulators always agree with the application of sovereign immunity—as evidenced by the body of case law resulting from litigation over the issue.

As a general proposition, federal agencies have no authority to use appropriated funds to pay fines or penalties resulting from their activities.[11] Only when an express statutory waiver of sovereign

[10] Whether the EPA is authorized to fine other federal agencies for environmental violations is not a sovereign immunity issue and is therefore beyond the scope of the article. However, various footnotes will address the issue.
[11] B-219532, *supra* note 4.

immunity exists may a federal agency do so.[12] The reason is that the Anti-Deficiency Act (ADA),[13] prohibits federal agencies from expending appropriated funds unless authorized by law.[14] Most importantly for those involved, federal employees are subject to adverse personnel actions[15] and criminal sanctions[16] for violating the ADA.

Regulators are usually sensitive to the fact that installation personnel could possibly go to jail for paying a fine for which sovereign immunity has not been waived. Experienced regulators know that sometimes they have to agree to disagree, and, if necessary, let the lawyers sort out the conflicting legal interests.

B. History of Sovereign Immunity

The United States, as sovereign, is immune from suit except when it consents to be sued.[17] A court's jurisdiction to entertain a suit against the United States is defined by the terms of the consent.[18] Similarly, states may not enforce their regulations upon the United States and its agencies unless the United States consents to such regulation.[19]

Most courts and commentators agree that the idea behind our doctrine of sovereign immunity originated in the British common law with the axiom "the king can do no wrong" and the resulting inability of British subjects to sue the king in his own courts.[20] However, not all commentators agree that that is an accurate interpretation of the British history or that the doctrine was appropriately derived from that history.

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[12] *Id.* It should also be noted that federal agencies are prohibited from paying interest unless there is specific language in the waiver of sovereign immunity that specifically allows payment of interest. Library of Congress v. Shaw, 478 U.S. 310 (1986).

[13] 31 U.S.C § 1341 (Lexis 2006).

[14] *Id.* § 1341 (a)(1)(B).

[15] *Id.* § 1349. An officer or employee of the U.S. Government or of the District of Columbia government violating section 1341(a) or 1342 of the ADA is subject to appropriate administrative discipline including, when circumstances warrant, suspension from duty without pay or removal from office.

[16] *Id.* § 1350. An officer or employee of the U.S. Government or of the District of Columbia government knowingly and willfully violating section 1341(a) or 1342 of the ADA can be fined not more than $5,000, imprisoned for not more than 2 years, or both. *See also* Office of Personnel Management v. Richmond, 496 U.S. 414 (1990).

[17] United States v. Sherwood, 312 U.S. 584, 586 (1941).

[18] *Id.* at 586; United States v. Shaw, 309 U.S. 495, 500 (1940).

[19] *See* Hancock v. Train, 426 U.S. 167 (1976); EPA v. California, 426 U.S. 200, 211 (1976) ("Federal installations are subject to state regulation only when and to the extent that congressional authorization is clear and unambiguous.").

[20] *See* United States v. Lee, 106 U.S. 196, 205-209 (1882); Edwin M. Borchard, *Government Liability in Tort*, 34 YALE L.J. 1, 4 (1924); William R. Hartl, *Sovereign Immunity: An Outdated Doctrine Faces Demise in a Changing Judicial Arena*, N. DAK. L. REV. 401 (1993); R. Matthew Molash, *If You Can't Save Us, Save Our Families: The Feres Doctrine and Servicemen's Kin*, 1983 U. ILL. L. REV. 317 (1983).

Some courts and commentators argue that British subjects had avenues of recourse against the king if he "did wrong," and some argue that the axiom "the king can do no wrong" really meant that the king was obliged to do no wrong because of his position of responsibility over his subjects.[21] In addition, some courts and commentators have argued that the assertion that British common law is the basis for our doctrine of sovereign immunity is incongruous with the ideals on which this country was founded and that, in fact, there is consent to suit contained in our Constitution.[22]

Although the history regarding the British common law is not clear, it is clear that British common law in some way initially contributed to what has evolved into the contemporary doctrine of sovereign immunity that we have in the United States. The idea that the sovereign could not be sued in his own courts was adopted in the United States, regardless of the reliability of the perceived history.

Unlike state sovereign immunity, however, federal sovereign immunity has no constitutional basis in the United States.[23] The doctrine of sovereign immunity in the United States has been

[21] *See* Owen v. City of Independence, 445 U.S. 622 (1980) ("Although it has never been understood how the doctrine of sovereign immunity came to be adopted in the American democracy, it apparently stems from the personal immunity of the English Monarch as expressed in the maxim, 'The King can do no wrong.' It has been suggested, however, that the meaning traditionally ascribed to this phrase is an ironic perversion of its original intent: 'The maxim merely meant that the King was not privileged to do wrong. If his acts were against the law, they were injuriae (wrongs). Bracton, while ambiguous in his several statements as to the relation between the King and the law, did not intend to convey the idea that he was incapable of committing a legal wrong.'"); Langford v. United States, 101 U.S. 341, 343 (1879) ("It is to be observed that the English maxim does not declare that the government, or those who administer it, can do no wrong; for it is a part of the principle itself that wrong may be done by the governing power, for which the ministry, for the time being, is held responsible; and the ministers personally, like our President, may be impeached; or, if the wrong amounts to a crime, they may be indicted and tried at law for the offence. We do not understand that either in reference to the government of the United States, or of the several States, or of any of their officers, the English maxim has an existence in this country."); Borchard, *supra* note 20, at 4; Louis L. Jaffe, *Suits Against Governments and Officers: Sovereign Immunity*, 77 HARV. L. REV. 1 (1967); Heintz, *supra* note 6.

[22] Susan Randall, *Sovereign Immunity and the Uses of History*, 81 NEB. L. REV. 1 (2002) (arguing that the concept of sovereign immunity has no basis in acceptance and adoption by this country in its founding as we were trying to escape such ideas of sovereign control as "the king could do no wrong," and arguing that the Constitution likely subjects the federal government to the power of the federal courts in Article III).

[23] *See* Nevada v. Hall, 440 U.S. 410, 415 (1978); Nestor M. Davidson, *Constitutional Mass Torts: Sovereign Immunity and the Human Radiation Experiments*, 96 COLUM. L. REV. 1203 (1996); *see also* Justice Brennan's dissenting opinion in *Edelman v. Jordan*, 415 U.S. 651, 687 (1974) (refering to the "nonconstitutional but ancient doctrine of sovereign immunity"); Heintz , *supra* note 6.

established by the courts rather than the Constitution and, it can be argued, also has contemporary bases for its existence.[24]

In 1821, Justice Marshall decided a case in favor of the United States on the grounds that it could not be sued: "The universally received opinion is, that no suit can be commenced or prosecuted against the United States; that the judiciary act does not authorize such suits."[25] The first Supreme Court to decide a case solely upon the idea that the federal government is immune from suit did so in 1846.[26] This Court found that "There was no jurisdiction of this case in the Circuit Court, as the government is not liable to be sued, except with its own consent, given by law. Nor can a decree or judgment be entered against the government for costs."[27] The Supreme Court continued to find that the federal government holds such a protection.[28]

Edwin M. Borchard is credited with inventing the phrase "sovereign immunity" in his article, *Government Liability in Tort*, published in the Yale Law Journal in 1921.[29] Courts began quoting Borchard's article and using the label "sovereign immunity" after that time.[30]

The development of the doctrine of sovereign immunity in the United States includes the Supreme Court identifying the characteristics of a waiver of sovereign immunity. The Supreme Court declared that a waiver of sovereign immunity must be unequivocally expressed in statutory text and may not be implied or inferred; it must be construed strictly in favor of the sovereign and not read for more than what the language strictly allows.[31] Since any waiver must appear clearly in the statutory text, legislative history cannot be used to clarify any

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[24] For a discussion of the contemporary bases for the common law doctrine in this country, see Harold J. Krent, *Reconceptualizing Sovereign Immunity*, 45 VAND. L. REV. 1529 (1992) (discussing that sovereign immunity protects our common resources by forcing individuals to bear their own losses suffered at the hands of government and that sovereign immunity is justified, if at all, as a means of protecting the freedom of action of the elected branches from judicial incursions).

[25] Cohens v. Virginia, 19 U.S. (6 Wheat.) 264 (1821).

[26] United States v. McLemore, 45 U.S. (4 How.) 286 (1846).

[27] *Id.* at 286.

[28] *See* Kansas v. United States, 204 U.S. 331 (1907) ("It does not follow that because a State may be sued by the United States without its consent, therefore the United States may be sued by a State without its consent. Public policy forbids that conclusion."); United States v. Thompson, 98 U.S. 486 (1878); The Davis, 77 U.S. (10 Wall) 15 (1869); The Siren, 74 U.S. (7 Wall.) 152 (1868); Nations v. Johnson, 65 U.S. (24 How.) 195 (1860); Hill v. United States, 50 U.S. (9 How.) 386 (1850); United States v. Clarke, 33 U.S. (8 Pet.) 436 (1834).

[29] Borchard, *supra* note 20, at 4; Randall, *supra* note 22.

[30] Owen v. City of Independence, 445 U.S. 622 (1980); Muskopf v. Corning Hospital District, 359 P.2d 457, 459 (1961).

[31] United States v. Nordic Village, Inc., 503 U.S. 30, 33-34 (1992); Department of Energy v. Ohio, 503 U.S. 607, 615, 619, 627 (1992); Lane v. Pena, 518 U.S. 187, 192 (1996); *see also* Hancock v. Train, 426 U.S. 167 (1976).

ambiguity.[32] Where a waiver would subject federal facilities to regulation under state law, the rule requiring the waiver to be unambiguous applies with special force. "Because of the fundamental importance of the principles shielding federal installations and activities from regulation by the State, an authorization of state regulation is found only when and to the extent there is a 'clear congressional mandate,' 'specific congressional action' that makes this authorization of state regulation 'clear and unambiguous.'"[33] Likewise, the Supreme Court has insisted upon a particularly unambiguous statement where the alleged waiver would affect the public fisc.[34] Moreover, the Supreme Court has commented sovereign immunity may only be waived by congressional legislation and that an agent of the federal government cannot waive sovereign immunity.[35] Given the ground rules established by the Supreme Court for waivers of sovereign immunity, environmental practitioners have no choice but to construe waivers very narrowly.

III. OVERVIEW OF MAJOR ENVIRONMENTAL LEGISLATION

A. Acts Not Subjecting Federal Facilities to State Fines

1. *Clean Water Act*

In 1972, Congress enacted the Clean Water Act (CWA), also known as the Federal Water Pollution Control Act. 33 U.S.C. § 1251–1376. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[36] In order to achieve this objective, the CWA sets forth several ambitious goals and policies intended to control water pollution.[37] Furthermore, Congress specifically recognized the primary responsibility and rights of the states to control water pollution.[38] The most visible and mature program under the CWA is the National Pollutant Discharge

[32] United States v. Nordic Village, 503 U.S. 30, 37 (1992).
[33] Hancock v. Train, 426 U.S. 167, 179 (1976) (footnotes omitted).
[34] Lane v. Pena, 518 U.S. 187, 192 (1996).
[35] Stanley v. Schwalby, 162 U.S. 255, 270 (1896) ("It is a fundamental principle of public law, affirmed by a long series of decisions of this court, and clearly recognized in its former opinion in this case, that no suit can be maintained against the United States, or against their property, in any court, without express authority of Congress."). *See* Belknap v. Schild, 161 U.S. 10 (1895) (indicating that an agent of the federal government may not waive the immunity from suit held by the federal government). Administrative regulations cannot waive federal sovereign immunity. Mitzelfelt v. Department of Air Force, 903 F.2d 1293, 1296 (10th Cir. 1990) (citing United States v. Mitchell, 463 U.S. 206, 215-16 (1983)).
[36] 33 U.S.C. § 1251(a) (Lexis 2006).
[37] *Id.*
[38] *Id.* § 1251(b).

Elimination System (NPDES).[39] The NPDES provides for the issuance of NPDES permits by the EPA or by authorized states.[40] In general, NPDES permits are required for discharges into the waters of the United States.[41] The permits impose limitations on the discharge of pollutants and establish related monitoring and reporting requirements in order to protect and improve the cleanliness of our Nation's waters. Lack of a required permit or noncompliance with a permit constitutes a violation of the CWA.[42]

The seminal case addressing sovereign immunity in an environmental law context is *Dep't of Energy v. Ohio*.[43] In this case, the Supreme Court resolved a split in the circuit courts[44] as to whether Congress waived sovereign immunity from liability for civil fines imposed by states for past violations of the CWA or Resource Conservation and Recovery Act (RCRA).[45] In reaching its conclusion, the Court drew a distinction between "coercive" and "punitive" fines.[46] Coercive fines are those imposed on federal facilities "to induce them to comply with injunctions or other judicial orders designed to modify behavior prospectively."[47] Punitive fines are those imposed to punish past violations of environmental laws.[48]

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[39] *Id*. § 1342.
[40] *Id*.
[41] *Id*. § 1311(a).
[42] *Id*. § 1342.
[43] 503 U.S. 607 (1992). For a detailed discussion of this case and sovereign immunity in general, see Gregory J. May, *United States Department of Energy v. Ohio & the Federal Facility Compliance Act of 1992: The Supreme Court Forces a Hazardous Compromise in CWA and RCRA Enforcement Against Federal Facilities*, 4 VILL. ENVTL. L.J. 363 (1993).
[44] *See* Charles L. Green, *A Guide to Monetary Sanctions for Environmental Violations by Federal Facilities*, 17 PACE ENVTL. L. REV. 45, n.23 (1999).
[45] The Court's coverage of RCRA is discussed in Section III.B.1 of this article.
[46] U.S. Dep't of Energy v. Ohio, 503 U.S. 607, 613-614 (1992).
[47] *Id*.
[48] *Id.* The authors are not aware of any circumstance where a "coercive" fine has been imposed against a federal agency for environmental violations. Accordingly, unless otherwise noted, all references to fines in this article refer to the "punitive" variety.

The State of Ohio argued that both the CWA's citizen-suit[49] and federal facilities sections[50] waive sovereign immunity for the fines in question. The Supreme Court disagreed. Regarding the citizen-suit provision, the Court reasoned that, although suit may be brought against the United States, the civil-penalties section[51] applies only to "persons" and the CWA does not include the United States in the definition of "person."[52] After extensive parsing of the federal facilities section, the Court also concluded that, because the statement of waiver is not unequivocal as to punitive fines, no waiver could be interpreted.[53] However, the Court did find a clear waiver for coercive fines.[54]

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[49] In relevant part, the CWA citizen-suit provision, 33 U.S.C. § 1365(a), reads:

> [A]ny citizen may commence a civil action on his own behalf—
> (1) against any person (including . . . the United States) who is alleged to be in violation of
> (A) an effluent standard or limitation under this chapter or
> (B) an order issued by the Administrator or a State with respect to such a standard or limitation . . . .
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> . . . .
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> The district courts shall have jurisdiction . . . to enforce such an effluent standard or limitation, or such an order . . . as the case may be, and to apply any appropriate civil penalties under section 1319(d) of this title.

[50] In relevant part, the CWA federal facilities section, 33 U.S.C.§ 1323(a), reads:

> Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government . . . shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity including the payment of reasonable service charges. The preceding sentence shall apply (A) to any requirement whether substantive or procedural (including any recordkeeping or reporting requirement, any requirement respecting permits and any other requirement, whatsoever), (B) to the exercise of any Federal, State, or local administrative authority, and (C) to any process and sanction, whether enforced in Federal, State, or local courts or in any other manner . . . . [T]he United States shall be liable only for those civil penalties arising under Federal law or imposed by a State or local court to enforce an order or the process of such court.

[51] 33 U.S.C § 1319(d).

[52] *Dep't of Energy v. Ohio*, 503 U.S. at 617, 618; 33 U.S.C § 1362(5) states: "The term 'person' means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a state, or any interstate body."

[53] *Dep't of Energy v. Ohio*, 503 U.S. at 627.

[54] *Id.*

As a result of *Dep't of Energy v. Ohio*, Congress quickly enacted the Federal Facilities Compliance Act (FFCA) of 1992.[55] This act effectively overruled *Dep't of Energy v. Ohio* as it pertains to RCRA;[56] however, it notably did not address the CWA aspects of the case.[57] Consequently, *Dep't of Energy v. Ohio* is still good law as applied to the CWA, and federal facilities continue to be immune from state-imposed punitive fines for CWA violations.[58]

2. *Comprehensive Environmental Response, Compensation and Liability Act*

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),[59] was enacted in 1980 in response to the serious environmental and health risks posed by industrial pollution.[60] "CERCLA is a comprehensive statute that grants the President broad power to command government agencies and private parties to clean up hazardous waste sites."[61] If a hazardous waste site meets certain conditions, the EPA may use the "Hazardous Substances Superfund"[62] to finance remediation of the site. Suits may be brought under CERCLA § 107 to ensure those parties actually responsible for environmental contamination, in whole or in part, are responsible for funding the cleanup.[63]

The Superfund Amendments and Reauthorization Act of 1986 added section 120, the Federal Facilities section, to CERCLA.[64]

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[55] Pub. L. No. 102-386, § 102, 106 Stat. 1505 (1992).
[56] *See* Andrea Gross, *A Critique of the Federal Facilities Compliance Act of 1992*, 12 VA. ENVTL. L.J. 691 (1993).
[57] Legislation designed to reverse the court's holding in *Dep't of Energy v. Ohio* regarding the CWA has been repeatedly introduced in Congress, but none have been enacted. *See* S. 1923, 105th Cong. (proposing the Federal Facilities Clean Water Compliance Act of 1998 to authorize state punitive fines against federal facilities for CWA violations); H.R. 961, 104th Cong. (1995); H.R. 340, 103d Cong. (1993).
[58] Federal facilities also do not pay fines to EPA for CWA violations, although this has not been an issue because of the effective delegation to the states of the permitting programs.
[59] 42 U.S.C. §§ 9601–9675 (Lexis 2006).
[60] *See* Exxon Corp. v. Hunt, 475 U.S. 355, 358-359 (1986).
[61] Key Tronic Corp. v. United States, 511 U.S. 809, 814 (1994).
[62] *See* 42 U.S.C. §§ 9601(11), 9604 (Lexis 2006); 26 U.S.C. § 9507 (Lexis 2006).
[63] S. Rep. No. 96-848, at 13 (1980).
[64] Pub. L. No. 99-499, 100 Stat. 1613 (1986). For a discussion of federal government liability under CERCLA, see Steven G. Davison, *Governmental Liability Under CERCLA*, 25 B.C. ENVTL. AFF. L. REV. 47 (1997).

The waiver of sovereign immunity in CERCLA § 120,[65] provides that agencies of the United States shall be subject to and comply with CERCLA in the same manner and to the same extent as any nongovernmental entity.[66] Furthermore, the waiver[67] imposes state

[65] CERCLA § 120(a) states:

> Application of Act to Federal Government.
> (1) In general. Each department, agency, and instrumentality of the United States (including the executive, legislative, and judicial branches of government) shall be subject to, and comply with, this Act in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 107 of this Act [42 USCS § 9607]. Nothing in this section shall be construed to affect the liability of any person or entity under sections 106 and 107 [42 USCS §§ 9606 and 9607].
> (2) Application of requirements to federal facilities. All guidelines, rules, regulations, and criteria which are applicable to preliminary assessments carried out under this Act for facilities at which hazardous substances are located, applicable to evaluations of such facilities under the National Contingency Plan, applicable to inclusion on the National Priorities List, or applicable to remedial actions at such facilities shall also be applicable to facilities which are owned or operated by a department, agency, or instrumentality of the United States in the same manner and to the extent as such guidelines, rules, regulations, and criteria are applicable to other facilities. No department, agency, or instrumentality of the United States may adopt or utilize any such guidelines, rules, regulations, or criteria which are inconsistent with the guidelines, rules, regulations, and criteria established by the Administrator under this Act.
> (3) Exceptions. This subsection shall not apply to the extent otherwise provided in this section with respect to applicable time periods. This subsection shall also not apply to any requirements relating to bonding, insurance, or financial responsibility. Nothing in this Act shall be construed to require a State to comply with section 104(c)(3) [42 USCS § 9604(c)(3)] in the case of a facility which is owned or operated by any department, agency, or instrumentality of the United States.
> (4) State laws. State laws concerning removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial action at facilities owned or operated by a department, agency, or instrumentality of the United States or facilities that are the subject of a deferral under subsection (h)(3)(C) when such facilities are not included on the National Priorities List. The preceding sentence shall not apply to the extent a State law would apply any standard or requirement to such facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by any such department, agency, or instrumentality.

[66] 42 U.S.C. § 9620(a)(1) (Lexis 2006).

[67] *Id*. § 9620(a)(4). *See* Warminster Township Mun. Auth. v. United States, 903 F. Supp. 847 (E.D. Pa. 1995).

law[68] requirements concerning removal and remedial action on federal facilities not included on the National Priorities List.[69]

However, when it comes to state-imposed, punitive, civil penalties, the United States Court of Appeals for the First Circuit concluded § 120 of CERCLA does not waive the federal government's sovereign immunity.[70] The Court followed the rationale of the Supreme Court in *Dep't of Energy v. Ohio*, and held that, because the language of CERCLA § 120 was not clear and unequivocal as to punitive civil penalties, a waiver of sovereign immunity could not be found.[71] Therefore, federal facilities do not pay state imposed fines under CERCLA.[72]

3. *Toxic Substances Control Act*

The Toxic Substances Control Act (TSCA) was enacted in 1976 by Congress in an effort to prevent injury to human health and the environment caused by chemical substances and mixtures.[73] The act and its amendments primarily serve to do the following three things: (1) require those who manufacture and process chemical substances and mixtures affecting health and the environment to collect data regarding those effects; (2) regulate chemical substances and mixtures which pose imminent hazards; and (3) assure that innovation and commerce in such chemical substances do not present unreasonable risk.[74] The primary chemical substances and the activities regarding those substances that are affected by the act are asbestos, lead-based paint, and radon.[75] In addition, regulations promulgated under the act stringently regulate polychlorinated biphenyls and many other toxic substances.[76]

TSCA does not contain a waiver of sovereign immunity with regard to enforcement or administrative fines or penalties. Both 15

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[68] *See* Thomas Kearns, *An Examination of, and Suggested Revisions To, CERCLA's Provisions Waiving the Federal Government's Sovereign Immunity From Actions Based on State Law*, 5 BUFF. ENVTL. L.J. 17 (1997).

[69] CERCLA § 105(a)(8) requires the establishment of a "National Priorities List" that prioritizes known or threatened releases throughout the United States that have the highest urgency for remedial action based upon relative risk or danger to the public health or welfare or the environment.

[70] Maine v. Department of Navy, 973 F.2d 1007, 1010 (1st Cir. 1992). *See* Lieutenant Commander Marc G. Laverdiere, *Another Victory in the Unwinnable War Over Civil Penalties*: Maine v. Department of the Navy, 142 MIL. L. REV. 165 (1994).

[71] *Maine v. Department of Navy*, 973 F.2d at 1011.

[72] Federal facilities are subject to stipulated penalties to EPA for violations of Interagency Agreements or Federal Facility Agreements. 42 U.S.C. §§ 9609(a)(1)(E), 9620 (Lexis 2006).

[73] 15 U.S.C. § 2601 (Lexis 2006).

[74] *See* 15 U.S.C. § 2601(b) (Lexis 2006).

[75] *See* 15 U.S.C. § 2601.

[76] 40 CFR §§ 700–799 (2002).

U.S.C. § 2615 and 15 U.S.C. § 2616 discuss penalties and enforcement; however, both discuss penalties and enforcement against a "person." Because "person" is not defined in the statute, no case can be made that Congress "clearly and unambiguously" waived sovereign immunity with regard to the statute.[77] Consequently, federal facilities do not pay state fines for violations of the general TSCA statute; however, see the discussion below regarding the Residential Lead-Based Paint Hazard Reduction Act of 1992.[78]

4. *Emergency Planning and Community Right-to-Know Act*

The Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. §§ 11001–11050, was passed in 1986 to ensure adequate emergency planning at the local level for threats against releases of extremely hazardous substances.[79] Although EPCRA does not apply to federal facilities,[80] Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*, mandates that federal facilities comply with certain EPCRA planning and reporting requirements. This includes the Toxic Release Inventory reporting requirements of EPCRA § 313[81] and the emergency planning and reporting responsibilities of EPCRA §§ 301–312.[82] The Executive Order tasks EPA to consult the other federal agencies to monitor compliance.[83]

Given that EPCRA does not apply directly to federal facilities and contains no waiver of sovereign immunity provision, clearly federal facilities are not subject to any fines for noncompliance.[84] Even Executive Order 13148 states that it is not intended to create any right or benefit enforceable by law against the United States.[85]

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[77] *But cf.* Charles L. Green, *A Guide to Monetary Sanctions for Environmental Violations by Federal Facilities*, 17 PACE ENVTL. L. REV. 45 (1999) (argues that 15 U.S.C. **§** 2621 implies that there is a waiver of sovereign immunity by indicating that the Administrator can issue an exemption from compliance in the interest of national defense but also acknowledging that waivers may not be implied).

[78] Pub. L. No. 102-550, 106 Stat. 3672 (1992); 42 U.S.C. §**§** 4851–56 (1992).

[79] 42 U.S.C. § 11002 (Lexis 2006).

[80] The definition of "person" in EPCRA § 329, 42 U.S.C. § 11049, does not include entities of the federal government. Also, EPCRA does not include a federal facilities provision or any waiver of sovereign immunity.

[81] 42 U.S.C. § 11023; Executive Order 13148, § 504, 65 Fed. Reg. 24595 (Apr. 26, 2000).

[82] 42 U.S.C. §§ 11001–11022; Exec. Order No. 13148, § 504, 65 Fed. Reg. 24595 (Apr. 26, 2000).

[83] Exec. Order No. 13148, § 406, 65 Fed. Reg. 24595 (Apr. 26, 2000).

[84] Federal facilities are also not subject to EPA fines for violations of EPCRA as Executive Order 13148 does not give EPA such authority.

[85] Exec. Order No. 13148, § 902, 65 Fed. Reg. 24595 (Apr. 26, 2000).

5. *Pollution Prevention Act*

The Pollution Prevention Act (PPA)[86] was enacted by Congress in 1990 to further the national policy of reducing or preventing pollution at its source, safely recycling pollution that cannot be prevented, safely treating pollution that cannot be prevented or recycled, and disposing or releasing pollution in an environmentally safe manner only as a last resort.[87] Although the PPA does not apply to federal facilities,[88] Executive Order 13148 mandates that federal facilities comply with section 6607 of the PPA.[89] This section requires the submission of a toxic chemical source reduction and recycling report for each toxic chemical required to be reported in the annual toxic chemical release form (Form R) under EPCRA § 313.[90] The Executive Order tasks EPA to consult the other federal agencies to monitor compliance.[91]

Given that the PPA does not apply directly to federal facilities and contains no waiver of sovereign immunity provision, clearly federal facilities are not subject to any fines for noncompliance.[92] Again, Executive Order 13148 states that it is not intended to create any right or benefit enforceable by law against the United States.[93]

B. Acts Subjecting Federal Facilities to State Fines

1. *Resource Conservation and Recovery Act*

RCRA[94] governs the management and disposal of hazardous waste. The permit program is primarily administered by the EPA,[95] but is usually delegated to states with approved programs.[96] When enacting RCRA, Congress declared it national policy to reduce or eliminate the generation of hazardous wastes as expeditiously as possible and to treat,

[86] 42 U.S.C. §§ 13101–09 (Lexis 2006).
[87] *Id.* § 6602(b); 42 U.S.C. § 13101(b).
[88] *Id.* § 6607. 42 U.S.C. § 13106 applies to facilities required to file an annual toxic chemical release form under EPCRA § 313. As discussed in the foregoing section, EPRCA does not apply to federal facilities (other than through Executive Order 13148). Also, the PPA does not include a federal facilities provision or any waiver of sovereign immunity.
[89] 42 U.S.C. § 13106 (Lexis 2006); Exec. Order No. 13148, § 501(a), 65 Fed. Reg. 24595 (Apr. 26, 2000).
[90] 42 U.S.C. § 13106(a) (Lexis 2006).
[91] Exec. Order No. 13148, § 406, 65 Fed. Reg. 24595 (Apr. 26, 2000).
[92] Federal facilities are also not subject to EPA fines for violations of the PPA as Executive Order 13148 does not give EPA such authority.
[93] Exec. Order No. 13148, § 902, 65 Fed. Reg. 24595 (Apr. 26, 2000).
[94] 42 U.S.C §§ 6901–6922k (Lexis 2006).
[95] *Id.* § 6911.
[96] *Id.* § 6926.

store, or dispose of waste in such a manner that will minimize present and future threats to human health and the environment.[97]

The Court in *Dep't of Energy v. Ohio*[98] also addressed sovereign immunity under RCRA. In this case, the Supreme Court had to decide whether Congress waived sovereign immunity from liability for civil fines imposed by states for past violations of RCRA or the Clean Water Act.[99] As explained earlier, the Court drew a distinction between "coercive" and "punitive" fines.[100] It defined coercive fines as those imposed on federal facilities "to induce them to comply with injunctions or other judicial orders designed to modify behavior prospectively"[101] and punitive fines as those imposed to punish past violations of environmental laws.[102]

As with the CWA, the State of Ohio argued that RCRA's citizen-suit[103] and federal facilities sections[104] waive sovereign

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[97] *Id.* § 6902(b).
[98] 503 U.S. 607 (1992).
[99] The Court's coverage of the CWA is discussed in Section III.A.1.
[100] *U.S. Dep't of Energy v. Ohio*, 503 U.S. at 613-614.
[101] *Id.*
[102] *Id.*
[103] In relevant part, the RCRA citizen-suit provision, 42 U.S.C. § 6972(a), reads:

> [A]ny person may commence a civil action on his own behalf—
> (1) (A) against any person (including (a) the United States . . .) who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter; or (B) against any person, including the United States . . . who has contributed or who is 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 . . . .
>
> . . . .
>
> The district court shall have jurisdiction . . . to enforce the permit, standard, regulation, condition, requirement, prohibition, or order, referred to in paragraph (1)(A), to restrain any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both . . . and to apply any appropriate civil penalties under section 6928 (a) and (g).

[104] In relevant part, the RCRA federal facilities section, 42 U.S.C.§ 6961, at the time of the decision provided that the federal government "shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief) . . . in the same manner, and to the same extent, as any person is subject to such requirements . . . . Neither the United States, nor any agent, employee, or officer thereof, shall be immune

immunity for the fines in question. As with the CWA, the Supreme Court disagreed. The Court reasoned that, although suit may be brought against the United States, the civil-penalties section[105] only applies to "persons" and, at the time of the decision, RCRA did not include the United States in the definition of "person."[106] The Court also concluded that the federal facilities section did not waive sovereign immunity for punitive fines because the language of the statute only extended to coercive sanctions.[107]

Congress passed the FFCA of 1992[108] that effectively overruled *Dep't of Energy v. Ohio* as it pertains to RCRA. The FFCA of 1992 added the United States to the definition of "person"[109] and clearly waived sovereign immunity in the federal facilities section of the law.[110]

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or exempt from any process or sanction of any State or Federal Court with respect to the enforcement of any such injunctive relief." *Dep't of Energy v. Ohio*, 503 U.S. at 627.

[105] 42 U.S.C §§ 6928(a), (g) (Lexis 2006).

[106] *Dep't of Energy v. Ohio*, 503 U.S. at 617, 618. At the time of the decision, 42 U.S.C § 6903(15) stated "The term "person" means an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body."

[107] *Dep't of Energy v. Ohio*, 503 U.S. at 628.

[108] Pub. L. No. 102-386, § 102, 106 Stat. 1505 (1992).

[109] 42 U.S.C. § 6903(15) now reads: "The term 'person' means an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body and shall include each department, agency, and instrumentality of the United States."

[110] In relevant part, the RCRA federal facilities section, 42 U.S.C.§ 6961(a), now reads:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government…shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions or injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. *The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge). The reasonable service charges referred to in this subsection include, but are not limited to, fees or charges assessed in connection with the processing and issuance of*

Consequently, federal facilities can no longer rely on sovereign immunity as protection from state-imposed punitive fines for hazardous waste law violations.[111] Notably, however, the FFCA of 1992 did not address the Clean Water Act aspects of *Dep't of Energy v. Ohio*.

In addition to RCRA governing the management and disposal of solid and hazardous waste, Subchapter IX governs the regulation of underground storage tanks (USTs).[112] Like the hazardous waste permit program, the UST program is primarily administered by the EPA,[113] but may be delegated to states with approved programs.[114] Congress enacted the RCRA UST provisions in order to ensure improved release detection and prevention practices and to develop corrective action measures for UST leaks and spills necessary to protect human health and the environment.[115]

Until August 2005, the RCRA UST federal facilities provision[116] did not waive sovereign immunity as it applied to state-

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> *permits, renewal of permits, amendments to permits, review of plans, studies, and other documents, and inspection and monitoring of facilities, as well as any other nondiscriminatory charges that are assessed in connection with a Federal, State, interstate, or local solid waste or hazardous waste regulatory program.* Neither the United States, nor any agent, employee, or officer thereof, shall be immune or exempt from any process or sanction of any State or Federal Court with respect to the enforcement of any such injunctive relief. *No agent, employee, or officer of the United States shall be personally liable for any civil penalty under any Federal, State, interstate, or local solid or hazardous waste law with respect to any act or omission within the scope of the official duties of the agent, employee, or officer. An agent, employee, or officer of the United States shall be subject to any criminal sanction (including, but not limited to, any fine or imprisonment) under any Federal or State solid or hazardous waste law, but no department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal Government shall be subject to any such sanction*.

(emphasis added).

[111] Federal agencies are also liable for civil penalties administratively imposed by EPA for violations of RCRA according to congressional direction in § 102(a) of the FFCA, Pub. L. No. 102-386, 106 Stat. 1505 (1992) and 42 U.S.C.§ 6961(a).

[112] 42 U.S.C. § 6991–6999(Lexis 2006).

[113] *Id.* § 6991e.

[114] *Id.* § 6991c.

[115] *Id.* § 6991b.

[116] The RCRA UST federal facilities section, 42 U.S.C. § 6991f(a), read:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government having jurisdiction over any underground storage tank shall be subject to and comply with all Federal, State, interstate, and local requirements, applicable to such tank, both substantive and procedural, in the same manner, and to the same extent, as any other person is subject to such requirements, including payment of reasonable service charges. Neither the United States, nor any agent, employee, or officer thereof,

imposed punitive fines for UST violations.[117] In the Energy Policy Act of 2005, Congress expressly waived sovereign immunity as it applies to "all civil and administrative penalties and fines" for UST volitions "regardless of whether such penalties or fines are punitive or coercive in nature."[118] So, federal facilities are no longer immune from punitive fines for violation of state UST regulations.[119]

> shall be immune or exempt from any process or sanction of any State or Federal court with respect to the enforcement of any such injunctive relief.

[117] No court addressed the issue of sovereign immunity as it applied to state-imposed punitive fines for UST violations. However, in *Dep't of Energy v. Ohio*, the Supreme Court decided that Congress did not waive sovereign immunity from liability for civil fines imposed by states for past violations of RCRA's hazardous waste provisions. Congress then enacted the FFCA of 1992 (Pub. L. No. 102-386, § 102, 106 Stat. 1505 (1992)), effectively overruling *Dep't of Energy v. Ohio* as it pertained to RCRA hazardous waste regulations. However, RCRA Subchapter IX, Regulation of Underground Storage Tanks, contains its own federal facilities provision. Up until late 2005, the federal facility section under the RCRA UST subchapter was virtually identical to the federal facilities section interpreted by the Supreme Court in *Dep't of Energy v. Ohio*. Given that the FFCA of 1992 did not change the RCRA UST federal facilities section, the Supreme Court's rationale for finding no waiver of sovereign immunity for punitive fines in *Dep't of Energy v. Ohio* still applied to RCRA USTs. Therefore, until recently, federal facilities did not pay state fines for UST violations.

[118] Pub. L. No. 109-58, § 1528(a), 119 Stat. 1100 (2005) reads in relevant part:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any underground storage tank or underground storage tank system, or (2) engaged in any activity resulting, or which may result, in the installation, operation, management, or closure of any underground storage tank, release response activities related thereto, or in the delivery, acceptance, or deposit of any regulated substance to an underground storage tank or underground storage tank system shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting underground storage tanks in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge). The reasonable service charges referred to in this subsection include, but are not limited to, fees or charges assessed in connection with the

2. *Safe Drinking Water Act*

In 1974, Congress enacted the Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f–300j-26, to ensure the development of a regulatory mechanism that protects the quality of publicly supplied drinking water. Under the SDWA, the EPA and the state environmental agencies share responsibility for administering the safe drinking water programs. As required by the SDWA, the EPA promulgated national primary drinking water regulations (NPDWR) designed to prevent contamination of public water systems.[120] These NPDWRs are the standards applicable to all public water systems in the nation and may be enforced by the EPA or a state.[121] A state can receive primary enforcement responsibilities for public water systems provided it can show EPA that its safe drinking water program is no less stringent than the NPDWRs and that the state has an effective enforcement mechanism.[122]

The SDWA also provides for protection of the purity of drinking water at its source. State Underground Injection Control

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> processing and issuance of permits, renewal of permits, amendments to permits, review of plans, studies, and other documents, and inspection and monitoring of facilities, as well as any other nondiscriminatory charges that are assessed in connection with a Federal, State, interstate, or local underground storage tank regulatory program. Neither the United States, nor any agent, employee, or officer thereof, shall be immune or exempt from any process or sanction of any State or Federal Court with respect to the enforcement of any such injunctive relief. No agent, employee, or officer of the United States shall be personally liable for any civil penalty under any Federal, State, interstate, or local law concerning underground storage tanks with respect to any act or omission within the scope of the official duties of the agent, employee, or officer. An agent, employee, or officer of the United States shall be subject to any criminal sanction (including, but not limited to, any fine or imprisonment) under any Federal or State law concerning underground storage tanks, but no department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal Government shall be subject to any such sanction.

[119] It is important to note, however, that the RCRA UST provisions do not apply to aboveground storage tanks (ASTs). Some states have attempted to expand their UST provisions to include ASTs, and more will likely follow in an attempt to benefit from the waivers contained in Pub. L. No. 109-58, 119 Stat. 1100 (2005). In addition, some promulgate AST regulations under the CWA. However, since RCRA UST provisions do not apply to ASTs, and since there is no waiver of sovereign immunity in the CWA for state punitive fines and penalties, federal facilities may not pay punitive fines and penalties for violations of state AST regulations unless the regulations are promulgated under another applicable act that does include a waiver.

[120] 42 U.S.C. § 300g-1(a) (Lexis 2006).

[121] *Id.* §§ 300g-2(a), 300g-3.

[122] *Id.* § 300g-2.

programs are designed to prevent subsurface waste disposal to ensure contaminants do not reach drinking water sources.[123] The Sole Source Aquifer program is a federal grant program that reimburses states 50% of their cost in developing state programs to identify and preserve "critical aquifer protection areas."[124] The Wellhead Protection Area program is designed to protect surface and subsurface watershed areas that surround wells that are used to supply public water systems with drinking water.[125]

After the enactment of the SDWA Amendments of 1996,[126] no doubt exists about the waiver of sovereign immunity.[127] Congress used the language from the FFCA of 1992[128] to modify the federal facilities section of the SDWA to clearly and unequivocally waive sovereign immunity for "all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations."[129] The

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[123] *Id.* § 300h.
[124] *Id.* § 300h-6.
[125] *Id.* § 300h-7.
[126] Pub. L. No. 104-182, 129, 110 Stat. 1613 (1996).
[127] Federal facilities are also subject to civil penalties administratively imposed by EPA.
[128] Pub. L. No. 102-386, § 102, 106 Stat. 1505 (1992).
[129] 42 U.S.C. § 300j-6(a). The waiver of sovereign immunity in the SDWA, section 1447, provides in part:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government…shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting the protection of such wellhead areas, respecting such public water systems, and respecting any underground injection in the same manner and to the same extent as any person is subject to such requirements, including the payment of reasonable service charges. The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge). . . . Neither the United States, nor any agent, employee, or officer thereof, shall be immune or exempt from any process or sanction of any State or Federal Court with respect to the enforcement of any such injunctive relief. No agent, employee, or officer of the United States shall be personally liable for any civil penalty under any Federal, State, interstate, or local law concerning the protection of wellhead areas or public water systems or concerning underground injection

state must use all funds collected from federal facilities for fines or penalties only for environmentally beneficial projects or to defray environmental protection of enforcement costs.[130] Clearly, federal facilities are subject to penalties imposed by states for SDWA violations.

3. *Toxic Substances Control Act: Lead-Based Paint*

In 1992, after the Supreme Court decided *Dep't of Energy v. Ohio*, Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992.[131] This Act amended TSCA by adding to it the Lead-Based Paint Reduction Act (subchapter IV of TSCA).[132] Even though there is no blanket TSCA waiver, Congress in this amendment waived sovereign immunity with regard to lead-based paint and lead-based paint activities.[133] Not only does this waiver require the federal

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> with respect to any act or omission within the scope of the official duties of the agent, employee, or officer. An agent, employee, or officer of the United States shall be subject to any criminal sanction (including, but not limited to, any fine or imprisonment) under any Federal or State requirement adopted pursuant to this title, but no department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal Government shall be subject to any such sanction.

[130] 42 U.S.C. 300j-6(c). This limitation does not apply if prohibited by the state constitution or a state law in effect on August 6, 1996.

[131] Pub. L. No. 102-550, 106 Stat. 3672 (1992); 42 U.S.C. §§ 4851–56 (1992).

[132] 15 U.S.C. §§ 2681–92 (1994).

[133] 15 U.S.C. § 2688 (the waiver) states the following:

> Each department, agency, and instrumentality of executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any property or facility, or (2) engaged in any activity resulting, or which may result, in a lead-based paint hazard, and each officer, agent, or employee thereof, shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for certification, licensing, recordkeeping, or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief) respecting lead-based paint, lead-based paint activities, and lead-based paint hazards in the same manner, and to the same extent as any nongovernmental entity is subject to such requirements, including the payment of reasonable service charges. The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines regardless of whether such penalties or fines are punitive or coercive in nature, or whether imposed for isolated, intermittent or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive

government to comply with all federal, state, interstate, and local substantive and procedural lead-based paint requirements, it expressly waives any immunity applicable to the United States with regard to these requirements.[134] All punitive civil and administrative fines and penalties are specifically included.[135] The waiver is clear and unambiguous and subjects federal facilities to punitive and coercive fines and penalties for violations of state regulations covering federal lead-based paint and lead-based paint activities.[136] TSCA lead-based paint requirements primarily affect the Air Force with regard to military family housing and military housing activities.[137]

C. Act Where State Fine Issue is Unsettled: Clean Air Act

The Clean Air Act (CAA)[138] is a comprehensive national program that makes the states and the federal government partners in the struggle against air pollution.[139] The purposes of the CCA are to protect the quality of the Nation's air resources, encourage advancements in air

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> relief, administrative order, or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge). The reasonable service charges referred to in this section include, but are not limited to, fees or charges assessed for certification and licensing, as well as any other nondiscriminatory charges that are assessed in connection with a Federal, State, interstate, or local lead-based paint, lead-based paint activities, or lead-based paint hazard activities program. No agent, employee, or officer of the United States shall be personally liable for any civil penalty under any Federal, State, interstate, or local law relating to lead-based paint, lead-based paint activities, or lead-based paint hazards with respect to any act or omission within the scope of his official duties.

[134] *See* 15 U.S.C. § 2688 (Lexis 2006). This waiver only includes those requirements that treat federal properties and federal actions "in the same manner and to the same extent as any nongovernmental entity." It does not require that state and local governmental entities be treated the same for the federal government to be subject to the statute. Therefore, even if state or local governments are exempt from a regulation, the federal government may still be subject to compliance and subject to punitive fines and penalties for not complying.

[135] *See id.*

[136] Federal facilities are also subject to civil penalties administratively imposed by EPA. *See* The United States Department of Navy, Kingsville Naval Air Station, TSCA Docket No. VI-736C(L), involving a Complaint filed by the EPA, seeking $408,375 in civil penalties against the Navy for six counts of alleged violation of § 409 of the Toxic Substances Control Act, 15 U.S.C. § 2689. The Complainant asserted that Respondent failed to comply with the Real Estate Notification and Disclosure Rule requirements of 40 C.F.R. Part 745 Subpart F, a federal regulation promulgated pursuant to section 1018 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, 42 U.S.C. § 4852d.

[137] *See* Thomas Franke Zimmerman, *The Regulation of Lead-Based Paint in Air Force Housing*, 44 A.F. L. REV. 169 (1998) for a comprehensive coverage of lead-based paint legislation and issues affecting military family housing.

[138] 42 U.S.C. §§ 7401–7671q (Lexis 2006).

[139] *Id.* § 7401(a)(3)-(4).

pollution control, provide resources to state and local governments for the execution of their air pollution control programs, and to aid in the control of regional air pollution.[140] In general, the primary goal of the CAA is air pollution prevention.[141]

Congress included a waiver of sovereign immunity in section 118(a) of the CAA. The question of whether § 118(a) of the CAA, waives the United States' sovereign immunity from state-imposed civil penalties for violations of state air pollution control laws has been addressed by various courts.[142] Predictably, some courts have held that Congress did not waive sovereign immunity for state-imposed CAA fines,[143] while others decided to the contrary.[144] These conflicting

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[140] *Id.* § 7401(b)(1)-(4).

[141] *Id.* § 7401(c).

[142]The CAA waiver of sovereign immunity is set forth in 42 U.S.C. § 7418(a) as follows:

> Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any property or facility, or (2) engaged in any activity resulting, or which may result, in the discharge of air pollutants, and each officer, agent, or employee thereof, shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of air pollution in the same manner, and to the same extent as any nongovernmental entity. The preceding sentence shall apply (A) to any requirement whether substantive or procedural (including any recordkeeping or reporting requirement, any requirement respecting permits and any other requirement whatsoever), (B) to any requirement to pay a fee or charge imposed by any State or local agency to defray the costs of its air pollution regulatory program, (C) to the exercise of any Federal, State, or local administrative authority, and (D) to any process and sanction, whether enforced in Federal, State, or local courts, or in any other manner. This subsection shall apply notwithstanding any immunity of such agencies, officers, agents, or employees under any law or rule of law. No officer, agent, or employee of the United States shall be personally liable for any civil penalty for which he is not otherwise liable.

[143] City of Jacksonville v. Department of Navy, 348 F.3d 1307 (11th Cir. 2003), *reh'g denied*, 2004 U.S. App. LEXIS 5891 (Without an unequivocal statement within the statutory language itself, the Court declined to find that Congress intended to waive the federal government's sovereign immunity from punitive penalties under the CAA.); United States v. Georgia Department of Natural Resources, 897 F. Supp. 1464 (N.D. Ga. 1995) (Because the only clearly expressed waiver of sovereign immunity in the CAA was for coercive fines, punitive fines could not be imposed on the federal government.); California v. United States, 29 F. Supp. 2d 652 (E.D. Cal. 1998) (The court applied the reasoning used by the Supreme Court in *Dep't of Energy v. Ohio*, 503 U.S. 607 (1992), to decide that Congress did not waive the United States' sovereign immunity from liability for state-imposed civil penalties under the CAA. Reasoning that the federal facilities provision of the CAA paralleled the same provision of the CWA, the court found that sovereign immunity was not waived.), vacated and remanded by California v. United States, 215 F.3d 1005 (9th Cir. Cal. 2000). *See* Joshua Klinger, *The Clean Air*

judicial decisions have created uncertainty regarding the payment of state-imposed fines under the CAA.[145]

At the time this article was written, the Department of Justice (DoJ) position continues to be that sovereign immunity is not waived for state-imposed CAA fines.[146] However, given the uncertainty of the issue, the Air Force has published the following guidance:[147]

> - States in the Sixth Circuit: The Department of Defense (DoD) will continue to pay state penalties as a result of the holding in United States v. Tennessee Air Pollution Control Board, 185 F.3d 529 (6th Cir. 1999).
> - States in the Ninth Circuit: DoJ agreed with the services' recommendation not to appeal California v. U.S., No. 98AS00723 (Super. Ct. of Cal., Sacramento Co., March 18, 2002). DoD may negotiate and settle other pending and future penalty assessments.
> - States in the Eleventh Circuit: To preserve the United States' litigation posture for the anticipated appeal of the *Jacksonville* case, DoD will not negotiate or pay any state CAA penalties.[148]

Act and the Federal Removal Statute: Do They Fit Together or Are We Missing a Piece of the Puzzle?, 8 MO. ENVTL. L. & POL'Y REV. 85 (2001). *Cf.* Sierra Club v. TVA, 430 F.3d 1337, 1353-57 (11th Cir. 2005) (following *Jacksonville v. Navy* in finding that Congress did not waive sovereign immunity from liability for punitive fines imposed for past conduct in citizen suits under the CAA).

[144] United States v. Tennessee Air Pollution Control Board, 185 F.3d 529 (6th Cir. 1999) (The Court held that section 7604(a) of the CAA unequivocally and unambiguously waived sovereign immunity for state-imposed civil penalties. The CAA permits any person to bring a citizen-suit to enforce the federal clean air laws against any person including the United States. Under section 7604(e), states are expressly empowered to bring enforcement actions against the United States under state air pollution laws and to obtain any judicial remedy or sanction or any administrative remedy or sanction. State enforcement authority is not limited to prospective, coercive action, nor does any other law, including the law relating to sovereign immunity, restrict it.).

[145] A July 16, 1997 opinion from the Department of Justice's Office of Legal Counsel concluded that federal facilities are subject to civil penalties administratively assessed by EPA. Accordingly, federal agencies are subject to EPA-imposed fines under CAA § 113(d)(1) and CAA § 113(d)(3). *See* Major Kevin Luster, *The Field Citation Program Under the Clean Air Act: Can EPA Apply It to Federal Facilities?*, 22 WM. & MARY ENVTL. L. & POL'Y REV. 71 (1997).

[146] City of Jacksonville v. U.S. Department of the Navy, 348 F.3d 1307 (11th Cir. 2003), *reh'g denied*, 2004 U.S. App. LEXIS 5891.

[147] Memorandum from Deputy Assistant Secretary of the Air Force (Environment, Safety, and Occupational Health), Air Force Policy on the Payment of Fines and Penalties for Violations of the Clean Air Act (CAA) (17 July 2002).

[148] This policy was issued prior to the decision in *City of Jacksonville v. U.S. Department of the Navy.* Prior to being reversed by the 11th Circuit, the District Court for the Middle District of Florida held that the CAA did waive federal sovereign immunity for punitive penalties. City of Jacksonville v. U.S. Department of the Navy, 187 F. Supp. 2d 1352 (M.D. Fla. 2002).

- States in all other circuits: Coordination will be obtained from DoJ on a case-by-case basis prior to entering into negotiation for the settlement of state CAA penalties.
- All states in all circuits: When settling a state CAA penalty case, the written agreement memorializing the settlement shall expressly state that the Air Force does not admit liability and must remain silent with regard to the issue of sovereign immunity.[149]

It is clear that changes in the law and policy regarding payment of state-imposed CAA fines are inevitable.[150]

IV. CONCLUSION

The law of sovereign immunity as it applies to federal facility compliance with environmental regulations has undergone significant changes over the past several decades. The law in this area will continue to change in the near future. Numerous court decisions and congressional reaction to those decisions have created uncertainty in where the law is headed and inconsistency in how various environmental statutes are enforced against agencies of the federal government. As noted, more changes are certainly in the making; however, one trend is clear—the trend toward more state authority. Every time Congress has acted to resolve a conflict, they have acted to enhance state authority over federal entities.

The environmental statutes can be divided into three categories with regard to sovereign immunity for state imposed fines: those subjecting federal facilities to state fines, those that do not, and those where the issue is unsettled. Federal facilities are subject to state fines for violations of RCRA, SWDA, and the TSCA's lead-based paint provisions. Federal facilities are not subject to punitive state fines under the CWA, CERCLA, EPCRA, and PPA. Lastly, the authority for states to fine federal facilities under the CAA is in active litigation. Whether a facility pays state CAA fines depends on the U.S. judicial circuit in which the facility is located. If the issue is resolved in a manner consistent with current trends, all federal facilities will eventually be subject to state CAA fines. This will happen either because court decisions in various jurisdictions will rule against the use of sovereign

[149] Prior to execution, all settlement agreements must be coordinated through the Major Command with the U.S. Air Force Environmental Law and Litigation Division.

[150] For an alternative to the use of civil fines as a method to ensure federal facility compliance, see Lisa M. Schenck, *Let's Clear the Air: Enforcing Civil Penalties Against Federal Violators of the Clean Air Act*, 6 ENVTL. LAW. 839 (2000).

immunity in the area of CAA fines or because Congress will act to ensure federal facilities are subject to state CAA fines.

TERRORISM, NATURAL DISASTERS AND ENVIRONMENTAL REPORTING

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I. INTRODUCTION

A. Terrorism, Natural Disasters and Environmental Reporting

Tuesday, September 11, 2001. To the horror of an entire nation, terrorists hijacked four airliners. Before the morning was over, those terrorists deliberately crashed the aircraft into two skyscrapers in New York and the Pentagon, causing nearly 3,000 deaths and resulting in the release of hazardous substances into the environment.[1]

Tuesday, August 29, 2005. Hurricane Katrina created a storm surge which caused a breach of the New Orleans levee.[2] Within hours, most of the city of New Orleans was submerged by the floodwaters.[3] Well over a thousand people were killed and the resulting environmental damage was catastrophic.[4]

The first few years of the third millennium have seen disasters, both natural and manmade, of biblical proportions. Obviously, when either a terrorist event or natural disaster occurs, the first priority is, and should be, the protection of human lives. However, even at times such as these, there are environmental reporting requirements that must be complied with under penalty of law. This article will discuss the federal and Air Force environmental and incident reporting requirements triggered by the recent terrorist attacks and natural disasters, as well as those triggered by various hypothetical scenarios.

B. General Principles Applicable to Environmental Reporting Requirements

The environmental reporting requirements contained in numerous federal environmental statutes and regulations generally require that "persons in charge" of facilities or owners and operators of facilities make real-time reports of environmental releases and incidents based on clear cut criteria, regardless of cause. Most environmental release reporting statutes and regulations require reporting when reportable quantities of hazardous substances or extremely hazardous substances are released into the environment (without regard to other

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[1] NAT'L COMMISSION ON TERRORIST ATTACKS, THE 9/11 COMM. REPORT, 555 n.13 (2004).

[2] NAT'L HURRICANE CENTER, TROPICAL CYCLONE REPORT, HURRICANE KATRINA 23-30 (2005), http://www.nhc.noaa.gov/pdf/TCR-AL122005_Katrina.pdf. (last visited Aug. 2, 2006).

[3] *Id.*

[4] Janet McConnaughey, *LA. Team to Study Dutch Flood Controls,* ASSOC. PRESS, Jan. 8, 2006, *available at* http://www.cbsnews.com/stories/2006/01/08/ap/national/mainD8F0N0O01.shtml; Betsy McKay, *Katrina Oil Spill Clouds Future of Battered Suburb*, WALL ST. J., Jan. 3, 2006, at A1.

considerations, such as injuries, damage to property, etc.).[5] Most incident reporting regulations require reporting when incidents involving hazardous substances or hazardous materials result in injuries, fatalities, and transportation accidents.[6] They can be triggered even in circumstances in which an actual release of hazardous substances or hazardous materials has not yet occurred.[7] In both cases, reporting is done in real-time, generally regardless of fault or cause, so that environmental authorities can ensure that protective measures, including providing aid to injured persons, the evacuation of people from the affected area, and the cleanup of the environment, are promptly taken. It is for this reason that typically the determination of whom or what was responsible for the release or incident is left for a later time.[8]

In the event of either a known or suspected terrorist attack or a natural disaster, the person in charge of the facility or the owner or operator of a facility (depending on the language of the particular reporting requirement) is required to promptly report reportable releases and incidents. In fact, even in situations such as these, failure to report environmental releases and incidents in a timely manner could result in sanctions, including fines, penalties, and criminal prosecution.[9] If a person is uncertain of the facts relating to a reportable environmental release or incident, that person must report the incident based on the information available at the time. If it turns out that the initial information was inaccurate or incomplete, it can be corrected by contacting the entity that receives the reports and providing the additional information as soon as possible.

Many incidents involving reportable environmental releases or incidents trigger multiple reporting requirements, all of which have to be complied with on a real-time or close to real-time basis. Therefore, it is necessary to review the list of reporting requirements contained in this article to determine which reporting requirements have been triggered by the particular event.

The requirements and time periods contained in the environmental release and incident reporting regulations discussed in this article are legal minimum requirements. Obviously, when faced with exigent circumstances, responsible officials would be prudent to

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[5] *See* 42 U.S.C. §§ 9603(a), 11004(a) (Lexis 2006).
[6] *Id*.
[7] *See* 49 C.F.R. § 171.15(b)(5) (Lexis 2006); *see also* 10 C.F.R § 20.2201(a)(2) (Lexis 2006).
[8] For example, under the CERCLA regulation, the National Contingency Plan (NCP) after a hazardous substance release, the National Response Center informs the On-Scene Coordinator. The On-Scene Coordinator directs the response and creates and maintains documentation, which is used to determine the circumstances of the release and provide a basis for "cost recovery" from responsible parties. *See* 40 C.F.R. § 300.120-.160 (Lexis 2006).
[9] *See* 42 U.S.C. § 9603(b) (Lexis 2006); *see also* 33 U.S.C. §1321(b)(5) (Lexis 2006).

report as soon as possible, even though a particular reporting regulation may allow a forty-eight hour window for reporting. In addition, even though there may not be a legal requirement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Emergency Planning and Community Right-To-Know Act (EPCRA) to report certain types of releases, such as a release of a biological chemical such as anthrax, prudence suggests that responsible officials consider the benefits of keeping federal, state and local environmental and public health officials "in the loop," should such a calamitous situation arise.

Federal agencies are required, by statute, to comply with all of the federal reporting requirements listed in Sections II-XII below, except for the EPCRA and Chemical/Biological hotline reporting. However, Executive Order 13148, signed by President Clinton in 2000, requires that all federal agencies comply with the Right-To-Know release reporting provisions of the EPCRA.[10]

Do environmental laws provide exceptions or waivers that excuse compliance when there is a catastrophe, such as Katrina, that is so large that virtually everyone living within the city limits is forced to flee and it is almost impossible to determine whether a reportable release or incident has occurred? The answer is "No." As the law currently exists, there are no "automatic" waivers. The state of Louisiana, however, did act to waive certain requirements, such as the National Pollutant Discharge Elimination System (NPDES) upsets reporting requirement under the Clean Water Act and underground storage tank (UST) release reporting under The Resource Conservation and Recovery Act (RCRA) following the Katrina disaster.[11] However, while environmental authorities may grant waivers to reporting requirements in catastrophes such as Katrina, the only prudent course of action is to promptly report whatever information is available as soon as possible.

II. CERCLA "HAZARDOUS SUBSTANCE" RELEASE REPORTING.

A. The Basic Requirement.

By far, the most significant federal environmental release reporting requirement is contained in CERCLA section 103(a), which states:

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[10] Exec. Order No.13148, 55 Fed. Reg. 24595 (Apr. 21, 2000).

[11] STATE OF LA. DEP'T. OF ENVTL QUALITY, FOURTH AMENDED DECLARATION OF EMERGENCY AND ADMIN. ORDER, HURRICANE KATRINA AND ITS AFTERMATH (2006) [hereinafter STATE OF LA.], http://www.deq.louisiana.gov/portal/portals/0/news/pdf/Katrina-FourthAmended1-13-06.pdf (last visited Jul. 6, 2006).

> Any person in charge of a vessel or an offshore or an onshore facility shall, as soon as he has knowledge of any release (other than a federally permitted release) of a hazardous substance from such vessel or facility in quantities equal to or greater than those determined pursuant to section 9602 of this title, immediately notify the National Response Center established under the Clean Water Act of such release.[12]

When a reportable quantity of a hazardous substance is released into the environment, the person in charge of the facility or vessel must immediately call the National Response Center at its twenty-four hour hotline.[13] Because there is a legal requirement to report releases immediately, this hotline is manned twenty-four hours a day, seven days a week, fifty-two weeks a year.[14] If the person in charge of a facility or vessel fails to immediately report a release of a hazardous substance, it is a felony punishable by up to three years in prison for the first offense and up to five years for the second offense.[15] Federal agencies, such as the Air Force, are required to comply with this statute by the CERCLA waiver of sovereign immunity found at 42 U.S.C. § 9620(a)(1).

B. Hazardous Substance

CERCLA section 103(a) applies only to releases of CERCLA hazardous substances.[16] This includes: RCRA hazardous waste; Clean Water Act hazardous substances or toxic pollutants; Clean Air Act hazardous air pollutants; Toxic Substance Control Act (TSCA) imminently hazardous chemical substances; or any other substance the Environmental Protection Agency (EPA) formally designates as a CERCLA hazardous substance.[17] Unlisted hazardous substances, which include RCRA characteristic hazardous wastes are addressed at 40 C.F.R. § 302.4(b). Characteristic hazardous wastes include those that are reactive, ignitable, corrosive, and toxic.[18] It is important to note that literally hundreds of "radioisotopes" (i.e., radioactive materials) are included in the list of CERCLA hazardous substances.[19]

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[12] 42 U.S.C. § 9603(a) (Lexis 2006) (citations omitted).
[13] 40 C.F.R. § 302.6(a) (Lexis 2006). The National Response Center number is (800) 424-8802. In the Washington, D.C. metropolitan area, the number is (202) 426-2676. *Id.*
[14] *Id.*
[15] 42 U.S.C. § 9603(b) (Lexis 2006).
[16] *Id.* § 9601(14).
[17] *Id.* The lists of CERCLA hazardous substances are found at 40 C.F.R. § 302.4, tbl.302.4 and apps. A and B.
[18] 40 C.F.R. §§261.20-.24 (Lexis 2006).
[19] *See* 40 C.F.R. § 302.4, app. B (Lexis 2006).

The term "hazardous substance" specifically excludes crude oil and natural gas or synthetic gas used as fuel.[20] The EPA interprets this exclusion to apply to petroleum and crude oil, including any CERCLA hazardous substances that are either indigenous to the petroleum or oil and those that are normally added to it in the refining process.[21] However, hazardous substances added to the petroleum, or increased in concentration solely as a result of contamination, are not part of the petroleum and are not excluded from regulation under CERCLA.[22]

The terrorist attacks on September 11, 2001, triggered the CERCLA release reporting requirement because it was believed that the collapse of the World Trade Center towers caused a release well in excess of reportable quantities of CERCLA hazardous substances, including asbestos, mercury, and other miscellaneous hazardous substances.[23] The term "hazardous substance" does *not* include certain man-made chemical agents, such as the deadly nerve agent sarin gas. On March 20, 1995, members of the Aum Shinrikyo cult used sarin gas in a terrorist attack on the Tokyo subway system, killing twelve Japanese citizens.[24]

The U.S. National Response Team (NRT), comprised of sixteen federal agencies, including the Homeland Security Agency, the Department of Defense (DoD), the EPA, and the Department of Justice, noted in its 2003 report that neither CERCLA nor its regulation, the National Contingency Plan (NCP), contain specific reporting requirements for biological agents.[25] The NRT report states that biological agents are natural diseases, including those that are endemic to the United States.[26] This term apparently includes such substances as anthrax, the plague, influenza, and numerous other bacteriological or viral agents—not included in the list of CERCLA "hazardous substances"—that could potentially be used by terrorists. Therefore, the

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[20] 42 U.S.C. § 9601(14) (Lexis 2006).

[21] *See* 50 Fed. Reg. 13460 (Apr. 4, 1985) (notification requirements); *see also* ENVIR. PRO. AGENCY OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE (OSWER), DIR. 9838.1, SCOPE OF THE PETROLEUM EXCLUSION (1987) [hereinafter PETROLEUM EXCLUSION].

[22] *See* 50 Fed. Reg. 13460 (Apr. 4, 1985); *see also* PETROLEUM EXCLUSION, *supra* note 21.

[23] Press Release, Envtl. Protection Agency, EPA Initiates Emergency Response Activities, Reassures Public About Envtl. Hazards (Sept. 13, 2001), http://yosemite.epa.gov/opa/admpress.nsf/0/d7ada9cf2d39c0a185256acc007c097f?OpenDocument.

[24] *See* 40 C.F.R. 302.4, tbl. 302.4 (Lexis 2006); *see also* Kyle B. Olson, *Aum Shinrikyo: Once and Future Threat?*, 5 EMERGING INFECTIOUS DISEASES 513, *available at* http://www.cdc.gov/ncidod/EID/vol5no4/olson.htm (last visited Feb. 6, 2006).

[25] NATIONAL RESPONSE TEAM, RECONCILING FEDERAL EMERGENCY RESPONSE PLANS – NRT HOMELAND SECURITY RECOMMENDATIONS, iv, 17-18 (July 2003), http://www.nrt.org (search "Homeland Security Recommendations") (last visited Feb. 6, 2006).

[26] *Id*. at 17-18.

release caused by the anthrax-laden mail attack, which killed five people and sickened seventeen others in 2001, would not be a reportable release under CERCLA.[27]

C. Release into the Environment

In order to trigger CERCLA section 103(a), a hazardous substance must be released from either a facility or vessel.[28] The term "release" is defined very broadly to include "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance)."[29] "Environment" is defined as follows:

> (a) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson-Stevens Fishery Conservation and Management Act, and
> (b) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.[30]

Under this definition of environment, releases of reportable quantities that occur outside of buildings are CERCLA reportable releases—even if the substance released does not travel beyond installation boundaries.

Certain things are specifically excluded from the definition of release, such as: any release which results in exposure to persons solely within a workplace (meaning wholly contained within a building); engine exhaust emissions from motor vehicles, aircraft, vessels, or pipeline pumping station; and releases of source, byproduct or special nuclear material from a "nuclear incident" (as such terms are defined by the Atomic Energy Act).[31] In addition, the release reporting statute also excludes "federally permitted releases," which include those releases of

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[27] *Id.*; *see generally* U.S. GOV. ACCOUNTABILITY OFFICE, ANTHRAX DETECTION: AGENCIES NEED TO VALIDATE SAMPLING ACTIVITIES IN ORDER TO INCREASE CONFIDENCE IN NEGATIVE RESULTS, REPORT NO. GAO 05-251 (2005) [hereinafter GAO 05-251], http://www.gao.gov/cgi-bin/getrpt?GAO-05-251 (last visited Feb. 6, 2006).
[28] 42 U.S.C. § 9603(a) (Lexis 2006).
[29] *Id.* § 9601(22).
[30] *Id.* § 9601(8)(a)-(b) (citations omitted).
[31] *Id.* § 9601(22).

hazardous substances specifically allowed under environmental permits issued by either the EPA or by an authorized state.[32]

Under CERCLA section 107(b), facility owners or operators can assert several defenses, including the "act of God" defense, the "act of war" defense, and the "acts of third persons" defense.[33] At first blush, it might appear that these exemptions might excuse facility owners from having to report releases that are the result of the acts of third persons, such as a terrorist, or an act of God, such as natural disasters like a hurricane or tornado. However, because CERCLA section 107(b) states that "there shall be no liability under this section," this exemption merely applies to liability, not to release reporting. This analysis is further supported by the fact that when Congress created the CERCLA statute and EPA drafted the release reporting regulations, they omitted any reference to acts of third persons, acts of war, or acts of God.[34] Therefore, even when a release of hazardous substances from a facility is the result of a known or suspected act of a terrorist or an act of God, the owner of the facility has a duty under CERCLA section 103(a) to report the release.

D. Reportable Quantity

Releases of CERCLA hazardous substances trigger the release reporting requirement when the amount released during any twenty-four hour period equals or exceeds the reportable quantity set for the particular chemical under CERCLA section 102.[35] "Characteristic" hazardous wastes include those that are reactive, ignitable, corrosive, and toxic.[36] For purposes of determining whether a reportable release has occurred, multiple releases of the same CERCLA hazardous substance from a single facility must be aggregated.[37]

E. Facility and Vessel

In order for a release to be covered by CERCLA section 103, a hazardous substance must be released from either a facility or vessel.[38]

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[32] *Id.* §§ 9603(a), 9601(10).
[33] *Id.*
[34] *See* 42 U.S.C. § 9603(a) (Lexis 2006); *see also* 40 C.F.R. § 302 (Lexis 2006).
[35] 42 U.S.C. § 9602(a) (Lexis 2006); *see* 40 C.F.R. § 302.6(a) (Lexis 2006). The list of reportable quantities for each CERCLA hazardous chemicals is found at 40 C.F.R. § 302.4 at Table 302.4 and at Appendices A and B. For unlisted hazardous substances, including RCRA "characteristic" hazardous wastes, the special rule, found at 40 C.F.R. § 302.5(b) applies.
[36] 40 C.F.R. §§ 261.20-261.24.
[37] 50 Fed. Reg. 13456 (Apr. 4, 1985).
[38] 42 U.S.C. § 9603(a) (Lexis 2006). CERCLA defines "facility" as "any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or

For purposes of both terrorist incidents and natural disasters, it is important to note that the term "facility" explicitly includes vehicles and aircraft used to transport people and/or supplies.[39] Therefore, if either a terrorist incident or natural disaster downs an aircraft or causes a motor vehicle to leave the road resulting in a release of a reportable quantity of hazardous substance(s), such event would trigger the CERCLA immediate release reporting requirement.

Federal courts have held that the term "facility" not only includes entire installations, but discrete portions of installations. In *United States v. Carr*,[40] a maintenance foreman who had supervisory authority over a small, discrete portion of Fort Drum, ordered his subordinates to dump waste paint containing CERCLA hazardous substances, into holes in the ground.[41] In his defense, the foreman argued that he was not a "person in charge of the facility" who had a legal duty to report the release to the National Response Center.[42] The court held that because the term facility included such things as "pits," and "any place where a hazardous substance had been disposed of," and the foreman was a supervisor in charge of the pit area, he was a "person in charge of a facility" who had a legal duty to report the release of the paint waste into the environment.[43]

Neither CERCLA or the NCP expressly addresses whether "the person in charge of a facility" is legally required to report releases under section 103(a) in situations where a terrorist or a natural disaster brings hazardous substances onto facility property and all of the substance released is neither owned nor possessed by the facility. CERCLA section 103(a) requires reporting when reportable quantities of hazardous substances "are released from the facility."[44] Did Congress intend that the phrase "from the facility" be interpreted as meaning "owned or possessed" by the facility? Since the CERCLA release reporting regulations and the legislative history do not answer this question with absolute certainty, prudence suggests that persons in charge of a facility must report such releases to the National Response Center and notify them that they believe their facility is not the source. This should be done for three reasons. First, the person may be mistaken and at least some of the hazardous substance released may be owned or possessed by the facility. In such a case, reporting the release

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publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located." 42 U.S.C. § 9601(9) (Lexis 2006).

[39] *Id*. § 9601(9).

[40] 880 F.2d 1550 (2d Cir. 1989).

[41] *Id.* at 1551.

[42] *Id.* at 1551-54.

[43] *Id.* at 1554.

[44] 42 U.S.C. § 9603(a) (Lexis 2006).

would spare them and the facility from criminal and civil penalties. Second, reporting the release to the National Response Center may enable environmental authorities to dispatch assistance to the facility and the surrounding area. Third, it is possible that a court could determine that the "person in charge" of the facility does, in fact, have a legal duty to report the release (even though the facility owner would have no liability for cleanup).

F. Release Must be Reported Immediately

CERCLA states that releases of reportable quantities of hazardous substances must be reported "immediately" to the National Response Center. Neither CERCLA nor its regulation define "immediately." However, EPA policy sets forth its position regarding the definition of "immediately."[45] In its policy, EPA quotes the legislative history of the Superfund Amendments and Reauthorization Act (SARA), a law that both amended CERCLA and created the EPCRA.[46] In that legislative history, Congress stated: "[O]rdinarily, delays in making the required notifications should not exceed 15 minutes after the person in charge has knowledge of the release. Immediate notification requires shorter delays whenever practicable."[47]

In recognition of this legislative history, the EPA guidance contains a penalty matrix for CERCLA release reporting that provides that the EPA "penalty clock" begins running fifteen minutes after the person in charge of the facility knew of the release.[48] While extenuating circumstances may be considered when evaluating the immediate notification requirement, those circumstances should not include things such as poor emergency planning or elaborate facility operating procedures, and reporting systems that may cause unnecessary delays.[49] Examples of extenuating circumstances include: downed telephone lines, delays in field personnel getting to a radio or telephone, and delays that may result because the person in charge is alone and severely injured.[50]

Although the guidance does not explicitly address when the penalty clock would begin for criminal purposes, it stands to reason that if the civil penalty clock does not begin until fifteen minutes after the

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[45] ENVTL PROT. AGENCY, OFFICE OF REGULATORY ENFORCEMENT, ENFORCEMENT RESPONSE POLICY FOR SECTIONS 304, 311 AND 312 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT AND SECTION 103 OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) (1999) [hereinafter ENFORCEMENT RESPONSE POLICY].
[46] *Id.* at 11-12.
[47] *Id.* at 12-13.
[48] *Id.* at 19-21.
[49] *Id.* at 12.
[50] *Id.*

person in charge knew of the release, the criminal penalty clock also would not start for at least fifteen minutes.

The person in charge of the facility who reports the release to the National Response Center must include the caller's name and phone number, as well as the name of the responsible party.[51] The report must also include the name and amount of the material spilled and the location and source of the release.[52] As weather conditions can affect the dispersion and ultimate effect of the release, the conditions should be noted in the report.[53] It is also important that the report address whether there is a continuing danger to human life in the community or whether an evacuation occurred.[54] If a carrier is involved, the report must include, among other things, the carrier's name, the name of the manufacturer or shipper, a description of the cleanup plans, and the agencies which have been notified.[55]

III. THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT

A. The Basic Requirement

Section 304 of the EPCRA states that if a CERCLA hazardous substance is released at or above its reportable quantity or an EPCRA "extremely hazardous substance" is released at or above its reportable quantity from a facility at which a hazardous chemical is produced, used, or stored, the owner or operator of the facility must immediately report the release to both the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC) for the appropriate "Emergency Planning District" within the state in which the facility is located.[56] EPCRA section 301 requires that every state establish a SERC and LEPC for each Emergency Planning District within the state in order to address environmental releases on a local level.[57] States typically create a LEPC for each county within the state.[58] Although the EPCRA immediate release reporting statute was

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[51] ENVTL. PROT. AGENCY, WHAT INFORMATION MUST BE PROVIDED: WHAT INFORMATION DOES THE NATIONAL RESPONSE CENTER REQUEST FROM INDIVIDUALS REPORTING A RELEASE?, *available at* http://www.epa.gov/oerrpage/superfund/programs/er/triggers/haztrigs/whatinfo.htm (last visited Aug. 6, 2006).
[52] *Id.*
[53] *Id.*
[54] *Id.*
[55] *Id.*
[56] 42 U.S.C. § 11004(a)-(b) (Lexis 2006).
[57] 42 U.S.C. § 11001(a)-(b) (Lexis 2006).
[58] *See* ENVTL. PROT. AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) DATABASE, http://yosemite.epa.gov/oswer/lepcdb.nsf/HomePage?openForm (last visited Aug. 6, 2006).

not created with terrorist acts in mind, EPA issued guidance to address the issue.[59] That guidance states that EPCRA contingency plans should be adapted to include terrorist acts.[60] In the event of such attack, the responders may avail themselves of the special expertise available through the National Response Center's Chemical and Biological Hotline, which is the same number used to report CERCLA and Clean Water Act reportable releases.[61] More recently, Congress passed the Public Health and Bioterrorism Preparedness and Response Act of 2002 (The Bioterrorism Act), which states: "Each community (drinking) water system serving a population greater than 3,300 shall prepare an emergency response plan . . . which shall, to the extent possible, coordinate with the Local Emergency Planning Committee (LEPC) established under EPCRA."[62]

The EPCRA statute states that any person who knowingly and willfully fails to provide emergency notice can be sentenced to up to two years in prison and a fine of up to $50,000.[63]

B. Executive Orders 12856 and 13148

The EPCRA statute only applies to "facilities," which is defined as "buildings, structures, etc. owned by 'persons.'"[64] The definition of "persons" omits federal agencies.[65] Therefore, since buildings and structures owned by federal agencies are not facilities, as defined by EPCRA, EPCRA does not apply to federal agencies. To address this issue, President Clinton signed Executive Order 12856, which requires that federal agencies comply with EPCRA reporting requirements.[66] This Executive Order was subsequently revoked and replaced by Executive Order 13148 in 2000.[67] Section 203 of Executive Order 13148 requires that federal agencies must report releases as non-governmental entities are required to do so under EPCRA[68]

[59] *See* ENVTL. PROT. AGENCY, PUB. 550-F-01-005, LEPC AND INTENTIONAL RELEASES 1-2 (2001).
[60] *Id.*
[61] *Id.* The National Response Center number is (800) 424-8802. In the Washington, D.C. metropolitan area, the number is (202) 426-2676.
[62] 42 U.S.C. § 300i-2 (Lexis 2006).
[63] *Id.* § 11045(b)(4).
[64] *Id.* § 11049(4).
[65] *Id.* § 11049(7).
[66] Exec. Order No. 12856 § 1-101 (Aug. 6, 1993).
[67] Exec. Order No. 13148, 65 Fed. Reg. 24595 (Apr. 26, 2000).
[68] *Id.*

C. Hazardous Substances, Extremely Hazardous Substances, and Reportable Quantities

The term "hazardous substance," as used in EPCRA, has the same definition as it does under CERCLA.[69] The term extremely hazardous substance (EHS) is defined in the Code of Federal Regulations as a substance listed in appendices A and B of 40 C.F.R. § 355.[70] Appendix A lists EHSs in alphabetical order and Appendix B lists EHSs by Chemical Abstract Service number. Since the universe of CERCLA hazardous substances includes hundreds of radioactive substances, releases of reportable quantities of any of those substances that travel beyond facility boundaries must be reported to the appropriate SERC and LEPC. Note that EPCRA, unlike CERCLA, does not have petroleum exclusion. Therefore, if any of the constituents of the petroleum product is an EPCRA EHS, releases in a quantity equal to or greater than the reportable quantity for that EHS must be reported.[71]

While EPCRA, unlike CERCLA, does not have a petroleum exclusion, releases of large quantities of oil would still trigger the EPCRA reporting requirement because benzene, a major constituent of oil and petroleum products, is an EPCRA EHS. Therefore, the release of enormous quantities of oil and petroleum products caused by Hurricane Katrina triggered the EPCRA release reporting regulation.

The list of EHSs includes man-made chemical agents, such as the deadly nerve agent sarin gas. This gas was used in a March 20, 1995 terrorist attack by members of the Aum Shinrikyo cult, who entered the Tokyo subway system and released the agent.[72] Such a release would be reportable under EPCRA were it to occur in the United States.

Such substances as anthrax, the plague, influenza, and numerous other bacteriological or viral agents are not included in either the list of CERCLA hazardous substances or the EPCRA list of EHSs.[73] Therefore, the release caused by the anthrax-laden mail attack, which killed five people and sickened seventeen others in 2001, would not be a reportable release under EPCRA.[74]

[69] 42 U.S.C. § 11004(a)(3)(A) (Lexis 2006).
[70] 40 C.F.R. § 355.20 (Lexis 2006).
[71] 52 Fed. Reg. 13378, 13385 (Apr. 22, 1987).
[72] *See* 40 C.F.R. 302.4, tbl.302.4 (Lexis 2006); *see also* Olson, *supra* note 24, at 513.
[73] 40 C.F.R. §§ 302.4, tbl.302.4, 355, app. A (Lexis 2006).
[74] *Id.*; *see* GAO 05-251, *supra* note 27.

Releases of CERCLA hazardous substances and EPCRA EHSs are only reportable when the amount released is equal to or greater than a reportable quantity for the respective hazardous substance or EHS.[75] "Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any hazardous chemical, extremely hazardous substance, or toxic chemical."[76] The term "environment" includes water, air, and land and the interrelationship which exists among and between water, air, and land and all living things.[77]

D. Facility at Which a Hazardous Chemical is Produced, Used, or Stored

A prerequisite for triggering the EPCRA release reporting requirement is that the release must be "from a facility at which a hazardous chemical is produced, used or stored."[78] The EPCRA definition of "facility" is quite different from the CERCLA definition, as the EPCRA definition generally covers an entire installation, whereas the CERCLA definition considers smaller, discrete portions of an installation, such as a building, structure, pit, well, lagoon, ditch, or landfill to be "facilities."[79] Also, the EPCRA definition of "facility" includes motor vehicles and aircraft.[80] Therefore, if through the act of a terrorist or an act of nature, an aircraft is downed or a motor vehicle leaves the road resulting in a release of a reportable quantity of either a CERCLA hazardous substance or EPCRA EHS, such release must be immediately reported to the appropriate SERC and LEPC.

The EPCRA statute, unlike the CERCLA statute, states that releases that could result only in exposure to persons within the boundaries of the installation are not required to be reported.[81] In other words, the release is not a reportable release under EPCRA unless it goes beyond facility boundaries. Releases that go beyond facility

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[75] 40 C.F.R. § 355.40(a) (Lexis 2006). The reportable quantities for CERCLA "hazardous substances" are those listed at 40 C.F.R. §302.4, tbl.302.4 and Appendices A and B. The reportable quantities for all EPCRA "extremely hazardous substances" is listed at Appendices A and B to 40 C.F.R. § 355 (Lexis 2006).
[76] *Id.* § 11049(8).
[77] *Id.* § 11049(2).
[78] *Id.* § 11004(a). The term "facility" means "all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person). *Id.* § 11049(4).
[79] *See id.* § 9601(9).
[80] *Id.* § 11049(4).
[81] *Id.* § 11004(a)(4); *see* 40 C.F.R. § 355.40(a)(2)(i) (Lexis 2006).

boundaries, however, need not result in actual exposures to be reportable releases under EPCRA.[82] It goes without saying that when faced with either a terrorist event or natural disaster, if there is any doubt about whether the substance released went beyond facility boundaries, one must err on the side of caution and report the release.

The additional requirement that the release be from a facility "at which a hazardous chemical is produced, used, or stored" has a major significance in both the terrorist and natural disaster scenarios because in those circumstances where a terrorist or a tornado or hurricane brings a hazardous substance or EHS onto a facility that does not produce, use or store hazardous chemicals, the release of that substance does not trigger the EPCRA reporting requirement.[83] The Occupational Safety and Health Administration (OSHA) Hazard Communication (Hazcom) regulation defines "hazardous chemical" as any chemical which is a physical hazard or a health hazard.[84] "Physical hazard" means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.[85] "Health hazard" means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.[86]

The EPCRA regulations do not explicitly define the terms produce, use, or store. However, EPA takes the position that a facility produces, uses, or stores a hazardous chemical for purposes of the EPCRA emergency release reporting requirement when it meets the threshold planning quantities (TPQs) listed at 40 C.F.R. § 372.[87] TPQs are the quantities designated for each chemical on the EPCRA list of EHSs that triggers notification by facilities to the SERC that such facilities are subject to emergency planning requirements under

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[82] 52 Fed. Reg. 13378, 13381 (Apr. 22, 1987).

[83] The term "hazardous chemical" is defined as having the meaning given such term by the OSHA Hazcom regulation 29 C.F.R. §1910.120(c), with several exceptions, which are listed at 42 U.S.C. 11021(e).

[84] 29 C.F.R. § 1910.120(c) (Lexis 2006). Appendices A and B of the OSHA Hazcom Standard provides definitions, explanations, and criteria for determining whether or not a chemical is to be considered hazardous for purposes of this standard. *Id.*

[85] *Id.*

[86] *Id.* The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. *Id.*

[87] ENVTL. PROT. AGENCY, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, GUIDANCE DOCUMENT RCRA, SUPERFUND & EPCRA HOTLINE TRAINING MODULE: INTRODUCTION TO CERCLA AND EPCRA RELEASE REPORTING REQUIREMENTS (Feb. 1998), *available at* www.epa.gov/superfund/contacts/sfhotlne/over.pdf (last visited July 6, 2006).

EPCRA.[88] Thus, when any of these thresholds are met and a reportable quantity of either a CERCLA hazardous substance or EPCRA EHS is released and travels beyond facility boundaries, the owner or operator of the facility must immediately report the release to the appropriate SERC and LEPC.

Since the EPCRA emergency release reporting regulation only applies to facilities which use, manufacture, or store hazardous chemicals, one might argue that it was the intention of Congress not to require facility owners and operators to report releases of chemicals which they neither own nor possess. Nevertheless, reporting such releases is important for several reasons. First, a court may conclude that Congress intended reporting to be done in such cases in order to ensure that responders will be dispatched to clean up the release and evacuate people, if necessary. Second, the hazardous substance released may, in fact, be owned or possessed by the facility, in which case reporting would avoid penalties under EPCRA. Third, reporting the release to the appropriate SERC and LEPC will enable environmental authorities to dispatch assistance to the facility and the surrounding area.

E. When and What Should be Reported?

The owner or operator of the EPCRA facility must provide detailed information to both the LEPC and SERC regarding the release.[89] EPCRA requires releases to be reported immediately. The EPA addresses this requirement by stating that "ordinarily, delays in

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[88] *See* 42 U.S.C. § 11002 (Lexis 2006); *see also* 40 C.F.R. § 355.30 (Lexis 2006). The EPCRA TPQs are 25,000 lbs. for manufacturing (i.e., producing) and 10,000 lbs. for chemicals "otherwise used," i.e., used or stored. 40 C.F.R. § 372.25(a)-(b) (Lexis 2006).

[89] 42 U.S.C. § 11004(b)(2) (Lexis 2006); *see* 40 C.F.R. §355.40(b)(2) (Lexis 2006). The information to be included is as follows:

> (A) The chemical name or identity of any substance involved in the release.
> (B) An indication of whether the substance is on the list referred to in section 302(a) [42 USCS § 11002(a)].
> (C) An estimate of the quantity of any such substance that was released into the environment.
> (D) The time and duration of the release.
> (E) The medium or media into which the release occurred.
> (F) Any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed individuals.
> (G) Proper precautions to take as a result of the release, including evacuation (unless such information is readily available to the community emergency coordinator pursuant to the emergency plan).
> (H) The name and telephone number of the person or persons to be contacted for further information.

42 U.S.C. § 11004(b)(2) (Lexis 2006).

making the required notification should not exceed 15 minutes after the person in charge of the facility knew of the release . . . . Immediate notification requires shorter delays whenever practicable."[90] In recognition of this legislative history, the EPA guidance contains penalty matrices for EPCRA release reporting that provide that the EPA "penalty clock" begins running fifteen minutes after the owner or operator of the facility knew of the release.[91]

F. Who Must Report the Release?

Under EPCRA, the "owner or operator of the facility" is the person responsible for reporting the release.[92] Neither the EPCRA statute nor the EPCRA regulations define either "owner" or "operator." However, the U.S. Supreme Court in a CERCLA case, *United States v. Best Foods,*[93] held that:

> [A]n operator is simply someone who directs the workings of, manages, or conducts the affairs of a facility. . . . [A]n operator must manage, direct, or conduct operations specifically related to pollution, that is, operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations.[94]

One court recently held that given the close connection of the CERCLA and EPCRA statutes, the analysis of "operator" found in *Best Foods* is applicable to EPCRA.[95]

G. To Whom Must the Release be Reported?

The general rule under EPCRA is that the release must be reported to both the LEPC(s) for any area(s) likely to be affected by the release and the appropriate SERC.[96] EPCRA states that when there is a "transportation related release," i.e., one that occurs during transportation or storage incident to transportation, if the stored

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[90] ENFORCEMENT RESPONSE POLICY, *supra* note 45, at 12.
[91] *Id.* at 19-21.
[92] 42 U.S.C. § 11004(a) (Lexis 2006).
[93] 524 U.S. 51 (1988).
[94] *Id.* at 59.
[95] Sierra Club v. Tyson Foods, 299 F. Supp. 2d 693, 721 (W.D. Ky. 2003).
[96] 42 U.S.C. § 11004(b)(1) (Lexis 2006). The SERCs for each of the fifty states can be found at EPA's State Emergency Planning Commission Contact webpage located at the following URL: http://www.epa.gov/ceppo/serclist.htm. The LEPC for every facility in the United States can be located by performing a search at EPA's LEPC Database webpage located at the following URL: http://www.epa.gov/ceppo/lepclist.htm#bystate.

substance is moving under active shipping papers and has not reached the ultimate consignee, such release may be reported by either calling 911, or in the absence of a 911 service, by calling the operator.[97]

As soon as practicable after providing an emergency notification, the owner or operator must provide a written follow-up notice setting forth and updating the information contained in the original report.[98] In addition, the written report must contain actions taken to respond to and contain the release, any known or anticipated acute or chronic health risks associated with the release, and whether appropriate advice was given regarding medical attention necessary for exposed individuals.[99]

IV. CLEAN WATER ACT REPORTING REQUIREMENTS

Perhaps no recent event illustrates how a natural disaster can trigger multiple Clean Water Act (CWA) reporting requirements than Hurricane Katrina, which simultaneously triggered the oil and hazardous substance discharge reporting requirements and NPDES reporting requirements.

A. Requirement to Report Discharges of Oil

The CWA prohibits discharge of oil or hazardous substances into or upon the navigable waters of the United States and adjoining shorelines in quantities as deemed harmful by the President.[100] The CWA states:

> Any person in charge of a vessel or of an onshore facility or an offshore facility shall, as soon as he has knowledge of a discharge of oil or a hazardous substance from such vessel or facility in quantities deemed harmful by the President shall immediately notify the appropriate agency of the United States Government of such discharge.[101]

Discharges (meaning "releases") of reportable quantities of oil must be immediately reported to the National Response Center's twenty-four hour hotline.[102] CWA regulations state that if direct

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[97] *Id.* § 11004(b)(1); *see* 40 C.F.R. § 355.40(b)(4) (Lexis 2006).
[98] 42 U.S.C. § 11004(c) (Lexis 2006); *see* 40 C.F.R. § 355.20(b)(3) (Lexis 2006).
[99] *Id.*
[100] 33 U.S.C. § 1321(b)(3) (Lexis 2006).
[101] *Id.* § 1321(b)(5).
[102] 40 C.F.R. § 110.6 (Lexis 2006). The National Response Center number is (800) 424-8802. In the Washington, D.C. metropolitan area, the number is (202) 426-2676.

reporting to the National Response Center is not practicable, reports may be made to the Coast Guard or EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the discharge occurs.[103] All such reports must be promptly relayed to the National Response Center.[104] If it is not possible to notify the National Response Center or the predesignated OCS immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore or offshore facility notifies the National Response Center as soon as possible.[105] The CWA requires reporting for quantities that the EPA Administrator has determined may be harmful to the public health or welfare or the environment of the United States.[106] EPA regulations state that this threshold is triggered when discharges of oil either: "(a) Violate applicable water quality standards; or (b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines."[107]

In order to have a reportable discharge, the oil must have been discharged into "navigable water."[108] EPA regulations define "navigable waters" broadly and include such things as waters used in interstate or foreign commerce, interstate waters, and, in some instances, mudflats and wetlands.[109] Waste treatment systems, however, are generally not waters of the United States.[110] The case law has held that the term "person in charge of a facility" or "vessel" has essentially the same meaning as it does under the CERCLA release reporting statute, which is discussed in the CERCLA section of this article above.[111]

The person in charge of the vessel or facility must report the following information: caller's name and phone number; name of the responsible party; substance released; amount released; source of release; cause of the release; date, time, and duration of release; number and type of injuries; whether there is a continuing danger to human life in the community; amount of damage; weather conditions; if a carrier is involved, the name of the carrier, the name of the manufacturer or shipper, the name of the consignee, and the rail car number or vessel

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[103] *Id.*
[104] *Id.*
[105] *Id.*
[106] 33 U.S.C. § 1321(b)(3) (Lexis 2006).
[107] 40 C.F.R. § 110.3. The term "sheen" is defined as iridescent appearance on the surface of water. 40 C.F.R. § 110.1 (Lexis 2006).
[108] 33 U.S.C. § 1321(b)(3).
[109] 40 C.F.R. § 110.1.
[110] *Id.*
[111] *See supra*, Section III; United States v. Carr, 880 F.2d 1550, 1554 (2d Cir. 1989).

number; and a description of the cleanup plans and agencies that have been notified.[112]

The breach of the New Orleans levee caused by Hurricane Katrina caused 575 petroleum and hazardous substance discharges triggering the CWA oil discharge reporting requirements.[113] Federal agencies are required to comply with this requirement and the other CWA reporting requirements listed below, by the CWA waiver of sovereign immunity found at 33 U.S.C. § 1323(a). Failure to report oil discharges can result in a maximum criminal penalty of up to five years in prison.[114]

B. Hazardous Substance Discharge Reporting Requirement

The CWA states: "Any person in charge of a vessel or of an onshore facility or an offshore facility shall, as soon as he has knowledge of a discharge of oil or a hazardous substance from such vessel or facility in quantities deemed harmful by the President shall immediately notify the appropriate agency of the United States Government of such discharge."[115] Discharges of reportable quantities of hazardous substances must be immediately reported to the National Response Center's twenty-four hour hotline.[116] A discharge is required to be reported if the amount of any hazardous substance discharged during any twenty-four hour period equals or exceeds the reportable quantity for that hazardous substance.[117] Like the definition of CERCLA hazardous substance, the list of CWA hazardous substances is limited to a finite list of man-made chemicals. It does not include biologicals, such as anthrax or other pathogens, that might be used during a terrorist attack.[118]

It is important to note that all CWA reportable hazardous substances discharges are also reportable under the CERCLA release reporting statute. One call to the National Response Center is sufficient for the release reporting requirements of both statutes.[119] Failure to

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[112] *See* ENVIRONMENTAL PROTECTION AGENCY, HOW TO REPORT OIL SPILLS, http://www.epa.gov/oilspill/oilhow.htm (listing information that must be reported) (last visited July 6, 2006).
[113] McKay, *supra* note 4, at A1.
[114] 33 U.S.C. § 1321(b)(5) (Lexis 2006).
[115] *Id.*
[116] 40 C.F.R. § 117.21 (Lexis 2006); *see* 33 C.F.R § 153.203 (Lexis 2006). The list of CWA "hazardous substances" and the reportable quantity thresholds for each are found at 40 C.F.R. § 117.3, tbl.117.3 (Lexis 2006).
[117] *Id.*
[118] *Id.*
[119] *See* ENVTL. PROT. AGENCY, WHO MUST BE NOTIFIED: WHO MUST BE NOTIFIED OF A RELEASE UNDER CERCLA, http://www.epa.gov/superfund/programs/er/triggers/haztrigs/whomust.htm (last visited July 6, 2006).

report hazardous substance releases can result in a maximum criminal penalty of up to five years in prison.[120] The information that the person in charge of the facility is required to report to the National Response Center is essentially the same as is required to be reported under CERCLA above.[121]

C. National Pollutant Discharge Elimination System Excursion Reporting Requirements

Under the National Pollutant Discharge Elimination System (NPDES) excursion regulations, persons or entities that hold NPDES permits are required to give oral twenty-four hour notice after becoming aware of any noncompliance which may endanger health or the environment.[122] Excursions that have to be reported within twenty-four hours include, but are not limited to: an unanticipated "bypass" that exceeds any effluent limitation in the permit; any "upset" which exceeds any effluent limitation in the permit; or any violation of the maximum daily discharge limitation for any pollutant listed by the EPA Administrator.[123] An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.[124] In the aftermath of the Katrina disaster, wastewater treatment systems were overwhelmed by the huge quantities of floating waste which caused "upsets" under their permits.[125] Because of this upset, the state of Louisiana, for example, acted to waive certain requirements, such as the NPDES upsets reporting requirement.[126]

A written follow-up report must be provided within five days of the time the permittee becomes aware of the circumstances.[127] The written report must contain a description of the noncompliance, including its cause, dates, and times of the noncompliance, and how

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[120] 33 U.S.C. § 1321(b)(5) (Lexis 2006).
[121] *See supra*, Section II.
[122] 40 C.F.R. § 122.41(l)(6) (Lexis 2006).
[123] *Id.* The term "bypass" is defined as the intentional diversion of waste streams from any portion of a treatment facility. 40 C.F.R. § 122.41(m) (Lexis 2006). The term "upset" is defined as "an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee." 40 C.F.R. § 122.41(n) (Lexis 2006).
[124] 40 C.F.R. § 122.41(n) (Lexis 2006).
[125] James E. McCarthy & Claudia Copeland, *Emergency Waiver of EPA Regulations: Authorities and Legislative Proposals in the Aftermath of Hurricane Katrina*, CONG. RESEARCH SERVICE (2005).
[126] STATE OF LA., *supra* note 22.
[127] 40 C.F.R. § 122.41(l)(6) (Lexis 2006).

long it is expected to continue.[128] It must also address the steps taken or planned to "reduce, eliminate, and prevent reoccurrence of the noncompliance."[129]

D. Publicly-Owned Treatment Works User Requirement to Report Certain Events to Publicly-Owned Treatment Works

All industrial users of Publicly-Owned Treatment Works (POTWs) must notify the POTW immediately of all discharges that could cause problems to the POTW, including "slug loading, as defined by 40 C.F.R. § 403.5."[130] The regulation defines POTW as "treatment works" as defined by section 212 of the CWA.[131]

V. CLEAN AIR ACT REPORTING REQUIREMENTS

Just a few years ago, a Department of Justice study concluded:

> In recent years, criminals have with increasing frequency attempted to obtain or produce WMD [weapons of mass destruction] precisely because such weapons are engineered to cause wide-scale damage to life and property. However, traditional means of creating or obtaining WMD are generally difficult to execute. In contrast, breaching a containment vessel of an industrial facility with an explosive or otherwise causing a chemical release may appear relatively simple to such a terrorist. . . . It is particularly noteworthy that there have

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[128] *Id.*
[129] *Id*.
[130] *Id.* § 403.12(f) .
[131] *Id.* § 403.3. Section 212 of the Clean Water act defines "treatment works" as:

> any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 1281 of this title, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment.

33 U.S.C. § 1292(2) (Lexis 2006).

> been successful efforts by foreign militaries and certain terrorist groups indigenous to other countries to cause releases from industrial facilities using bombs. These efforts have in effect converted the facilities into makeshift WMD.[132]

One need only consider the catastrophe caused by the accidental, inadvertent release of hazardous chemical vapors in Bhopal, India in 1984, which killed 2,500 people and seriously injured many thousands of others, to realize how great the potential risk posed by terrorists who could target such facilities might be.[133] For that reason, this article includes reference to all the Clean Air Act (CAA) reporting requirements that could be triggered by the damage to, malfunction and shutdown of, and releases by, industrial facilities in the wake of a terrorist attack. Additionally, it must be noted that if the substance released is a CERCLA hazardous substance or EPCRA EHS and the quantity released exceeds that amount allowed under the permit by a reportable quantity, the release reporting requirements under both CERCLA and EPCRA may also be triggered.

A. Deviation and Emergency Reporting Required by CAA Permits

The CAA regulations require that permits for stationary air emissions sources contain language requiring permit holders to promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.[134] The permitting authority is required to define "prompt" in relation to the degree and type of deviation likely to occur and the applicable requirements.[135] Therefore, what constitutes "prompt" will depend both on the nature of the deviation and the language in the specific permit. This requirement works in conjunction with the standard "emergency" permit clauses that require permit holders to provide notice to permitting authorities of emergencies that have impacted the normal operation of the facilities.[136]

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[132] DEPARTMENT OF JUSTICE, ASSESSMENT OF THE INCREASED RISK OF TERRORIST OR OTHER CRIMINAL ACTIVITY ASSOCIATED WITH POSTING OFF-SITE CONSEQUENCE ANALYSIS INFORMATION ON THE INTERNET 2 (2000), *available at* http://www.911investigations .net/document247.html (last visited on July 6, 2006).
[133] *Id*. at 22.
[134] 40 C.F.R. § 70.6(a)(3)(iii)(B) (Lexis 2006).
[135] *Id.*
[136] *Id.* § 70.6(g). The term "emergency" is defined as follows:

> Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts

Under the emergency permit language, the permit holder must give notice of the emergency within two working days.[137] The permitee will have an affirmative "emergency" defense if he: made timely notification; can demonstrate through properly signed, contemporaneous operating logs that an emergency occurred; can identify the cause; can demonstrate the facility was being properly operated just prior to the emergency; and can prove that during the emergency he took all reasonable steps to minimize levels of emissions that exceeded the emissions standards.[138]

Any person who knowingly fails to report as required by this regulation or makes a false material statement or omits material information is subject to a criminal penalty of up to two years in prison and a fine.[139] Federal agencies must comply with this CAA reporting requirement and the ones below by the CAA waiver of sovereign immunity found at 42 U.S.C. § 7418(a).

B. CAA Source Startup, Shutdown, and Malfunction Immediate Reporting Requirement

In the aftermath of either a terrorist event or natural disaster, the owner or operator of a permitted emissions source may be faced with a damaged source that is malfunctioning or is in need of a shutdown. The CAA regulations state the owner or operator of a CAA permitted source must immediately make startup, shutdown, and malfunction reports whenever an action occurred during a startup, shutdown, or malfunction that is not consistent with the procedures specified in the startup, shutdown, and malfunction plans, and the source exceeds any applicable emission limitation in the relevant emission standard.[140] Such reports must be made by telephone or fax to the EPA Administrator within two working days after commencing actions inconsistent with the startup, shutdown, and malfunction plan.[141] The initial notification must be

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> of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[137] *Id.* § 70.6(g)(3)(iv).
[138] *Id.* § 70.6(g)(2)-(3).
[139] 42 U.S.C. § 7413(c)(2) (Lexis 2006).
[140] 40 C.F.R. § 63.10(d)(5)(ii) (Lexis 2006).
[141] *Id.*

followed by a letter within seven working days after the end of the event.[142]

C. Chemical Accident Prevention Reporting Requirement

Owners and operators of stationary air emissions sources who have more than a threshold quantity of a regulated substance (as determined by 40 C.F.R. § 68.115) must comply with the CAA Accident Prevention regulation and create contingency plans, or risk management plans (RMPs), to address potential accidental releases.[143] Accidental release is defined by the CAA as "an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source."[144]

Both the known or suspected acts of a terrorist and acts of God, which result in unanticipated release would clearly fit within the parameters of this regulation. Owners and operators must, within forty-eight hours, initiate an investigation of each incident which resulted in, or could reasonably have resulted in a "catastrophic release."[145] Note that this regulation includes situations in which the incident *could have* resulted in a catastrophic release. At the end of the investigation, the owner or operator must create a summary report containing the following information: the date of incident, the date investigation began, a description of the incident, the factors that contributed to the incident, and, any recommendations resulting from the investigation.[146] The owner or operator is then required to promptly address and resolve the investigation findings and recommendations.[147] Corrective actions taken must then be documented.[148] The owner and operator, must, at a minimum, retain the investigation summary report for at least five years.[149]

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[142] *Id.* The letter must contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. It must also explain the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and describe all excess emissions and/or parameter monitoring exceedances which are believed to have occurred. *Id.*

[143] *See* 42 U.S.C. § 7412(r)(1), (3) (Lexis 2006); *see also* 40 C.F.R. §§ 68.10(a), 68.12(a) (Lexis 2006). The list of regulated substances and the threshold quantities for each is found at 40 C.F.R. § 68.130.

[144] 40 C.F.R. § 68.3 (Lexis 2006).

[145] *Id.* §§ 68.60(a)-(b), 68.81(a)-(b). The term "catastrophic release" means "a major uncontrolled emission, fire, or explosion, involving one or more regulated substances that presents imminent and substantial endangerment to public health and the environment." *Id*. § 68.3.

[146] *Id.* § 68.60(c).

[147] *Id.* §§ 68.60(d), 68.81(e).

[148] *Id.*

[149] *Id.* §§ 68.60(f), 68.81(g).

D. Requirement to Report Excess Emissions

The CAA regulations state that each facility owner or operator required to install a continuous air emissions monitoring device must submit a report to the EPA Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart, or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source.[150]

All reports must be postmarked by the thirtieth day following the end of each six-month period.[151] Written reports of excess emissions must include, among other things: the magnitude of excess emissions, the date and time the excess emissions begin and ended, the cause or nature any malfunction, and the corrective or preventive steps taken.[152] A summary report form must be submitted for each pollutant monitored at each affected facility.[153] If the excess emissions for the reporting period has a total duration of less than 1% of the total operating time, less stringent reporting requirements apply.[154]

VI. HAZARDOUS MATERIALS TRANSPORTATION ACT REPORTING

A major area of concern post-9/11 is the notion that terrorists could target aircraft or vehicles transporting hazardous materials. With respect to this concern, the Department of Transportation (DoT) recently stated:

> After the terrorist attacks of September 11, 2001, the Federal Motor Carrier Safety Administration (FMCSA) and the Research and Special Programs Administration (RSPA) reviewed government and industry hazardous materials transportation safety and security programs with a view towards identifying areas where security should be enhanced. Over 800,000 shipments of hazardous materials occur each day in the United States. The overwhelming majority of these shipments—approximately 95 percent—are made by highway. Many of the hazardous materials transported by motor carriers potentially may be used as weapons of mass destruction or in the manufacture of such weapons. Since September 11, 2001, on several occasions, Federal law

[150] *Id.* § 60.7(c).
[151] *Id.*
[152] *Id.*
[153] *Id.*
[154] *See id.* § 60.7(d)(1).

> enforcement officials provided information indicating that terrorist organizations may be planning to use motor vehicles transporting certain hazardous materials for additional terrorist attacks on facilities in the United States.[155]

There are three Hazardous Materials Transportation Act (HMTA) regulations that could potentially be triggered by either a terrorist act or a natural disaster, including the HMTA transportation-related incidents reporting, liquid pipeline release and related incidents reporting, and gas pipeline releases and related incidents reporting requirements.

A. Hazardous Materials Transportation-Related Incidents Reporting Requirement and Written Follow-up Reporting Requirement

As the name of the statute implies, the HMTA regulates the transportation of hazardous materials on the highways and on aircraft.[156] The HMTA regulations state: "As soon as practical, but no later than 12 hours after the occurrence of any of the types of reportable 'incidents' listed in [49 C.F.R. § 171.15(b)], each person in physical possession of the hazardous material must provide notice by telephone to the National Response Center."[157]

What types of transportation-related "incidents" require reporting under the HTMA? A telephone report is required when, during the course of transportation, a hazardous material causes a death, injury requiring hospitalization, or evacuation for more than an hour.[158] If the hazardous material affects a major transportation artery or facility or the operational flight pattern of aircraft, it must also be reported.[159] Mishaps with radioactive and infectious material must also be reported. Even if these criteria are not met, the person in possession of the hazardous material should report incidents to the National Response Center, if they believe in their best judgment reporting is necessary.[160] Note that if the "incident" involves the release of a reportable quantity of a CERCLA "hazardous substance," the person in charge of the vehicle, vessel or aircraft is also legally required to report the release immediately to the National Response Center.[161]

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[155] Revision to Periodic Tire Check Requirement for Motor Carriers Transporting Hazardous Materials, 67 Fed. Reg. 62191 (Oct. 4, 2002).
[156] 49 U.S.C. § 5101 (Lexis 2006).
[157] 49 C.F.R. § 171.15(a) (Lexis 2006). The National Response Center number is (800) 424-8802. In the Washington, D.C. metropolitan area, the number is (202) 426-2676.
[158] *Id.* § 171.15(b).
[159] *Id.*
[160] *Id.*
[161] *See* 40 C.F.R. § 302.6 (Lexis 2006); *see also* 49 C.F.R. § 171.15 (Lexis 2006).

In addition to making a verbal report to the National Response Center, the person in physical possession of the vehicle, vessel or aircraft at the time of the incident must send a written follow-up report within thirty days of discovering the incident.[162] The written report must include the same information submitted in the verbal report, plus certain other data.[163] If the incident involves transportation by aircraft, the report is submitted to the Federal Aviation Agency (FAA).[164] In some instances, these reports will have to be updated within a year.[165]

B. Reporting of Liquid Pipeline Releases and Related Incidents

Liquid pipeline systems are a major part of the U.S. infrastructure that many believe is particularly vulnerable to both terrorist attack and natural disasters. Accident reports must be made whenever a failure in a pipeline system causes a release of hazardous liquid or carbon dioxide resulting in explosion, death, injury requiring hospitalization, property damage exceeding $50,000, or release of five gallons or more.[166]

This regulation does not define the term "accident." However, since this regulation covers fires and explosions :

> not intentionally set by the operator," releases and incidents caused by natural disasters, and those that are the result of the intentional act of other persons, such as terrorists, are covered. "Pipeline system" as defined by this regulation means "all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves in transportation, including but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated

[162] 49 C.F.R. §§ 171.15(c), 171.16(a) (Lexis 2006).
[163] *Id.* § 171.16(a). The completed Hazardous Materials Incident Report must be sent to the Information Systems Manager, PHH-63, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, DC 20590-0001, or an electronic Hazardous Material Incident Report to the Information System Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001 at http://hazmat.dot.gov. *Id.* § 171.16(b)(1).
[164] *Id.* § 171.16(b)(2).
[165] *Id.* § 171.16(c) (circumstances include when a death results from injury caused by a hazardous material, when a hazardous material was misidentified on a prior incident report, or when the damage, loss or related cost was not known when the initial incident report was filed.
[166] *Id.* § 195.50.

with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.[167]

The operator of the system must make a telephone notice at the earliest practicable moment following discovery of a release if it resulted in pollution of a body of water.[168] In addition, each operator who experienced an accident must submit a written follow-up report within 30 days.[169]

C. Reporting of Gas Pipeline Releases and Related Incidents

The U.S. Department of Energy (DoE) recently stated that "The nation's energy system of . . . gas pipelines . . . is uncomfortably exposed to terrorist threats."[170] Owners and operators of gas pipeline systems must notify the National Response Center at the earliest practicable moment following discovery of an incident.[171]

Incidents requiring reporting include releases of gas from a pipeline or of liquefied natural gas or gas from a liquefied natural gas facility.[172] It also includes situations that result in death, personal injury requiring in-patient hospitalization, emergency shutdown of the facility, or estimated property damage of $50,000 or more.[173]

The telephone report must include the following information: names of operator and person making report and their telephone

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[167] *Id.* § 195.2. "Pipeline facility" means new and existing pipe, rights-of-way and any equipment, facility, or building used in the transportation of hazardous liquids or carbon dioxide. "Hazardous liquid" means petroleum, petroleum products, or anhydrous ammonia. *Id*.

[168] *Id.* §§ 195.52(a)-(b). The notice must include the following information: name and address of the operator; name and telephone number of the reporter; the location of the failure; fatalities and personal injuries, if any; all other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages. *Id.* § 195.52(b). The National Response Center number is (800) 424-8802. In the Washington, D.C. metropolitan area, the number is (202) 426-2676.

[169] *Id.* § 195.54(a). The report must be as soon as practicable, but not later than thirty days after discovery of the accident. *Id.* Changes in the information reported or additions to the original report must be filed in a supplemental report within thirty days. *Id.* § 195.54(b).

[170] DEPARTMENT OF ENERGY, SAFEGUARDING THE NATION'S ENERGY (2004), which can be accessed at http://www.eere.energy.gov/stateenergyprogram/feature detail info.cfm/start=2/fid=31 (last visited Feb. 6, 2006).

[171] 49 C.F.R. §§ 191.5(a)-(b) (Lexis 2006). "Gas," as used in this regulation, means "natural gas, flammable gas, or gas which is toxic or corrosive." *Id.* § 191.3. "Pipeline or Pipeline System" means "all parts of those physical facilities through which gas moves in transportation, including, but not limited to, pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies." *Id.*

[172] *Id.* § 191.3.

[173] *Id.* The operator must also report an event that is significant in the judgment of the operator, even though it did not meet the other criteria. *Id.*

numbers; the location of the incident; the time of the incident; the number of fatalities and personal injuries, if any; and all other significant facts that are known by the operator that are relevant to the cause of the incident or extent of the damages.[174]

VII. RADIOACTIVE MATERIALS RELEASES AND INCIDENTS

One area of great concern involves the possibility of a terrorist-related incident involving the theft of a licensed radioactive material, such as a radiopharmaceutical widely used in hospitals in the United States.[175] Some of this radioactive material, which are often used for the treatment of cancer, could be used in a "dirty bomb."[176] A dirty bomb is a bomb that combines conventional explosives, such as dynamite with the radioactive material.[177] The reporting requirements that could potentially be triggered by such a scenario are listed below such that the release or incident reporting requirements with the shortest window for reporting are listed first.

A. CERCLA Release Reporting for Releases of Radioactive Materials

If the radioactive substance is one that is included on the CERCLA list of hazardous substances, and it has been "released" from a "facility" or "vessel" into the "environment" (meaning released outside a building) in a quantity that is equal to or greater than the reportable quantity for that substance, then the release must be reported immediately to the National Response Center.[178] The CERCLA definition of "release" excludes release of source, byproduct, or special nuclear material from a "nuclear incident," as those terms are defined in the Atomic Energy Act of 1954.[179] However, it is the author's opinion that prudence dictates that the person in charge of a facility must immediately report the release to the National Response Center, rather

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[174] *Id.* § 191.5(b).

[175] *See* Nuclear Reg. Comm., Fact Sheet on Dirty Bombs, Mar. 2003; s*ee also* "Guidance on Prussian Blue for Treatment of Internal Contamination With Thallium or Radioactive Cessium," 68 Fed. Reg. 5645-8 (Feb. 4, 2003). Examples include Cesium-137 or cobalt. *Id.*

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[177] *Id.*

[178] 42 U.S.C. § 9603(a); *see also* 40 C.F.R. § 302.4, app B.

[179] 42 U.S.C. § 9601(22)(c). "Nuclear incident" is defined as "any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material." *Id.* § 2014(q).

than gamble that a court would ultimately determine that the release constituted a "nuclear incident."

B. EPCRA Release Reporting for Releases of Radioactive Materials

If the radioactive substance released is a "hazardous substance" that is required to be reported under CERCLA and the substance at issue has been released beyond EPCRA facility boundaries, then the release must immediately be reported to both the LEPC and SERC. Obviously, if there is any question about whether the release went beyond facility boundaries, it must be reported.

C. Nuclear Regulatory Commission Immediate Reporting Requirement

Each Nuclear Regulatory Commission licensee is required to immediately report any event involving a byproduct, source, or special nuclear material in its possession that may have caused or threatened to cause a person to receive a total effective dose above certain defined limits.[180] The licensee must prepare any report filed with the Commission under this section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.[181] Any person who knowingly and willfully fails to report the release or incident is subject to a criminal penalty of up to two years in prison and a fine of up to $25,000.[182] In addition to providing immediate notification, the permit holder must also provide a written follow-up report.

[180] 10 C.F.R. §§ 20.2202(a), 20.1003 (Lexis 2006) (defining terms "lens dose equivalent" and "total effective dose equivalent"). The definitions of the terms "byproduct," "source," and "special nuclear material" are found at 10 C.F.R. § 20.1003 (Lexis 2006). The reportable doses are those that exceed the equivalent of 25 rems (0.25 Sv) or more; or a lens dose equivalent of 75 rems (0.75 Sv) or more; or a shallow-dose equivalent to the skin or extremities of 250 rads (2.5 Gy) or more; or the release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake five times the annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures). 10 C.F.R. §§ 20.2202(a), 20.1003 (Lexis 2006).

[181] *Id.* § 20.2202(c). Licensees having an installed Emergency Notification System must make the reports required by this regulation to the National Response Center Operations Center in accordance with 10 C.F.R. § 50.72 and licensees without such a system must report the incident by telephone to the National Response Center Operations Center at (301) 816-5100. *Id.* § 20.2202(d)(2).

[182] 42 U.S.C. § 2273(c) (Lexis 2006).

D. Nuclear Regulatory Commission Twenty-Four Hour Notification

Nuclear Regulatory Commission licensees must, within twenty-four hours of discovery, report any event involving loss of control of licensed material they possessed that may have caused, or threatened to cause, certain harmful conditions.[183] The licensee must prepare any report filed with the Commission under this regulation so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.[184] In addition to providing twenty-four hour notification, the permit holder must also provide a written follow-up report as discussed in subsection E of this article, immediately below.

E. Written Follow-up Reports of Exposures, Radiation Levels, and Concentrations of Radioactive Material Exceeding the Constraints or Limits

In addition to making either an immediate or twenty-four hour notification, each Nuclear Regulatory Commission licensee must submit a written report within thirty days after learning of any of the occurrences enumerated in 10 C.F.R. § 20.2203(a).[185] These reports

[183] 10 C.F.R. § 20.2202(b) (Lexis 2006).
[184] *Id.* § 20.2202(c).
[185] *See id.* § 20.2203(a).

> The licensee shall submit a written report within thirty days after learning of any of the following occurrences:
> (1) Any incident for which notification is required by §20.2202; or
> (2) Doses in excess of any of the following:
> (i) The occupational dose limits for adults in §20.1201; or
> (ii) The occupational dose limits for a minor in §20.1207; or
> (iii) The limits for an embryo/fetus of a declared pregnant woman in §20.1208; or
> (iv) The limits for an individual member of the public in §20.1301; or
> (v) Any applicable limit in the license; or
> (vi) The ALARA constraints for air emissions established under §20.1101(d); or
> (3) Levels of radiation or concentrations of radioactive material in—
> (i) A restricted area in excess of any applicable limit in the license; or
> (ii) An unrestricted area in excess of 10 times any applicable limit set forth in this part or in the license (whether or not involving exposure of any individual in excess of the limits in §20.1301); or
> (4) For licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.

must describe the extent of individual exposure, the levels of radiation and concentrations of radioactive material involved, the cause of the elevated exposures, and any planned or executed corrective steps taken.[186] Each report filed under this regulation must identify each occupationally overexposed individual by name, Social Security number, and date of birth.[187] The report must be prepared so that this information is stated in a separate and detachable part of the report and must be clearly labeled "Privacy Act Information: Not for Public Disclosure."[188] The licensee must also provide a copy of the report to the individual. This report must be transmitted at a time no later than the date of transmittal to the Commission.[189]

F. Nuclear Regulatory Commission Regulation Requiring Reports of Lost or Stolen Radioactive Material

Nuclear Regulatory Commission licensees must immediately notify the Commission after the occurrence of any lost, stolen, or missing licensed material beyond certain specified levels.[190] They must also within thirty days after learning of the occurrence of any lost, stolen, or missing licensed material notify the Nuclear Regulatory Commission office that the material is still missing.[191] Following the submission of the written report, the licensee must also report any additional substantive information on the loss or theft within thirty days after learning about such information.[192]

These reports should include a description of the kind, quantity, and chemical and physical form of the material involved, as well as a description of the circumstances under which the loss or theft occurred. They must also include any potential exposures of individuals to radiation and the possible total effective dose equivalent to persons in unrestricted areas.[193]

The licensee must prepare any report filed with the Commission under this regulation so that names of individuals who may have

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[186] *Id.* § 20.2203(b).
[187] *Id.* § 20.2203(b)(2).
[188] *Id.*
[189] *Id.* § 20.2205.
[190] *Id.* § 20.2201(a). These levels are an aggregate quantity equal to or greater than 1,000 times the quantity specified in appendix C to 10 C.F.R. § 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas. *Id.* Licensees having an installed Emergency Notification System must make the reports to the Nuclear Regulatory Commission Operations Center in accordance with 10 C.F.R. § 50.72, and all other licensees must make reports by telephone to the Nuclear Regulatory Commission Operations Center (301-816-5100). *Id.* § 20.2201(a)(2).
[191] *Id.* § 20.2201(a)(ii).
[192] *Id.* § 20.2201(d).
[193] *Id.* § 20.2201(b).

received exposure to radiation are stated in a separate and detachable part of the report.[194] Holders of nuclear power plant permits must report the items listed above in accordance with the procedures described in 10 C.F.R. § 50.73(b), (c), (d), (e), and (g).[195]

VIII. OSHA REPORTING REQUIREMENTS

A. Requirement to Report Fatalities and Multiple Hospitalization Incidents to OSHA

Employers, including federal employers, must, within eight hours after the death of any employee from a "work-related" incident or the in-patient hospitalization of three or more employees as a result of a work-related incident, orally report the fatality/multiple hospitalization by telephone or in person to OSHA, U.S. Department of Labor, that is nearest to the site of the incident. [196]

An injury or illness is an abnormal condition or disorder. "Injuries" include cases such as, but not limited to, a cut, fracture, sprain, or amputation. "Illnesses" include both acute and chronic illnesses, such as, but not limited to, a skin disease, respiratory disorder, or poisoning.[197] Injuries and illnesses are recordable only if they are new, "work-related" cases that meet one or more of the 29 C.F.R. § 1904 recording criteria.[198] Reports must contain the information contained in 29 C.F.R. 1904.39(b)(2).

How do you know if an incident is "work-related," thereby triggering this reporting requirement? The OSHA regulations state that injuries or illnesses will be work-related "if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness."[199] OSHA will presume an injury or illness is work-related unless an exception applies.[200] The "work environment" is defined as follows:

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[194] *Id.* § 20.2201(e). Ordinarily, such reports must be made to the Administrator of the appropriate Nuclear Regulatory Commission Regional Office listed in appendix D to 10 C.F.R. § 20. *Id.* § 20.2201(b)(2)(ii).
[195] *Id.* § 20.2201(b)(2)(i).
[196] 29 C.F.R. §§ 1904.39(a), 1960.70 (stating federal agencies must comply with reporting requirements contained in 29 C.F.R. §1904.39). Employers may also use the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742). If the Area Office is closed, employers must report the fatality or multiple hospitalization incident using the 800 number. *Id.* § 1904.39(b)(1).
[197] *Id.* § 1904.46.
[198] *Id.*
[199] *Id.* § 1904.5(a).
[200] *Id.*

> Work environment means the establishment and other locations where one or more employees are working or are present as a condition of their employment. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.[201]

The OSHA regulations contain a matrix specifying the types of "events" that are considered "work-related." This matrix specifically states that contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are considered work-related if the employee is infected at work.[202] Therefore, if an actual or suspected terrorist event involving the spreading of such life-threatening contagious diseases were to occur at a workplace, resulting in the death of an employee or the in-patent hospitalization of three or more employees, such event must be reported to OSHA under the eight-hour reporting rule. Therefore, the release caused by the anthrax-laden mail attack, which killed two postal employees and one employee at a private publishing company and sickened seventeen others in 2001, would trigger this reporting requirement.[203]

If an employee is injured in either a terrorist attack not involving hazardous substances or in a natural disasters such as a hurricane, tornado or other natural disaster while at work, the employee's injuries would have occurred in the "work environment," and would required to be reported to OSHA. If it is not obvious whether the precipitating event or exposure occurred in the work environment or occurred away from work, an employer must evaluate the employee's work duties and environment to decide whether or not one or more events or exposures in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing condition.[204]

B. Requirement to Report Serious Accidents to the Office of Federal Agency Programs

Federal agencies must provide the Office of Federal Agency Programs with a summary report of each fatal and catastrophic accident investigation.[205] Although the federal agency OSHA regulations do not define "catastrophic accident," the OSHA has published an instruction that states that a "catastrophe" is a work-related incident that results in

[201] *Id.* § 1904.5(b)(1).
[202] *Id.* § 1904.5(b)(2), tbl.viii.
[203] *Id.*
[204] 29 C.F.R. § 1904.5(b)(3) (Lexis 2006).
[205] *Id.* § 1960.70.

the inpatient hospitalization of three or more employees within thirty days of an incident.[206] Curiously, the federal agency OSHA regulation does not state when this report must be submitted. The report must address, among other things, the date/time of accident, description of the accident, causal factors, and agency corrective/preventive actions. [207] This report must be submitted in addition to the requirements for reporting fatalities and multiple hospitalization incidents to OSHA under 29 C.F.R. § 1904.39.[208]

IX. DRINKING WATER REPORTING UNDER CERCLA, EPCRA, AND THE SAFE DRINKING WATER ACT

Recently, Congress passed the Public Health and Bioterrorism Preparedness and Response Act of 2002 ("The Bioterrorism Act"), which states that "each community (drinking) water system serving a population greater than 3,300 shall prepare an emergency response plan."[209] These plans, known as "water system vulnerability plans," are intended to ascertain the vulnerability of drinking water systems and provide emergency response plans to reduce the impact to public health that could result from a terrorist or other intentional act to tamper with or disrupt the drinking water supply.[210] The reporting requirements below include those that would potentially be triggered either by a terrorist attack or a natural disaster, such as Hurricane Katrina, that could cause toxic changes to the drinking water supply.

A. CERCLA Release Reporting for Releases of Hazardous Substances into Drinking Water

Under CERCLA the person in charge of the facility is required to immediately report releases of reportable quantities of hazardous substances into the environment.[211] Since the term "environment" includes "drinking water supply," releases of reportable quantities of hazardous substances into drinking water supplies must be reported immediately.[212] Note that since biological agents that could potentially be used by terrorists, such as anthrax, the plague, influenza, and numerous other bacteriological or viral agents, are not included in the list of CERCLA "hazardous substances," such releases would not

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[206] OSHA OFFICE OF FED. AGENCY PROG., OSHA INSTRUCTION FAP 1.3, FEDERAL AGENCY HEALTH AND SAFETY PROGRAMS (1996).
[207] 29 C.F.R § 1960.70 (Lexis 2006).
[208] *Id.*
[209] 42 U.S.C. § 300i-2(a)(1) (Lexis 2006).
[210] *Id.* § 300i-2.
[211] *Id.* § 9603(a).
[212] *Id.* § 9601(8).

trigger the CERCLA release reporting requirement. [See Section II of this article for details.]

B. EPCRA Release Reporting for Releases of Hazardous Substances into Drinking Water

Under EPCRA, if a CERCLA hazardous substance is released at or above its CERCLA reportable quantity or an EPCRA EHS is released at or above its EPCRA reportable quantity from a facility at which a hazardous chemical is produced, used, or stored, the owner or operator of the facility must immediately report the release to both the SERC and the LEPC for the appropriate "Emergency Planning District" within the state in which the facility is located.[213] If a reportable quantity of either CERCLA hazardous substance or EPCRA extremely hazardous substance is released into a drinking water supply and travels beyond facility boundaries, the owner or operator of the facility must report the release to the appropriate SERC and LEPC.

C. Notification to Water System Users That Maximum Contaminant Levels Have Been Exceeded

The Safe Drinking Water Act (SDWA) provides limits, called "Maximum Contaminant Levels," for dozens of different chemicals commonly found in drinking water.[214] Under the waiver of sovereign immunity contained in the SDWA, federal agencies are required to comply with all substantive requirements of the Act.[215] Each owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non-community water systems) must give notice for all violations of national primary drinking water regulations.[216]

Table 2 of 40 C.F.R. § 141.201 provides a three-tiered reporting scheme based on the urgency posed by the contamination. The Tier I public notice regulation applies to those violations with "significant

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[213] *Id.* §§ 11004(a)-(b).
[214] *See, e.g.*, 40 C.F.R. §§ 141.11-141.62.
[215] 42 U.S.C. § 300j-6.
[216] 40 C.F.R. § 141.201(a). A public water system is defined as:

> [A] system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system . . . .

potential to have serious adverse effects on human health as a result of short-term exposure."[217]

When a Tier I public notice scenario arises, it must be reported as soon as practicable, but in no case longer than twenty-four hours. The report must be through notice by appropriate broadcast media (such as radio and television); posting of the notice in conspicuous locations throughout the area served by the water system; hand delivery of the notice to persons served by the water system; or another delivery method approved in writing by the primary agency.[218] Persons who are convicted of willful violations of reporting requirements under the Act are subject to a maximum criminal penalty of up to three years in prison.[219]

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[217] *Id.* § 141.201(b). Tier I notice scenarios include, but are not limited to: the occurrence of a waterborne disease outbreak or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination); or other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the primary agency either in its regulations or on a case-by-case basis. *Id.* § 141.202(a), tbl.1.

[218] *Id.* § 141.202(c). The public notice must include the following information:

> (1) A description of the violation or situation, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
> (2) When the violation or situation occurred;
> (3) Any potential adverse health effects from the violation or situation, including the standard language under paragraph (d)(1) or (d)(2) of this section, whichever is applicable;
> (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;
> (5) Whether alternative water supplies should be used;
> (6) What actions consumers should take, including when they should seek medical help, if known;
> (7) What the system is doing to correct the violation or situation;
> (8) When the water system expects to return to compliance or resolve the situation;
> (9) The name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice; and
> (10) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under paragraph (d)(3) of this section, where applicable.

Id. § 141.205(a).

[219] 42 U.S.C. § 300h-2(b)(2) (Lexis 2006).

D. Notice to the Appropriate Regulator That Maximum Contaminant Levels Have Been Exceeded

Suppliers of water must report any failure to comply with any national primary drinking water regulation to the state within forty-eight hours.[220] A copy of any notice sent to the public must also be sent to the "primacy agency," i.e., the regulator who is directly enforcing the SWDA in the state, in accordance with the requirements under 40 C.F.R. § 141.31(d).[221]

X. THE RESOURCE CONSERVATION AND RECOVERY ACT REPORTING REQUIREMENTS

A. Requirement to Report Emergencies, Releases, Fire and Explosions at RCRA Treatment, Storage, and Disposal Facilities

What are the legal reporting requirements if a terrorist attack or act of God caused a fire or explosion at a RCRA treatment, storage, or disposal facility? RCRA regulations require that whenever there is an actual or imminent emergency, the emergency coordinator (or his designee) must immediately activate internal facility alarms or communication systems, where applicable, to notify facility personnel and notify appropriate state and local agencies with designated response roles.[222] Whenever there is an emergency, such as a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and extent of any released materials.[223]

If the emergency coordinator determines that the emergency could threaten human health or the environment outside the facility, he must determine whether evacuation of local areas may be advisable, and, if he determines that it is, he must immediately notify appropriate local authorities.[224] He must be available to help appropriate officials decide whether local areas should be evacuated.[225]

The RCRA regulation also states that the emergency coordinator must immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under 40 C.F.R. § 1510) or the National Response Center.[226] CERCLA section 103(a) states that

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[220] 40 C.F.R. § 141.31(b).
[221] *Id.* § 141.201(c)(3).
[222] *Id.* §§ 264.56(a), 265.56(a).
[223] *Id.* §§ 264.56(b), 265.56(b).
[224] *Id.* §§ 264.56(d)(1), 265.56(d)(1).
[225] *Id.*
[226] *Id.* §§ 264.56(d)(2), 265.56(d)(2). The following information must be provided: the name and telephone number of the person making the report; the name and address of facility; the time type of incident (e.g., release, fire); the name and quantity of

releases of reportable quantities of hazardous substances (a term which includes all RCRA hazardous wastes) must be immediately reported to the National Response Center under penalty of law.

The RCRA Emergency Procedures regulation also states the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility, including where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.[227] The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan.[228]

Within fifteen days after the incident, the owner of operator must submit a written report on the incident to the Regional Administrator.[229] If the Emergency Coordinator knowingly fails to report the emergency as required by this regulation he is subject to a criminal penalty of up to two years in prison.[230] If, by failing to report an emergency, the emergency coordinator knowingly places another person in imminent danger of death or serious bodily injury, he would be subject to a sentence of up to fifteen years in prison and a fine up to $250,000.[231] Federal agencies are required to comply with this reporting requirement by the RCRA waiver of sovereign immunity found at 42 U.S.C. § 6961(a).

B. The RCRA Underground Storage Tank Release Reporting Rule

An Underground Storage Tank (UST) is defined by the RCRA UST statute as follows:

> An Underground Storage Tank means any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes

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material(s) involved, to the extent known; the extent of injuries, if any; and the possible hazards to human health, or the environment, outside the facility. *Id.*

[227] 40 C.F.R. §§ 264.56(e), 265.56(e).

[228] *Id.* §§ 264.56(j), 265.56(j).

[229] The report should include the following information: the name, address, and telephone number of the owner or operator; the name, address, and telephone number of the facility; the date, time, and type of incident (e.g., fire, explosion); the name and quantity of material(s) involved; the extent of injuries, if any; an assessment of actual or potential hazards to human health or the environment, where this is applicable; and the estimated quantity and disposition of recovered material that resulted from the incident. *Id.*

[230] 42 U.S.C. § 6928(d)(4).

[231] *Id.* § 6928(e).

> connected thereto) is 10 per centum or more beneath the surface of the ground.[232]

Since the definition of UST includes tanks which have as much as 90% of their volume above-ground, such tanks could very well be destroyed by either the act of a terrorist or an act of God, releasing their contents into the environment.[233]

To be a reportable UST release, the substance released must be a "regulated substance" under the RCRA UST statute, which means it must be either any CERCLA hazardous substance or petroleum.[234] Under the RCRA UST regulation, owners and operators of UST systems must contain and immediately clean up a spill, report to the implementing agency within twenty-four hours, and begin corrective action.[235]

The RCRA regulations state that when the hazardous substance spilled is a CERCLA hazardous substance and the amount is greater than the CERCLA reportable quantity, the National Response Center must also be notified immediately.[236] Likewise, when a reportable quantity of either a CERCLA hazardous substance or EPCRA EHS is released beyond facility boundaries, EPCRA notifications must be made immediately[237] Federal agencies are required to comply with this

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[232] *Id.* § 6991(1).

[233] *Id.* The term UST excludes many kinds of tanks, including:

> (A) farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes,
> (B) tank used for storing heating oil for consumptive use on the premises where stored,
> (C) septic tank,
> (D) pipeline facility (including gathering lines)—
> (i) which is regulated under chapter 601 of title 49, or
> (ii) which is an intrastate pipeline facility regulated under State laws as provided in chapter 601 of title 49,
> and which is determined by the Secretary to be connected to a pipeline or to be operated or intended to be capable of operating at pipeline pressure or as an integral part of a pipeline,
> (E) surface impoundment, pit, pond, or lagoon,
> (F) storm water or waste water collection system,
> (G) flow-through process tank,
> (H) liquid trap or associated gathering lines directly related to oil or gas production and gathering operations, or
> (I) storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

Id.

[234] *Id.* § 6991(2).

[235] 40 C.F.R. § 280.53(a).

[236] *Id.* § 280.53; *see supra,* Section III.

[237] *Id.*; *see supra,* Section III.

reporting requirement by the RCRA UST waiver of sovereign immunity found at 42 U.S.C. § 6991f(a).

XI. INTERNAL AIR FORCE ENVIRONMENTAL AND OPERATIONAL REPORTING REQUIREMENTS

Under Air Force policy, environmental releases and incidents caused by terrorism or natural disasters would have to be reported to various Air Force entities under a variety of different regulations.

A. Release and Incident Reporting Under Air Force Instruction 10-2501

Air Force Instruction (AFI) 10-2501, *Full Spectrum Threat Response (FSTR)*, is a new regulation, issued in 2005. FSTR is defined as "physical threats facing military installations including major accidents, natural disasters, HAZMAT, terrorist use of WMD, enemy attack and a broad spectrum of planning, response and recovery actions."[238] AFI 10-2501 states that the installation HAZMAT emergency planning and response program manager ensures that the affected LEPC and SERC are immediately notified by phone.[239] The AFI also requires that immediate reporting of releases of hazardous substances must be performed by the "environmental flight," meaning the Environmental Management function at an Air Force installation.[240] The environmental flight must also complete an operational report (OPREP-3) and submit that report to the Major Command (MAJCOM).[241] That document must state the date and time of the release; location of the release; chemical description or common name of the released hazardous material(s); approximate amounts released; primary, situation-specific reason for notifying the MAJCOM or HQ USAF/ILEV/ILEX.[242]

The regulation states that it is mandatory that both "the appropriate MAJCOM offices" and HQ USAF/ILEV/ILEX are notified of releases that involve any of the following: injury or loss of life; loss of aircraft or facility; interruption of flying operations; environmental contamination beyond installation boundaries; final impact exceeding $50,000; may result in litigation, publicity or media coverage; or other reasons as specified by the installation commander.[243]

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[238] DEP'T OF AIR FORCE, INSTR. 10-2501, FULL SPECTRUM THREAT RESPONSE (FTSR) PLANNING AND OPERATIONS ¶ 1.1, 1.2, attch. 1 (3 Aug. 2005).
[239] *Id.* ¶ 11.4.4.1.
[240] *Id*. attch. 1, §§ A2.2.4, A2.2.13.
[241] *Id*. ¶11.4.4.2.
[242] *Id.*
[243] *Id.* ¶ 11.4.4.3.

When the substance released is a weapon of mass destruction used by a terrorist, the FSTR report must be completed following the instructions contained in Air Force Manual 10-206.[244] AFI 10-2501 defines "weapon of mass destruction" as "weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people."[245]

B. Operational Reporting Under Air Force Manual 10-206

Reporting under Air Force Manual (AFMAN) 10-206, *Operational Reporting,* requires internal operational reporting in several circumstances in which there is a natural disaster or terrorist event that results in harm to people or the environment.[246] Incidents are categorized in one of several categories including "pinnacle" (the level of highest concern), "beeline" (the middle category), and "homeline" (the lowest category).[247]

Installations are required to report any theft, escape, or spillage of toxic or dangerous material that threatens life or location in accordance with the pinnacle reporting requirements.[248] Natural disasters, including earthquakes, floods, hurricanes, or tornados that may impair the operational capability of the Air Force must be reported under this regulation in accordance with the beeline reporting requirements found at § 3.3.10.[249] The AFM states that any event involving terrorism must be reported in accordance with either the pinnacle or beeline reporting requirements, depending on the severity of the incident.[250]

C. Safety Investigation and Reports: Requirement to Report Various Types of "Mishaps"

Air Force Instruction 91-204, *Safety Investigations and Reports,* provides guidance for reporting nuclear, guided missile, explosives, and guided missile "mishaps."[251] AFI 91-204 defines "mishap" as "an unplanned occurrence, or series of occurrences, that results in damage or

[244] *Id.* ¶ 11.4.5.
[245] *Id.* attch. 1
[246] DEP'T OF AIR FORCE, MANUAL 10-206, OPERATIONAL REPORTING ¶¶ 1.1–1.3 (14 May 2002).
[247] *Id.* ¶ 3.3.
[248] *Id.* tbl.3.1, ¶ 3.3.
[249] *Id.*
[250] *Id.* ¶ 3.1, Rule 7A, ¶¶ 3.3, 3.3.10.
[251] DEP'T OF AIR FORCE, INSTR. 91-204, SAFETY INVESTIGATIONS AND REPORTS (14 Feb. 2006).

injury . . . and meets Class A, B, C, D or E mishap reporting criteria."[252] Class "A" mishaps are the most severe and "E" mishaps are the least severe.[253]

This regulation applies to natural disasters (which it refers to as "natural phenomena") resulting from wildlife or environmental conditions of such magnitude that they could not have been predicted or prepared for or for which all reasonable precautions were taken.[254]

AFI 91-204 does not apply to environmental releases, injuries, or death that are attributable to terrorist attacks.[255] When natural phenomena occur involving Air Force personnel and/or assets, that result in environmental damage and/or injuries or death, the nearest Air Force installation must: determine the severity of injuries and estimate the costs of environmental cleanup, decontamination, and restoration of private and government property.[256]

The commander of the active duty installation nearest the mishap must, in addition to responding to the mishap, make notifications to the home installation commanders of all casualties, both military and civilian, and notify the nearest command post.[257] That commander must also notify the appropriate federal and state environmental authorities of environmental hazards associated with the mishap.[258] He must notify the nearest OSHA area or regional office when an on-duty mishap has resulted in an Air Force civilian employee fatality or involves the hospitalization of three or more people (if at least one of them is a DoD civilian) within eight hours of the mishap.[259] If unable to contact OSHA, he must contact OSHA's twenty-four hour hotline.[260] Following the initial reporting of the mishap, the installation commander must ensure that injuries (and deaths, if any) are recorded using Air Force Form 739.[261]

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[252] *Id.* at ¶ 1.3.1. "Damage or injury" is defined as "injury to DoD property; occupational illness to DoD military or civilian personnel; injury to DoD military personnel on- or off-duty; injury to on-duty DoD civilian personnel; damage to public or private property, or injury or illness to non-DoD personnel caused by Air Force operations." *Id.* at ¶ 1.3.1.1.
[253] *Id.* at ¶ 1.8.
[254] *Id.* ¶ 1.6.1.10.5.
[255] *Id.* ¶ 1.3.3.14.
[256] *Id.* ¶¶ 1.9.3, 1.10.
[257] *Id.* ¶ 2.7.6.
[258] *Id.* ¶ 2.7.7.4.
[259] *Id.* ¶ 2.7.7.3; *see* discussion *supra* Section VIII.
[260] *Id.* at attach. 2. The phone number is (800) 321-6742.
[261] *Id.* ¶ 1.11; *see generally id.* at Ch. 6.

D. Cargo Movement

Air Force Instruction 24-201, *Cargo Movement,* requires the reporting of transportation-related incidents and accidents involving hazardous materials.[262] This regulation defines "hazardous material" as any material listed as a hazardous material either under AFMAN 24-204 or the HMTA regulations found at 49 C.F.R. § 172.101.[263] In essence, materials are deemed to be "hazardous materials" if they are flammable, corrosive, an oxidizing agent, toxic, or radioactive [264]

This regulation states that Transportation Officers (TOs) are required to report "release(s) of a reportable quantity of a hazardous substance."[265] Since the HMTA regulations (49 C.F.R. §§ 171.15 and 171.16) pertain to many other kinds of incidents, i.e., involving deaths, injuries, evacuations, shutting down transportation arteries, etc., the regulation apparently intends that the TO is required to report those types of incidents as well. This AFI also addresses scenarios in which cargo shipments become contaminated during hostilities or contingencies.[266] When such incidents occur, the TO must (after accomplishing post-attack reconnaissance, self-aid and buddy aid) determine the contamination status of the cargo and report the incident to the Unit Control Center, within sixty minutes after the liquid deposition phase has ended.[267]

XII. NATIONAL RESPONSE CENTER DOMESTIC PREPAREDNESS CHEMICAL/BIOLOGICAL HOTLINE REPORTING

In 1997, the Soldier and Biological Chemical Command (SBCCOM) signed a Memorandum of Agreement (MOA) with the National Response Center which established the Chemical/Biological Hotline.[268] This hotline, like the one set up for the reporting of CERCLA and CWA reportable releases, is open to receive calls twenty-four hours a day, 365 days a year.[269] Callers who call the toll-free number (800) 424-8802 will be linked to experts from SBCCOM for technical advice for dealing with weapons of mass destruction and with the Federal Bureau of Investigation to initiate federal response

[262] DEP'T OF AIR FORCE, INSTR. 24-201, CARGO MOVEMENT § 10.3 (10 Mar. 2005).
[263] *Id.* at attach. 1.
[264] *Id.*
[265] *Id.* at ¶ 10.3.
[266] *See generally id.* at Ch. 17.
[267] *Id.* at ¶ 17.2.6.
[268] The National Response Center's Chemical/Biological Hotline website, which is found at the following URL: http://www.nrc.U.S.C.g.mil/ terrorismtxt.htm (last visited on Feb. 6, 2006).
[269] *Id.*

actions.[270] The hotline is open both to accept reports about actual or suspected terrorist acts, threats or attempts to release chemical, biological and radioactive agents, and suspicious activities.[271]

The bottom line regarding this hotline is that while there is no statute that legally requires either a "person in charge of a facility" or "owner" or "operator" of a facility to report actual and suspected report terrorist acts to the National Response Center (in the absence of a CERCLA reportable release, CWA reportable discharge or HMTA reportable "incident") as the focus of this hotline is to provide technical advice to callers and to connect callers with appropriate federal law enforcement officials.

XIII. CONCLUSION.

It is likely whenever a terrorist event or natural disaster occurs that more than one, and possibly several, environmental release reporting and incident reporting requirements would be triggered simultaneously. This article is designed to serve as a road map to determine what environmental reporting requirements have been triggered.

It must be noted, however, that there are several significant gaps in environmental release reporting requirements. There are no environmental statutes or regulations that require the reporting of biologicals, such as anthrax or the plague (other than the OSHA work-related incident regulation, which only applies to "employees" who are killed or hospitalized and which provides an eight hour window for reporting). Therefore, the release caused by the anthrax-laden mail attack, which killed five people and sickened seventeen others in 2001, would not be a reportable release under either the CERCLA or EPCRA environmental reporting regulations. Moreover, certain chemical substances, such as the sarin gas used by terrorists in Japan to kill twelve people and injure many others, while considered an EPCRA EHS, would not trigger the requirement to call the National Response Center because they are not included in the list of CERCLA hazardous substances.

The requirements and time periods contained in the environmental release and incident reporting regulations discussed in this article are legal minimum requirements. Obviously, when faced with exigent circumstances, responsible officials would be prudent to report as soon as possible, even though a particular reporting regulation may allow a forty-eight hour window for reporting. In addition, even though there may not be a legal requirement under CERCLA or EPCRA

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[270] *Id.*
[271] *Id.*

to report certain types of releases, such as a release of a biological (i.e., such as anthrax) to the National Response Center (which, in turn, would report the release to the EPA, the Centers for Disease Control and Prevention, and other officials), prudence suggests that responsible officials consider the benefits of keeping federal, state, and local environmental and public health officials "in the loop," should such a calamitous situation arise.

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