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# ARSENIC AND AN OLD BASE: LEGAL ISSUES ASSOCIATED WITH THE ENVIRONMENTAL RESTORATION OF DEFENSE SITES IN WASHINGTON, D.C., USED FOR THE DEVELOPMENT AND DISPOSAL OF WORLD WAR I CHEMICAL MUNITIONS

*James W. Moeller\**

## INTRODUCTION

In January 1993 an excavation for new home construction in the Spring Valley neighborhood of Northwest Washington, D.C., unearthed a cache of chemical munitions from the Great War (World War I).<sup>1</sup> Spring Valley is adjacent to American University, the site of a U.S. Army base in World War I used for the development of and experimentation with chemical munitions.<sup>2</sup>

The unearthed munitions and the environmental contamination attributable to their toxic constituents triggered a controversial environmental restoration of Spring Valley that appears to have no end in sight. The chemical munitions and related contamination also triggered several civil suits against the Federal Government, the U.S. Army, and American University.<sup>3</sup>

The environmental restoration of Spring Valley is in some respects unique. The U.S. Army has stated that no other defense site in the United States was used for the development of and experimentation with chemical munitions and thereafter developed into a residential

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1. Martin Weil & Santiago O'Donnell, *WWI Munitions Unearthed at D.C. Construction Site*, WASH. POST, Jan. 6, 1993, at D1.

2. See Martin K. Gordon et al., *Chemical Testing in the Great War: The American University Experiment Station*, WASH. HIST., Spring/Summer 1994, at 28, 28-29. See generally MARTIN K. GORDON ET AL., U.S. ARMY CORPS OF ENG'RS, A BRIEF HISTORY OF THE AMERICAN UNIVERSITY EXPERIMENT STATION AND U.S. NAVY BOMB DISPOSAL SCHOOL, AMERICAN UNIVERSITY (1994).

3. *E.g.*, *Loughlin v. United States*, 286 F. Supp. 2d 1, 2 & n.1 (D.D.C. 2003); *Jach v. Am. Univ.*, 245 F. Supp. 2d 110, 111 (D.D.C. 2003); *W.C. & A.N. Miller Cos. v. United States*, 963 F. Supp. 1231, 1232, 1234 (D.D.C. 1997).

neighborhood in a large metropolitan area.<sup>4</sup> Nonetheless, the neighborhood is just one old U.S. Army base among almost 10,000 used defense sites in the United States in possible need of environmental restoration.<sup>5</sup>

The environmental restoration of Spring Valley and the litigation associated therewith illustrate the challenges and legal issues associated with the environmental restoration of used defense sites throughout the United States. The resolution of those issues in Spring Valley will establish an important precedent for the future of environmental restoration at used defense sites.

Part I of this Article will provide a brief overview of the development of and experimentation with chemical munitions in Spring Valley during World War I. Part II will discuss the Defense Environmental Restoration Program (DERP) of the U.S. Department of Defense (DOD), which is responsible for the environmental restoration of active defense installations and of used defense sites. Part III of this Article will discuss the environmental restoration of Spring Valley by the U.S. Army Corps of Engineers (USACE) under the DERP. Part IV will discuss the litigation that the environmental contamination of Spring Valley has precipitated and the disposition of that litigation to date under the Federal Tort Claims Act.<sup>6</sup> Finally, this Article will offer a proposal that may advance the environmental restoration of Spring Valley.

## I. HISTORICAL BACKGROUND

World War I had raged in Europe for almost three years when, in April 1917, President Wilson requested and received from the U.S. Congress a declaration of war against Germany.<sup>7</sup> Within weeks, the board of trustees of American University, which was chartered in 1893,<sup>8</sup>

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4. *Spring Valley Revisited: The Status of the Cleanup of Contaminated Sites in Spring Valley: Hearing Before the Subcomm. on the D.C. of the House Comm. on Gov't Reform*, 107th Cong. 21 (2002) [hereinafter *2002 Spring Valley Hearing*] (statement of David G. Wood, Director, Natural Resources and Environment, U.S. General Accounting Office (GAO)).

5. See *id.* at 16 (“[T]he Spring Valley site, while unique in some respects, is one of some 9,200 formerly used Defense sites identified by the [U.S. Army].”).

6. Pub. L. No. 79-601, 60 Stat. 842 (1946) (codified as amended in scattered sections of 28 U.S.C.).

7. See, e.g., Charles Bermphohl, *Conflict Overseas Brought Camp to American U.*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B1, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf>. President Wilson requested a declaration of war on April 2. *Id.* (“On Wednesday, April 4, the Senate complied, with a vote of 82 to 6. The House followed, after 17 straight hours of oratory, at a little after 3 in the morning of April 16—a stormy Good Friday—by a vote of 373 to 50.”).

8. GORDON ET AL., *supra* note 2, at 37. American University was founded by the General Conference of the Methodist Episcopal Church. *Id.* The first building on campus

offered to the U.S. Government the use of the campus in support of the war effort.<sup>9</sup> The offer was accepted, and the Secretary of War transferred the grounds and buildings of American University to the USACE, which in May 1917 established Camp American University to train USACE troops.<sup>10</sup> The following year, "Camp American University was renamed Camp Leach."<sup>11</sup>

World War I witnessed the first battlefield use of poisonous gases.<sup>12</sup> The Bureau of Mines, established by the U.S. Department of the Interior in 1910, was familiar with noxious mine gases and rescue equipment and thus reasoned in 1917 that it could support the war effort with a large-scale investigation into the development of poisonous gases and gas masks.<sup>13</sup> The U.S. Army agreed, and in July 1917, the Bureau of Mines established the American University Experiment Station (AUES) on the campus adjacent to Camp American University.<sup>14</sup> Within three months,

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was constructed in 1896 (Hurst Hall). *Id.* The first academic degrees conferred by the school were awarded in 1916. *Id.* at 38. By 1988, over 11,000 students attended American University. *Id.* at 39; *see also* Gordon et al., *supra* note 2, at 30.

9. GORDON ET AL., *supra* note 2, at 15.

10. *Id.*; *see also* Letter from B.F. Leighton, President, Board of Trustees, American University, to Woodrow Wilson, President of the United States (Apr. 30, 1917), *reprinted in Spring Valley—Toxic Waste Contamination in the Nation's Capital: Hearing Before the Subcomm. on the D.C. of the House Comm. on Gov't Reform*, 107th Cong. 138 (2001) [hereinafter *2001 Spring Valley Hearing*] (statement of Benjamin Ladner, President, American University). "The school was 21 years old and struggling to survive as a university when [U.S. Army Corps of Engineers (USACE)] soldiers began using Hurst Hall as a dormitory and office building." Bempohl, *supra* note 7.

11. GORDON ET AL., *supra* note 2, at 16; *see also* Gordon et al., *supra* note 2, at 33.

12. Bempohl, *supra* note 7.

The Germans, breaking an international treaty, first used tear gas with little effect against the Russians on the Eastern Front. Then, on the balmy afternoon of April 22, 1915, they used a lethal gas against unsuspecting French soldiers crouched in miles of trenches outside the Belgium city of Ypres.

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The Germans had used chlorine, which prevented the lungs from absorbing oxygen. And as awful as it was, it would not be the worst. Two years later, at Ypres on July 10, 1917, the Germans unleashed mustard gas.

*Id.*; Gordon et al., *supra* note 2, at 30-31 ("During World War I[,] chemists on both sides of the conflict investigated more than 3,000 chemical substances for potential use as weapons, although only 30 were used in combat. Of the 30, only about a dozen were considered successful.").

13. GORDON ET AL., *supra* note 2, at 16; Bempohl, *supra* note 7 ("The Americans were not to be outdone in developing modern weapons. In February 1917, two months before Wilson signed the declaration of war, secret preparations had begun to develop gas weapons and to come up with a defense against them."); Gordon et al., *supra* note 2, at 31 ("By the fall of 1915, our Army was monitoring chemical warfare developments on the Western Front, sending medical officers to the British and French forces in the field.").

14. GORDON ET AL., *supra* note 2, at 17; Gordon et al., *supra* note 2, at 32-33. In December 1917 the USACE and the Bureau of Mines formalized an arrangement under

however, the Secretary of War established the Gas Service, which was renamed the Chemical Warfare Service.<sup>15</sup> In June 1918 President Wilson transferred the AUES from the Bureau of Mines to the Gas Service.<sup>16</sup>

Although numerous universities throughout the United States researched poisonous gases and chemical munitions,<sup>17</sup> the AUES was the principal installation within the Research Division of the fledgling Gas Service.<sup>18</sup> In addition to classroom buildings converted to laboratories, the Research Division utilized over 150 additional structures and facilities built by the U.S. Army on campus and on adjacent properties leased to the U.S. Army to accommodate the activities of the AUES.<sup>19</sup> When the guns in Europe fell silent in November 1918, the Research Division was comprised of approximately 1900 uniformed and civilian personnel, almost 1000 of which were assigned to the AUES.<sup>20</sup>

In addition to structures for AUES activities,<sup>21</sup> the Research Division outfitted the campus with underground concrete pits for field tests of chemical munitions.<sup>22</sup> "Field tests to determine the effectiveness of toxic

which one half of American University was under USACE control for Camp American University and one half of the school was under Bureau control for the (American University Experiment Station) AUES. GORDON ET AL., *supra* note 2, at 22; Gordon et al., *supra* note 2, at 32 ("It was the Bureau of Mines, a civilian branch of the government, and not the War Department[,] that took the first step in preparation for the employment of toxic agents in warfare.").

15. GORDON ET AL., *supra* note 2, at 18; Gordon et al., *supra* note 2, at 34 ("After much argument between the War and Interior departments . . . Wilson directed the transfer of the [AUES] from the Bureau of Mines to the War Department's eight-month-old Gas Service . . .").

16. GORDON ET AL., *supra* note 2, at 18-19.

17. *Id.* at 19; Bermpohl, *supra* note 7 ("At Edgewood Arsenal . . . shells were being made and filled with poison gas for shipment to France. A large chemical warfare test range had recently opened up in Lakehurst, N.J. A large-scale production plant in Willoughby, Ohio, was starting to turn out tons of Lewisite.").

18. GORDON ET AL., *supra* note 2, at 20.

19. *Id.* at 23; Bermpohl, *supra* note 7 ("Hundreds of acres of land privately owned by seven individuals, in addition to the land of the federally owned Girls Reform School, were leased. In all, 661 acres of land on and adjacent to the campus were used in the effort.").

20. GORDON ET AL., *supra* note 2, at 20. On the other side of campus, Camp Leach consisted of almost seventy structures and facilities adequate to train, feed and house over 4000 uniformed USACE personnel. *Id.* at 22.

21. *Id.* at 24 ("Operations at the Experiment Station, first under the Bureau of Mines and then under the Chemical Warfare Service, fell into several comprehensive, if overlapping, categories."). The Research Division was organized into a Chemical Research Division (Offense), a Chemical Research Division (Defense), a Small-Scale Manufacturing Division, a Pyrotechnic Division, a Mechanical Research Division, a Gas Mask Research Division, a Toxicology Division, and a Pharmacological Division. *Id.* at 24-28; *see also* Gordon et al., *supra* note 2, at 34.

22. GORDON ET AL., *supra* note 2, at 21.

chemicals and substances, incendiaries, smoke mixtures, and the like were conducted at various sites on the campus and adjoining properties, including the several bomb and gun pits, fields and other open areas, and trenches specially constructed for the purpose."<sup>23</sup> The test sites were used for experiments with mustard gas, "Lewisite, ricin, cyanogen, chloride, Adamsite, phosgene, chlorine, arsenic chloride, cyanide, [and] mercuric chloride."<sup>24</sup>

"The soldiers dubbed the test sites 'Death Valley.'"<sup>25</sup> The field tests of chemical munitions contaminated not just the underground concrete pits in which the munitions were detonated but also the open areas that surrounded the pits.<sup>26</sup> The Gas Service also engaged in open-air tests of toxic gases and toxic smokes on campus and on the adjacent properties leased to the AUES.<sup>27</sup> The experiments resulted in some inadvertent fatalities on base.<sup>28</sup> Nonetheless, the activities of the AUES appeared to have little adverse impact on civilian life in the area.<sup>29</sup>

The Armistice brought an end to hostilities in Europe but not to the development of chemical munitions.<sup>30</sup> In November 1918 the Secretary of War ordered the immediate and complete demobilization of the Chemical Warfare Service.<sup>31</sup> In July 1919, however, the U.S. Congress directed the Secretary to retain the Service for twelve months.<sup>32</sup> In the National Defense Act of 1920,<sup>33</sup> the Service became a permanent part of the U.S. Army.<sup>34</sup> In April 1919 the Chemical Warfare Service transferred some structures and facilities to the Ordnance Service to research the

23. *Id.* at 29; see also Gordon et al., *supra* note 2, at 34-35.

24. Bermpohl, *supra* note 7.

25. *Id.*

26. GORDON ET AL., *supra* note 2, at 30.

27. *Id.* at 31. In one instance, U.S. Senator Nathan B. Scott of West Virginia and his wife were "gassed" when an open-air test released a cloud of toxic gases that escaped the boundaries of the AUES and drifted toward their home. Gordon et al., *supra* note 2, at 35.

28. Bermpohl, *supra* note 7.

29. Gordon et al., *supra* note 2, at 35 ("Contemporary accounts show that except for adjustments to accommodate the rigors of wartime, civilian lifestyles near the Army camps continued much as before the war.")

30. Indeed, "Chemical Warfare Service officers believed that the research conducted [at the AUES] was important enough to warrant permanent retention of the installation." GORDON ET AL., *supra* note 2, at 32. The Secretary of War rejected an offer from the board of trustees to sell American University for two million dollars. See Gordon et al., *supra* note 2, at 36. In November 1919 "the Chemical Warfare Service was directed to look for other, more isolated accommodations for its research program." *Id.*

31. GORDON ET AL., *supra* note 2, at 35.

32. *Id.* at 33.

33. Pub. L. No. 66-242, 41 Stat. 759 (1920).

34. *Id.* § 2.

production of nitrogen and nitrates. This research was conducted until the U.S. Army returned the campus to American University.<sup>35</sup>

In March 1920 the Chemical Warfare Service and American University executed an agreement for the return of the campus and classrooms to American University.<sup>36</sup> The agreement was superseded in June 1920,<sup>37</sup> when American University, in exchange for numerous structures and a sewer and water system constructed by the U.S. Army, agreed to hold the U.S. Army harmless for damage to the buildings and grounds of American University:

The University agrees to release and does hereby release and forever discharge the United States of America from any and all claims and demands arising out of the use and occupancy of the entire tract of land, leased by the University to the United States, and particularly releases and discharges the United States of America from any obligation to restore the grounds as provided in the contract of March 11th, 1920, and agrees that it has no claims and will assert no claim against the United States for damages to the buildings or grounds of the University and hereby releases the United States from any obligation, other than to clean up the site or sites of the buildings retained by the United States.<sup>38</sup>

In the spring of 1921, the U.S. Army began to restore the grounds and buildings of American University.<sup>39</sup> Numerous structures and facilities built by the U.S. Army but not wanted by the school were demolished or, if contaminated with toxic substances from chemical munitions, burned.<sup>40</sup> Under the March 1920 agreement, however, twenty-two buildings constructed by the U.S. Army were transferred to American University,<sup>41</sup> which now had a world-class campus. "Chemical warfare had enabled American University to be a competitor in the nation's higher education industry."<sup>42</sup>

Although no chemical munitions were mass-produced at the AUES, the laboratories, test sites, and storage sheds of the station contained

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35. GORDON ET AL., *supra* note 2, at 33-34.

36. Agreement Between Amos A. Fries, Lieutenant Colonel, Chief, Chemical War Service, and American University 1-3 (Mar. 1920) [hereinafter Mar. 1920 Agreement], *reprinted in 2001 Spring Valley Hearing, supra* note 10, at 147-49.

37. Memorandum of Agreement 1-2, *reprinted in 2001 Spring Valley Hearing, supra* note 10, at 151-52.

38. *Id.* at 2, *reprinted in 2001 Spring Valley Hearing, supra* note 10, at 152.

39. GORDON ET AL., *supra* note 2, at 36.

40. *Id.*

41. Mar. 1920 Agreement, *supra* note 36, at 1, *reprinted in 2001 Spring Valley Hearing, supra* note 10, at 147.

42. Bermpohl, *supra* note 7.

“cannon and mortar shells, 55-gallon metal drums and five-gallon jugs” of toxic chemicals.<sup>43</sup> “The Army would claim more than 60 years later that almost all of the ordnance had been shipped to Edgewood.”<sup>44</sup> Nonetheless, “[t]he evidence in the ground over the past 11 years shows that much of the deadly stuff remained right where it was when the Great War ended.”<sup>45</sup>

The farmland that surrounded the ninety-two-acre American University campus before the war gradually disappeared after the war. To the northeast of campus, the neighborhood of American University Park hosted the construction of identical homes intended for middle-income families.<sup>46</sup> To the northwest of campus, the neighborhood of Spring Valley hosted the construction of custom-built homes intended for high-income families.<sup>47</sup> The development of this upscale neighborhood largely was the work of William C. and Allison N. Miller.<sup>48</sup> “They, the company they founded and named after themselves, and their heirs dominated Spring Valley’s development.”<sup>49</sup> By 1928, the Millers had purchased approximately 300 acres of land in Spring Valley.<sup>50</sup>

The plat for the development of Spring Valley reflected a departure from the grid system of streets for Washington, D.C.<sup>51</sup> The streets for the new residential neighborhood were designed to twist and turn with the natural landscape of the land.<sup>52</sup> This novel design required the approval of the new National Capital Park and Planning Commission.<sup>53</sup> “Throughout the history of Spring Valley, the Miller family has remained intimately involved with its development.”<sup>54</sup>

## II. DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

### A. Formerly Used Defense Sites

In 1986 the U.S. Congress reauthorized and amended the Comprehensive Environmental Response, Compensation, and Liability

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43. *Id.*

44. *Id.*

45. *Id.*

46. GORDON ET AL., *supra* note 2, at 40.

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.* at 41.

51. *Id.* at 42.

52. *Id.*

53. *Id.*

54. *Id.* at 43.



Act of 1980 (CERCLA).<sup>55</sup> CERCLA, or Superfund, was reauthorized by the Superfund Amendments and Reauthorization Act of 1986 (SARA).<sup>56</sup> SARA also established the DERP.<sup>57</sup>

The DERP requires the DOD to undertake the environmental restoration of installations and facilities under its jurisdiction.<sup>58</sup> Under section 120 of CERCLA,<sup>59</sup> the program is subject to the requirements of Superfund.<sup>60</sup> Thus the DERP is carried out in consultation with the U.S. Environmental Protection Agency (EPA).<sup>61</sup> The program was established for the “identification, investigation, research and development, and cleanup of contamination from hazardous substances, pollutants, and contaminants.”<sup>62</sup>

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55. Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613; Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended in scattered sections of 26 and 42 U.S.C.).

56. Pub. L. No. 99-499, 100 Stat. 1613 (codified as amended in scattered sections of 10, 26, and 42 U.S.C.).

57. 10 U.S.C. § 2701(a)(1) (2000).

58. *Id.* § 2701(a)(1). The Department of Defense’s (DOD) instruction number 4715.7 assigns Defense Environmental Restoration Program (DERP) responsibilities to the Under Secretary of Defense for Acquisition and Technology, the Deputy Under Secretary of Defense for Environmental Security, the Assistant Secretary of Defense for Economic Security, the Under Secretary of Defense (Comptroller), the Director of the Defense Logistics Agency, and the Secretary of the Army. DEP’T OF DEF., INSTRUCTION NUMBER 4715.7, ¶ 5 (1996) (discussing responsibilities), available at [http://www.dtic.mil/whs/directives/corres/pdf/i47157\\_042296/i47157p.pdf](http://www.dtic.mil/whs/directives/corres/pdf/i47157_042296/i47157p.pdf); see also OFFICE OF THE DEPUTY UNDER SEC’Y OF DEF. (INSTALLATIONS & ENV’T), U.S. DEP’T OF DEF., MANAGEMENT GUIDANCE FOR THE DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (2001) [hereinafter MANAGEMENT GUIDANCE FOR DERP], available at <http://www.uxoinfo.com/uxoinfo/downloads/derpguidance.pdf>; *id.* ¶ 1.1. (“This document is a companion to [instruction number] 4715.7.”).

59. 42 U.S.C. § 9620 (2000) (applying CERCLA to the Federal Government).

60. *Id.* § 9620(a)(1) (“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, [CERCLA] in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity . . .”).

61. 10 U.S.C. § 2701(a)(3) (2000). The DOD and the Environmental Protection Agency (EPA) cooperate, but the DOD is the lead department on environmental restoration under the DERP. See *id.* § 2701(a)(1), (3); see also Exec. Order No. 12,580, 3 C.F.R. 193 (1987) (listing agencies participating in Superfund implementation); Exec. Order No. 13,016, 3 C.F.R. 214 (1996) (amending Superfund implementation). The DOD “is fully committed to the substantive involvement of [the] EPA.” MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 11.1.

62. 10 U.S.C. § 2701(b)(1) (2000). The program also was established for the “[c]orrection of other environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment.” *Id.* § 2701(b)(2). The DERP is responsible for the “[d]emolition and removal of unsafe buildings and structures, including buildings and structures of the [DOD] at sites formerly used by or under the jurisdiction of

“The goal of the DERP . . . is to reduce, in a cost-effective manner, the risks to human health and the environment attributable to contamination” from DOD activities.<sup>63</sup> Under the program, the DOD is responsible for the environmental restoration, in accordance with the requirements of CERCLA,<sup>64</sup> of (i) active facilities and sites that are under DOD jurisdiction and (ii) inactive facilities and sites that were under DOD jurisdiction prior to the enactment of SARA.<sup>65</sup>

Consistent with this dual mandate, the DOD has established a dedicated program for the environmental restoration of formerly used defense sites (FUDS), i.e., inactive facilities that were under DOD jurisdiction prior to the enactment of SARA.<sup>66</sup> Most FUDS are relics of the Cold War, World War II, and World War I.<sup>67</sup> Some FUDS, however, were used in the Civil War.<sup>68</sup>

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the Secretary.” *Id.* § 2701(b)(3); *see also* MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 2 (explaining background of the program).

63. DEP’T OF DEF., *supra* note 58, ¶ 4; *see also* MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 4 (listing program goals).

64. *See* 42 U.S.C. § 9620(a)(1). The program also may be subject to the requirements of the Resource Conservation and Recovery Act (RCRA) of 1976. *See* Pub. L. No. 94-580, sec. 2, § 1006, 90 Stat. 2795, 2802 (1976). *See generally* Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k (2000). In general, CERCLA is applicable to inactive hazardous waste sites and RCRA is applicable to active waste sites. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-89-144, HAZARDOUS WASTE: EPA CLEANUP REQUIREMENTS—DOD VERSUS PRIVATE ENTITIES 2 (1989) (“A DOD installation with both active and inactive hazardous waste sites may be subject to both RCRA and [CERCLA] requirements.”).

65. *See* 10 U.S.C. § 2701(c)(1)(A)-(B) (2000). The DOD also is responsible for the environmental remediation of naval vessels owned or operated by the DOD. *Id.* § 2701(c)(1)(C).

66. *See* DEP’T OF DEF., *supra* note 58, ¶ 2.3 (“[I]nstruction number 4715.7 a]ppplies to [formerly used defense sites] FUDS that were under the jurisdiction of the [DOD] at the time of actions that caused the release of hazardous substances or other environmental damage.”). *See generally* MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 9, at 15-20 (explaining FUDS); DEP’T OF DEF., *supra* note 58, ¶ 1.8 (“[T]he Secretary of the Army [is] the D[O]D Executive Agent for the . . . (FUDS) Program . . . .”); U.S. ARMY CORPS OF ARMY ENG’RS, REGULATION NO. 200-3-1, DEP’T OF THE ARMY, ENVIRONMENTAL QUALITY: FORMERLY USED DEFENSE SITES PROGRAM POLICY (2004), *available at* [http://www.epa.gov/swerrfrt/pdf/army\\_fuds\\_policy\\_062004.pdf](http://www.epa.gov/swerrfrt/pdf/army_fuds_policy_062004.pdf); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 9.5.1 (“FUDS are defined as real property for which accountability rested with [the] D[O]D prior to October 17, 1986, irrespective of current ownership or current responsibility within the federal government.”).

67. *See, e.g.*, U.S. GEN. ACCOUNTING OFFICE, GAO-02-556, ENVIRONMENTAL CONTAMINATION: MANY UNCERTAINTIES AFFECT THE PROGRESS OF THE SPRING VALLEY CLEANUP app. 1, at 30-33 (2002) (listing properties in the District of Columbia where hazards from federal activities have been found).

68. *See* U.S. GEN. ACCOUNTING OFFICE, GAO-02-556, ENVIRONMENTAL CONTAMINATION: MANY UNCERTAINTIES AFFECT THE PROGRESS OF THE SPRING VALLEY CLEANUP app. 1, at 30-31 (2002); *see also* U.S. GEN. ACCOUNTING OFFICE,

The DERP authorizes the DOD to contract for services from other federal agencies, state and local government agencies, and non-profit conservation organizations to assist with environmental restoration.<sup>69</sup> In addition, section 120 of CERCLA authorizes the DOD to contract for services from the EPA for environmental restoration.<sup>70</sup>

The DERP requires the DOD to undertake “a program of research, development, and demonstration with respect to hazardous wastes.”<sup>71</sup> To

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GAO-02-658, ENVIRONMENTAL CONTAMINATION: CORPS NEEDS TO REASSESS ITS DETERMINATIONS THAT MANY FORMER DEFENSE SITES DO NOT NEED CLEANUP 1 (2002) (“Many of these properties . . . were acquired or used by DOD more than 30 to 40 years ago and in some cases more than 100 years ago.”).

69. 10 U.S.C. § 2701(d)(1) (Supp. II 2002). The DOD is required to “[d]evelop partnerships regarding restoration activities with the [EPA] and appropriate State, local, and territorial regulatory agencies.” DEP’T OF DEF., *supra* note 58, ¶ 4.5. Under the Defense-State Memorandum of Agreement (DSMOA) Program, “[s]tates and territories can be reimbursed for certain technical services in support of environmental restoration efforts at the D[O]D installations within their boundaries.” MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 11.4.1. The DOD “will make funds available to State/Territorial governments for their support services associated with cleanups” under the DERP. Notice, 57 Fed. Reg. 28,835, 28,835 (June 29, 1992). The Secretary of the Army is the lead agency for the DSMOA Program. DEP’T OF DEF., *supra* note 58, ¶ 1.8. “An executed DSMOA is mandatory for funding consideration.” Notice, 57 Fed. Reg. at 28,835. In June 1992 the DOD published a model DSMOA. *Id.* at 28,836. The DOD also has cooperated with state-led organizations like the Inter-State Technology Regulatory Council and the Environmental Council of States. *Current Environmental Issues Affecting the Readiness of the Department of Defense: Joint Hearing Before the Subcomm. on Commerce, Trade & Consumer Protection and the Subcomm. on Energy & Air Quality of the House Comm. on Energy & Commerce*, 108th Cong. 107 (2004) (statement of Steven Brown, Executive Director, Environmental Commissions of the States).

70. 42 U.S.C. § 9620(e)(2) (2000) (inter-governmental agreements). The DOD is required to “[n]egotiate and sign [Federal Facility Agreements (FFA)] and other types of Federal and State restoration agreements.” DEP’T OF DEF., *supra* note 58, ¶ 6.5. An FFA is “developed to assist in the implementation of CERCLA § 120(e).” MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 11.2.6.2. In June 1988 the EPA issued a model EPA-Department of Energy FFA. U.S. ENVTL. PROTECTION AGENCY, AGREEMENT WITH THE DEPARTMENT OF DEFENSE—MODEL PROVISIONS FOR CERCLA FEDERAL FACILITY AGREEMENTS, <http://www.epa.gov/swerfrr/documents/epa588.htm> (May 27, 1988).

71. 10 U.S.C. § 2702(a) (2000). The research and development program shall address, for example, the reduction of hazardous waste quantities, the treatment and disposal of hazardous waste, and the identification of cost-effective technologies for the disposal of hazardous waste. *Id.* § 2702(a)(1)-(3). Under the DERP, the DOD “[s]upport[s] the development and use of cost-effective innovative technologies and process improvements in the restoration process.” DEP’T OF DEF., *supra* note 58, ¶ 4.7; U.S. GEN. ACCOUNTING OFFICE, GAO/NSID-96-155, ENVIRONMENTAL PROTECTION: STATUS OF DEFENSE INITIATIVES FOR CLEANUP, COMPLIANCE, AND TECHNOLOGY 5 (1996) (“According to DOD, technological innovation is the key to more efficiently and effectively meeting the environmental restoration challenge . . . .”); *see also* 10 U.S.C. §§ 2901-2904 (2000). The Strategic Environmental Research and Development Program (SERDP) was established in a national defense authorization bill, enacted in November

fund the DERP, the U.S. Congress, in a national defense authorization bill enacted in September 1996,<sup>72</sup> established several environmental restoration accounts for the DOD budget.<sup>73</sup> In particular, the U.S. Congress established a separate environmental restoration account for FUDS.<sup>74</sup>

The DERP requires the DOD to advise the U.S. Department of Health and Human Services (HHS), through the Agency for Toxic Substances and Disease Registry (ATSDR),<sup>75</sup> of hazardous substances found in the course of environmental restoration of DOD facilities.<sup>76</sup>

1990. National Defense Authorization Act for Fiscal Year 1991, Pub. L. No. 101-510, § 1801(a), 104 Stat. 1485, 1750 (1990). See generally STRATEGIC ENVTL. RESEARCH & DEV. PROGRAM, ANNUAL REPORT TO CONGRESS (2003), available at [http://www.serdp.org/general/publications/annual\\_report/downloads/Annual\\_Report\\_2002.PDF](http://www.serdp.org/general/publications/annual_report/downloads/Annual_Report_2002.PDF). The SERDP engages in research and development of environmental technologies for (i) cleanup, (ii) compliance, (iii) conservation, (iv) pollution prevention, and (v) unexploded ordnance. *Id.* at i. A national defense authorization bill enacted for the fiscal year 1997 authorized the DOD to conclude cooperative agreements with states and local governments for the certification of new environmental technologies. See U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-97-126, ENVIRONMENTAL PROTECTION: STATUS OF DEFENSE INITIATIVES FOR CLEANUP, TECHNOLOGY AND COMPLIANCE 8 (1997) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-97-126]. Through May 1997 the DOD had identified over 100 technologies for the certification program. *Id.* at 9.

72. National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201, § 322(a)(1), 110 Stat. 2422, 2477 (1996).

73. 10 U.S.C. § 2703(a) (2000). The statute establishes separate accounts for the DOD in general, the U.S. Army, the U.S. Navy, and the U.S. Air Force. *Id.* § 2703(a)(1)-(4); see also DEP'T OF DEF., *supra* note 58, ¶ E2.1.8 (defining environmental defense accounts).

74. 10 U.S.C. § 2703(a)(5) (2000).

75. *Id.* § 2704(a)(1); *id.* § 2704(f) ("The functions of the Secretary of Health and Human Services . . . shall be carried out through the Administrator of the Agency for Toxic Substances and Disease Registry [(ATSDR)] of the Department of Health and Human Services [(HHS)] . . .").

76. *Id.* § 2704(a). The Secretary of the Army is the lead agency for ATSDR cooperation. DEP'T OF DEF., *supra* note 58, ¶ 1.8. One of the DOD policies to accomplish the DERP goal, *id.* ¶ 4, was to establish a Memorandum of Understanding with the ATSDR "to transfer funds in support of public health activities," *id.* ¶ 5.2.17. See generally MEMORANDUM OF UNDERSTANDING BETWEEN THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY U.S. PUBLIC HEALTH SERVICE AND THE U.S. DEPARTMENT OF DEFENSE ON THE DEVELOPMENT OF TOXICOLOGICAL PROFILES FOR HAZARDOUS SUBSTANCES AND PUBLIC HEALTH ASSESSMENTS AND RELATED ACTIVITIES AT DOD FACILITIES, available at <http://chppm-www.apgea.army.mil/atsdr/Documents%5CMOUfinal21NOV04ATSDR.pdf>; GUIDELINES FOR THE COORDINATION OF COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) ACTIVITIES BETWEEN THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY AND THE DEPARTMENT OF DEFENSE (1996), available at <http://aec.army.mil/usaec/cleanup/popup/library/>; MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 12.1 ("[T]he ATSDR has a significant role in the environmental restoration activities at many (but not all) D[O]D installations."); see also *id.* ¶ 18

This requirement is applicable to hazardous substances that are unregulated under the Toxic Substances Control Act,<sup>77</sup> the Safe Drinking Water Act of 1974,<sup>78</sup> the Clean Air Act,<sup>79</sup> and the Clean Water Act (Federal Water Pollution Control Act).<sup>80</sup> The ATSDR prepares toxicological profiles of unregulated hazardous substances reported by the DOD.<sup>81</sup> The EPA is responsible for health advisories on hazardous substances that could threaten drinking water supplies.<sup>82</sup> The ATSDR, a branch of the U.S. Public Health Service, was established by section 104(i) of CERCLA.<sup>83</sup>

Under the DERP, the DOD advises affected state and local authorities of proposed environmental restoration,<sup>84</sup> on which the authorities are permitted to comment.<sup>85</sup> The program requires the DOD, to the extent possible, to establish a Technical Review Committee (TRC), comprised of affected state and local authorities and of public representatives, to comment on proposed environmental restorations.<sup>86</sup> In lieu of a TRC, the DOD may permit the formation of a Restoration Advisory Board (RAB).<sup>87</sup> The DOD may provide a TRC or RAB with technical

(discussing health and ecological risk assessments, public health assessments, and assessment of explosive hazards).

77. 15 U.S.C. §§ 2601-2692 (2000).

78. 42 U.S.C. §§ 300f to 300j-25 (2000).

79. *Id.* §§ 7401-7671q.

80. 33 U.S.C. §§ 1251-1387 (2000).

81. 10 U.S.C. § 2704(b), (f) (2000). The profile of an unregulated hazardous substance ascertains "the levels of significant human exposure for the substance and the associated acute, subacute, and chronic health effects." *Id.* § 2704(b)(1). The toxicological profiles are prepared with DOD financial assistance. *Id.* § 2704(c).

82. *Id.* § 2704(d)(1)(B).

83. 42 U.S.C. § 9604(i) (2000).

84. 10 U.S.C. § 2705(a) (2000); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.1 ("It is D[O]D policy to involve the local community in the environmental restoration process as early as possible and to seek continued community involvement throughout the environmental restoration process."); *id.* ¶ 10.5 ("Information on environmental restoration activities shall be made available to the public in a timely manner using appropriate mechanisms for disseminating information to the public (e.g., local media, public meetings, websites)."); *see also* 42 U.S.C. § 9620(f) (2000) (state and local participation under CERCLA).

85. 10 U.S.C. § 2705(b).

86. *Id.* § 2705(c); DEP'T OF DEF., *supra* note 58, ¶ E2.1.24 ("The TRC is a mechanism for exchanging information about restoration activities at an installation.").

87. 10 U.S.C. § 2705(d) (2000); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.7 ("Each installation or FUDS shall establish a Restoration Advisory Board [RAB] where there is sufficient and sustained community interest. A RAB fulfills the requirements of 10 USC § 2705(c), which directs [the] D[O]D to establish Technical Review Committees (TRC)."). In September 1994 the DOD and the EPA issued a set of RAB implementation guidelines. U.S. DEP'T OF DEF. & U.S. ENVTL. PROTECTION AGENCY, RESTORATION ADVISORY BOARD (RAB) IMPLEMENTATION GUIDELINES,

assistance for public participation (TAPP) through the DOD TAPP program.<sup>88</sup> The DOD also may provide financial assistance.<sup>89</sup> The DERP requires the DOD to consult with a TRC or RAB on environmental restoration activities, priorities, and strategies.<sup>90</sup>

The DERP requires the DOD to submit annual reports to the U.S. Congress on defense environmental restoration activities.<sup>91</sup> The program also clarifies that: (i) the construction of DOD structures in furtherance of the DERP is separate from routine construction of DOD structures,<sup>92</sup>

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<http://www.acq.osd.mil/installation/reinvest/manual/rab.html> (1994); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.7.3.3 (“A RAB is not subject to the requirements of the [Federal Advisory Committee Act] . . .”).

88. See 10 U.S.C. § 2705(e) (2000); *see also* 32 C.F.R. pt. 203 (2003) (explaining technical assistance for public participation in defense environmental participation activities); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.9 (describing technical assistance for public participation). The National Defense Authorization Act for Fiscal Year 1995 amended the DERP to authorize the technical assistance for public participation (TAPP) program. Pub. L. No. 103-337, § 326, 108 Stat. 2663, 2712 (1994); *see also* National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201, § 325, 110 Stat. 2422, 2481 (1996) (codified as amended in scattered sections of 5, 10, 14, 18, 21, 22, 24, 37, 41, 42, and 50 U.S.C.).

89. 10 U.S.C. § 2705(g) (2000); *see also* 40 C.F.R. pt. 35 (2003) (EPA state and local assistance); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.9.3.2 (“TAPP funding may not exceed \$100,000 over the life of the restoration program . . .”). *See generally* 32 C.F.R. pt. 203 (2003) (detailing technical assistance for public participation in defense environmental participation activities); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 10.9 (describing technical assistance for public participation).

90. 10 U.S.C. § 2705(f) (2000). The DOD is required to “[p]romote and support public participation” in the DERP. DEP’T OF DEF., *supra* note 58, ¶ 4.6. The DOD also is required to “[c]onduct public participation in a manner consistent with the requirements of [CERCLA] . . . and other applicable laws and regulations by ensuring timely public access to information, opportunity for public comment on proposed activities, and consideration of public comments in the decision-making process.” *Id.* ¶ 6.6; *see also* Exec. Order No. 12,898, 3 C.F.R. 859 (1995) (outlining federal actions to address environmental justice in minority populations and low-income populations).

91. 10 U.S.C. § 2706(a) (2000); *see also* 42 U.S.C. § 9620(e)(5) (2000) (requiring annual report under CERCLA). *See generally* DEP’T OF DEF., DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (2004), available at [http://63.88.245.60/DERPARC\\_FY03/do/report](http://63.88.245.60/DERPARC_FY03/do/report). In a national defense authorization bill enacted in February 1996, the DOD was directed to include in the annual report for 1998 a discussion of DOD contracts for services from state and local government agencies. National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, § 321(b), 110 Stat. 186, 252 (1996). Since 1993, the annual report has included a discussion of restoration delays due to inadequate congressional appropriations. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-34, ENVIRONMENTAL CLEANUP: DEFENSE FUNDING ALLOCATION PROCESS AND REPORTED FUNDING IMPACTS 5 (1998).

92. 10 U.S.C. § 2707(b) (2000). This clarification was included in a national defense authorization bill enacted in December 2002. Bob Stump National Defense Authorization Act for Fiscal Year 2003, Pub. L. No. 107-314, § 313(a)(2), 116 Stat. 2458, 2507 (2002).

which is subject to the Military Construction Codification Act;<sup>93</sup> (ii) a reimbursement requirement applicable to DOD contracts for the disposal of hazardous waste is inapplicable to disposal contracts under the DERP;<sup>94</sup> and (iii) the management of environmental technologies used in the DERP is subject to an investment control process,<sup>95</sup> which was developed under the Defense Conversion, Reinvestment, and Transition Assistance Act of 1992.<sup>96</sup>

In a national defense authorization bill enacted in December 2001,<sup>97</sup> the U.S. Congress amended the DERP to require the DOD to develop and maintain a list of defense sites known or suspected to contain unexploded ordnance (UXO), munitions, or munitions constituents.<sup>98</sup> The amendment also requires the prioritization of UXO defense sites for environmental restoration.<sup>99</sup> The UXO amendment, however, is

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93. Pub. L. No. 97-214, 96 Stat. 153 (1982) (codified as amended at 7 U.S.C. 1704c (2000) and in scattered sections of 10 U.S.C.); see also MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 14.4.3 (discussing environmental restoration activities that involve construction).

94. 10 U.S.C. § 2708(b)(2)(A) (2000). This clarification was included in a national defense authorization bill enacted in December 1991. National Defense Authorization Act for Fiscal Years 1992 and 1993, Pub. L. No. 102-190, § 331(a)(1), 105 Stat. 1290, 1339 (1991). Under the reimbursement requirement, the DOD is reimbursed for liabilities, penalties, costs, and damages imposed on the DOD due to breach of contract or negligence in the performance of the contract. 10 U.S.C. § 2708(a)(1)(A)-(B) (2000).

95. 10 U.S.C. § 2709(a) (2000). This clarification was included in a national defense authorization bill enacted in October 1999. National Defense Authorization Act for Fiscal Year 2000, Pub. L. No. 106-65, § 323(b)(1), 113 Stat. 512, 562 (1999).

96. Pub. L. No. 102-484, 106 Stat. 2658 (1992) (codified as amended at 5 U.S.C. §§ 3329, 5597 (2000), § 3018B (2000) and in scattered sections of 10 U.S.C.).

97. National Defense Authorization Act for Fiscal Year 2003, Pub. L. No. 107-107, 115 Stat. 1012 (2001).

98. 10 U.S.C. § 2710(a)(1) (Supp. I 2001). The amendment followed a report in which the GAO concluded that “[t]he military services have not performed complete inventories of their ranges, fully identifying the types and extent of the unexploded ordnance present and the associated contamination.” U.S. GEN. ACCOUNTING OFFICE, GAO-01-479, ENVIRONMENTAL LIABILITIES: DOD TRAINING RANGE CLEANUP COST ESTIMATES ARE LIKELY UNDERSTATED 5 (2001). In September 1997 the DOD proposed a regulation on environmental restoration of DOD ranges with unexploded ordnance (UXO), munitions, and munitions constituents. Closed, Transferred, and Transferring Ranges Containing Military Munitions, 62 Fed. Reg. 50,796, 50,796 (proposed Sept. 26, 1997) (to be codified at 32 C.F.R. pt. 178). The Range Rule has not been adopted. The DOD also instituted an UXO Inventory Working Group in March 2000. U.S. GEN. ACCOUNTING OFFICE, *supra*, at 17.

99. 10 U.S.C. § 2710(b)(1) (Supp. II 2002). The DOD is required to update the list of UXO defense sites and the prioritization of UXO defense sites to reflect new information that becomes available. *Id.* § 2710(c)(1). In August 2003 the DOD proposed a prioritization protocol for UXO, munitions, and munitions constituents. Munitions Response Site Prioritization Protocol, 68 Fed. Reg. 50,900, 50,900 (proposed Aug. 22, 2003) (to be codified at 32 C.F.R. pt. 179); see also 40 C.F.R. §§ 266.200-206 (2004)

inapplicable to locations outside of the United States, munitions from combat operations, munitions storage facilities, and operational ranges.<sup>100</sup>

### B. Base Realignment and Closure

In addition to active installations, and to FUDS that were closed prior to the enactment of SARA, the DERP is applicable to defense sites closed between 1988 and 1995 under federal base realignment and closure (BRAC) legislation.<sup>101</sup> In particular, the Defense Base Closure and Realignment Act of 1990 (Base Closure Act of 1990),<sup>102</sup> which was included in a national defense authorization bill enacted in November 1990,<sup>103</sup> was enacted “to provide a fair process that will result in the timely closure and realignment of military installations inside the United States.”<sup>104</sup> The process complemented and expanded upon a general federal statute on DOD base closures and realignments.<sup>105</sup>

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(describing EPA munitions rule); *id.* § 266.200(a) (“The regulations in this subpart identify when military munitions become a solid waste, and, if these wastes are also hazardous[,] . . . the management standards that apply to these wastes.”). The EPA munitions rule was promulgated in February 1997. Military Munitions Rule, 62 Fed. Reg. 6622, 6622 (Feb. 12, 1997). The EPA munitions rule was promulgated in accordance with section 107 of the Federal Facility Compliance Act of 1992. 42 U.S.C. § 6924(y) (2000).

100. 10 U.S.C. § 2710(d) (Supp. II 2002); *see also* DEP’T OF DEF., *supra* note 58, ¶ 2.2 (stating that it is inapplicable to “[c]ontamination on facilities outside the United States and its territories”); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 3.2.1 (stating that it is inapplicable to “[r]esponses to address releases at facilities or sites outside of the United States”). Nonetheless, the DOD engages in environmental restoration of overseas installations to respond, for example, to host-nation requirements. *See* U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-97-126, *supra* note 71, at 6.

101. Instruction number 4715.7 is applicable to the base realignment and closure (BRAC) environmental restoration program. DEP’T OF DEF., *supra* note 58, ¶ 1.1. The DOD is required to “[c]onduct BRAC environmental restoration activities at closing and realigning installations.” *Id.* ¶ 6.2; *see also* MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 4.2.2; *id.* ¶ 8.1 (“Environmental restoration activities at installations being closed or realigned pursuant to BRAC statutes are analogous to those at active installations.”).

102. Pub. L. No. 101-510, div. B, tit. XXIX, pt. A, 104 Stat. 1808 (1990).

103. National Defense Authorization Act for Fiscal Year 1991, Pub. L. No. 101-510, 104 Stat. 1485 (1990).

104. *Id.* § 2901(b), 104 Stat. at 1808; U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-97-151, MILITARY BASES: LESSONS LEARNED FROM PRIOR BASE CLOSURE ROUNDS 2 (1997) (“Closing unneeded defense facilities has historically been difficult because of public concern about the economic effects of closures on communities and the perceived lack of impartiality of the decision-making process.”).

105. *See* 10 U.S.C. § 2687 (2000). This statute “required DOD to notify Congress of proposed closures and to prepare economic, environmental, and strategic consequence reports. These requirements effectively precluded bases from being closed between 1977 and 1988.” U.S. GEN. ACCOUNTING OFFICE, *supra* note 104.



The Base Closure Act of 1990 established three independent Base Realignment and Closure Commissions (BRAC Commissions).<sup>106</sup> The legislation directed the BRAC Commissions to recommend to the President by July of 1991, 1993, and 1995, the closure or realignment of DOD installations.<sup>107</sup> The recommendations of the BRAC Commissions were based on DOD recommendations<sup>108</sup> developed under selection criteria promulgated with congressional and public participation.<sup>109</sup>

The Base Closure Act of 1990 directed the President to approve or reject the recommendations of the BRAC Commissions, in whole or in part, by July 15, 1991; July 15, 1993; and July 15, 1995.<sup>110</sup> If the President approved a base closure or realignment, then the DOD was directed to initiate the closure within two years,<sup>111</sup> and to complete the closure within six years,<sup>112</sup> unless the U.S. Congress, advised by the President of the recommendations of the BRAC Commissions,<sup>113</sup> enacted a joint

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106. § 2902(a)-(c), 104 Stat. at 1808; *see, e.g.*, Notice, 56 Fed. Reg. 12,712 (Mar. 27, 1991) (establishment of BRAC).

107. § 2901(d), 104 Stat. at 1811-12. *See generally* DEF. BASE CLOSURE & REALIGNMENT COMM'N, REPORT TO THE PRESIDENT (1995), available at <http://www.defenselink.mil/brac/docs/1995com.pdf>; DEF. BASE CLOSURE & REALIGNMENT COMM'N, REPORT TO THE PRESIDENT (1993), available at <http://www.defenselink.mil/brac/docs/1993com2.pdf>; DEF. BASE CLOSURE & REALIGNMENT COMM'N, REPORT TO THE PRESIDENT (1991), available at <http://www.defenselink.mil/brac/docs/1991com.pdf>.

108. § 2903(c), 104 Stat. at 1811. *See generally* Notice, 60 Fed. Reg. 11,414 (Mar. 1, 1995); Notice, 56 Fed. Reg. 15,184 (Apr. 15, 1991); Notice, 58 Fed. Reg. 14,002 (Mar. 15, 1993); U.S. DEP'T OF DEF., BASE CLOSURE AND REALIGNMENT REPORT (1995), available at <http://www.defenselink.mil/brac/docs/1995dod.pdf>; U.S. DEP'T OF DEF., BASE CLOSURE AND REALIGNMENT REPORT (1993), available at <http://www.defenselink.mil/brac/docs/1993dod.pdf>; U.S. DEP'T OF DEF., BASE CLOSURE AND REALIGNMENT: REPORT (1991), available at <http://www.defenselink.mil/brac/docs/1991dod.pdf>; U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-93-173, MILITARY BASES: ANALYSIS OF DOD'S RECOMMENDATIONS AND SELECTION PROCESS FOR CLOSURES AND REALIGNMENTS (1993); U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-91-224, MILITARY BASES: OBSERVATIONS ON THE ANALYSES SUPPORTING PROPOSED CLOSURES AND REALIGNMENTS (1991); U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-95-199, MILITARY BASES: ANALYSIS OF DOD'S 1995 PROCESS AND RECOMMENDATIONS FOR CLOSURE AND REALIGNMENT (1995).

109. § 2902(b), 104 Stat. at 1810-11; *see, e.g.*, Notice, 59 Fed. Reg. 63,769 (Dec. 9, 1994) (final selection criteria for 1995 recommendations); Notice, 57 Fed. Reg. 59,334 (Dec. 15, 1992) (final selection criteria for 1993 recommendations); Notice, 56 Fed. Reg. 6374 (Feb. 15, 1991) (final selection criteria for 1991 recommendations).

110. *See* § 2903(e), 104 Stat. at 1812; *see, e.g.*, 141 CONG. REC. S9904 (daily ed. July 13, 1995) (certification of approval of BRAC Commission recommendations); 137 CONG. REC. S9489 (daily ed. July 10, 1991) (certification of approval of BRAC Commission recommendations).

111. § 2904(a)(3), 104 Stat. at 1813.

112. *Id.* § 2904(a)(4).

113. *See, e.g.*, 141 CONG. REC. S9904 (daily ed. July 13, 1995) (message to the Senate from the President); 141 CONG. REC. H7008 (daily ed. July 13, 1995) (message to the

resolution that, in effect, vetoed the proposed closure or realignment of a DOD installation.<sup>114</sup>

The BRAC Commissions, which terminated on December 31, 1995,<sup>115</sup> were modeled on a previous commission authorized by the Defense Authorization Amendments and Base Closure and Realignment Act (Base Closure Act of 1988),<sup>116</sup> which was included in a national defense authorization bill enacted in October 1988.<sup>117</sup> The legislation directed the original BRAC commission to recommend to the DOD by December 31, 1988, the closure or realignment of DOD installations.<sup>118</sup> The DOD was thereupon directed to initiate the closure by September 30, 1991,<sup>119</sup> and to complete the closure by September 30, 1995,<sup>120</sup> unless the U.S. Congress enacted a joint resolution, within forty-five days after March 1, 1989, that vetoed the proposed closure or realignment.<sup>121</sup>

The four rounds of base closures and realignments, in 1988, 1991, 1993, and 1995, under the Base Closure Act of 1990 and the Base Closure Act

House from the President); 137 CONG. REC. S9489 (daily ed. July 10, 1991) (message to the Senate from the President); 137 CONG. REC. H5371 (daily ed. July 10, 1991) (message to the House from the President).

114. § 2904(b), 104 Stat. at 1813. Between 1991 and 1995, six joint resolutions were introduced in the Senate and the House to veto the proposed closure or realignment of a DOD installation. H.R.J. Res. 102, 104th Cong. (1995); H.R.J. Res. 101, 104th Cong. (1995); S.J. Res. 114, 103d Cong. (1993); H.R.J. Res. 308, 102d Cong. (1991); H.R.J. Res. 298, 102d Cong. (1991); S.J. Res. 175, 102d Cong. (1991). None was enacted. In the 102d Congress, House Joint Resolution 308 was defeated on a roll call vote of 60-394. 137 CONG. REC. H6039-40 (daily ed. July 30, 1991). In the 103rd Congress, Senate Joint Resolution 114 was defeated in a roll call vote of 12-83. 139 CONG. REC. S12003 (daily ed. Sept. 20, 1993). In the 104th Congress, House Joint Resolution 102 was defeated in a roll call vote of 75-343. 141 CONG. REC. H8703-04 (daily ed. Sept. 8, 1995). *But cf.* Spector v. Garrett, 777 F. Supp. 1226 (E.D. Pa. 1991), (bringing a lawsuit to enjoin closure of Philadelphia Naval Shipyard), *rev'd*, 971 F.2d 939 (3d Cir. 1992), *rev'd sub nom.* Dalton v. Spector, 511 U.S. 462 (1994).

115. § 2902(f), 104 Stat. at 1810; U.S. GEN. ACCOUNTING OFFICE, *supra* note 104 (“The legislation authorizing these rounds expired at the end of 1995, and DOD’s authority to close or realign bases reverted to the 1970’s legislation under which DOD, in effect, was unable to close bases.”).

116. Pub. L. No. 100-526, 102 Stat. 2623 (1988).

117. *Id.* The Base Closure Act of 1988 authorized the original BRAC commission that was, however, established by a DOD order in May 1988. COMM’N ON BASE REALIGNMENT & CLOSURE, BASE REALIGNMENTS AND CLOSURES app. A at 37(1988), available at <http://www.defenselink.mil/brac/docs/1988.pdf>.

118. *Id.* § 203(b)(1), 102 Stat. at 2628. See generally COMM’N ON BASE REALIGNMENT & CLOSURE, *supra* note 117; U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-90-42, MILITARY BASES: AN ANALYSIS OF THE COMMISSION’S REALIGNMENT AND CLOSURE RECOMMENDATIONS (1989).

119. § 201(3), 102 Stat. at 2627.

120. *Id.*

121. *Id.* § 202(b).

of 1988, generated 499 recommendations.<sup>122</sup> Consistent with these recommendations, the DOD has shuttered ninety-seven major defense installations and closed or realigned several hundred minor installations.<sup>123</sup> The *net* cost savings associated with the closure and realignment of defense installations,<sup>124</sup> although difficult to calculate with precision,<sup>125</sup> total \$16.7 billion through 2001 and \$6.6 billion per year thereafter.<sup>126</sup> These funds, the DOD has reasoned, are thus available for other uses such as “weapons systems modernization.”<sup>127</sup>

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122. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO-02-433, MILITARY BASE CLOSURES: PROGRESS IN COMPLETING ACTIONS FROM PRIOR REALIGNMENTS AND CLOSURE 5 (2002) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO-02-433]; see also U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-36, MILITARY BASES: STATUS OF PRIOR BASE REALIGNMENT AND CLOSURE ROUNDS 2 (1998) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-36].

123. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO-02-433, *supra* note 122, at 5. The base closures have yielded 518,500 acres of unneeded land. *Id.* at 3. Forty-six percent of the unneeded land (236,400 acres) will be transferred to other federal agencies. *See id.* at 17. In particular, 191,700 acres will be transferred to the U.S. Fish and Wildlife Service and the U.S. Bureau of Land Management. *Id.* at 18; see also U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-95-139, MILITARY BASES: CASE STUDIES ON SELECTED BASES CLOSED IN 1988 AND 1991, at 1 (1995) (describing the case studies of thirty-seven bases closed). The closure of ninety-seven, out of 495, major defense installations represented a reduction of almost twenty percent of those bases. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-36, *supra* note 122, at 12.

124. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-36, *supra* note 122, at 3; see also *id.* at 13 (“Military installations are diverse and can include a base, camp, post, station, yard, center, home port, or leased facility and can vary in size from a few acres to hundreds of thousands of acres.”).

125. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-96-67, MILITARY BASES: CLOSURE AND REALIGNMENT SAVINGS ARE SIGNIFICANT BUT NOT EASILY QUANTIFIED 2 (1996).

126. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO-02-433, *supra* note 122, at 2, 8. The net cost savings through 2001 are based on \$22 billion in BRAC-related costs and \$38.7 billion in BRAC-related savings. *Id.* at 9. Compare U.S. GEN. ACCOUNTING OFFICE, GAO-01-971, MILITARY BASE CLOSURES: DOD’S UPDATED NET SAVINGS ESTIMATE REMAINS SUBSTANTIAL 2 (2001) (indicating a net cost savings of \$15.5 billion through 2001 and \$6.1 billion per year thereafter), with U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-93-161, MILITARY BASES: REVISED COST AND SAVINGS ESTIMATES FOR 1988 AND 1991 CLOSURES AND REALIGNMENTS 1-2 (1993).

127. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-17, MILITARY BASES: REVIEW OF DOD’S 1998 REPORT ON BASE REALIGNMENT AND CLOSURE 8 (1998); U.S. DEP’T OF DEF., THE REPORT OF THE DEPARTMENT OF DEFENSE ON BASE REALIGNMENT AND CLOSURE v (1998), available at <http://www.defenselink.mil/brac/docs/98dodbrac.pdf> (“This dramatic level of savings will permit the [DOD] to increase spending on the modernization and transformation of our forces, while sustaining high levels of readiness and quality of life.”); U.S. GEN. ACCOUNTING OFFICE, *supra* note 125, at 7 (“DOD expects BRAC savings to provide much of the funding necessary for quality-of-life initiatives and defense modernization efforts.”).

Under the DERP, the sale of facilities and sites that were under DOD jurisdiction are subject to federal regulations promulgated by the U.S. General Services Administration<sup>128</sup> that are intended to ensure the safe condition of U.S. Government land and facilities prior to sale.<sup>129</sup> In addition, a national defense authorization bill enacted in November 1993<sup>130</sup> directed the DOD to make closed installations available to state and local redevelopment authorities,<sup>131</sup> in furtherance of economic revitalization of communities affected by base closures,<sup>132</sup> and for assistance with the homeless.<sup>133</sup> The Base Closure Community

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128. See 10 U.S.C. § 2701(g) (2000). The DOD is required to “[e]nsure that actions necessary to protect human health, safety, and the environment are taken before the property is transferred or leased.” DEPT OF DEF., *supra* note 58, ¶ 6.4. “Prior to transferring or leasing any property where environmental restoration activities have occurred, formal documentation concluding the suitability to lease or transfer property must be prepared and approved.” MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 22.2; see also 42 U.S.C. § 9620(h) (2000) (describing notice requirement for land transferred by federal agencies under CERCLA). Section 120(h) of CERCLA was amended by the Community Environmental Response Facilitation Act (CERFA). Pub. L. No. 102-426, 106 Stat. 2174 (1992).

129. See, e.g., 41 C.F.R. pt. 102-75 (2004) (explaining real property disposal). See generally *id.* pts. 101-1 to 101-49; *id.* pts. 102-1 to 102-195; *id.* § 102-75.130 (“If hazardous substance activity took place on the property, the reporting agency must include information on the type and quantity of such hazardous substance and the time at which such storage, release, or disposal took place.”).

130. National Defense Authorization Act for Fiscal Year 1994, Pub. L. No. 103-160, 107 Stat. 1547 (1993).

131. *Id.* § 2903, 107 Stat. at 1912. The authorization bill amended the Base Closure Act of 1988 and the Base Closure Act of 1990. *Id.*

132. *Id.* § 2901(3)-(4), 107 Stat. at 1909.

A military installation is a significant source of employment for many communities, and the closure or realignment of an installation may cause economic hardship for such communities.

....  
 ... [T]he [DOD] shall consider locally and regionally delineated economic development needs and priorities into the process by which the [DOD] disposes of real property and personal property as part of the closure of a military installation under a base closure law.

....  
 ... It is the sense of Congress that the [DOD] take all actions that the [DOD] determines practicable to make available the military equipment . . . to communities suffering significant adverse economic consequences as a result of the closure of military installations.

*Id.* §§ 2901(2), 2903(c), 107 Stat. at 1915, 2909(a), 107 Stat. at 1924. The DOD is required to “[s]upport community reinvestment initiatives at closing and realigning installations through the selection of remedies, where practicable, that are consistent with redevelopment actions.” DEPT OF DEF., *supra* note 58, ¶ 4.8.

133. § 2905, 107 Stat. at 1916. The authorization bill amended the Base Closure Act of 1988 and the Base Closure Act of 1990. *Id.*; see also Stewart B. McKinney Homeless

Redevelopment and Homeless Assistance Act of 1994 (Homeless Assistance Act)<sup>134</sup> advanced those goals of the 1993 authorization bill.<sup>135</sup> To date, the Federal Government has spent \$1.5 billion to assist communities affected by base closures.<sup>136</sup>

In accordance with a Defense Conversion Plan announced by President Clinton in July 1993,<sup>137</sup> the DOD established a Fast-Track Cleanup Program (FTC) to accelerate the environmental restoration of BRAC facilities and to expedite the sale and lease of BRAC facilities to state and local redevelopment authorities.<sup>138</sup> Enacted in September

Assistance Act, 42 U.S.C. § 11411 (2000) (allowing use of unutilized and underutilized public buildings to assist the homeless).

134. Pub. L. No. 103-421, 108 Stat. 4346 (1994) (codified as amended at 10 U.S.C. § 2687 note (2000) and 42 U.S.C. §§ 11301 note, 11411 (2000)).

135. *Id.* § 2(a), 108 Stat. at 4346. The Homeless Assistance Act amended the Base Closure Act of 1990. *Id.* See generally 32 C.F.R. pt. 174 (2004) (discussing revitalization of base closure communities); *id.* pt. 175 (prescribing procedures for base closure communities); *id.* pt. 176 (allowing for redevelopment and homeless assistance for base closure communities). Under DOD regulations that implement the 1993 authorization bill and the Homeless Assistance Act, the DOD shall “[h]elp communities impacted by base closures and realignments achieve rapid economic recovery through effective reuse of the assets of closing and realigning bases—more quickly, more effectively and in ways based on local market conditions and locally developed reuse plans.” *Id.* § 174.4(a).

136. See, e.g., U.S. GEN. ACCOUNTING OFFICE, GAO-02-433, *supra* note 122, at 3, 14. In addition to the DOD, the U.S. Department of Commerce, the U.S. Department of Labor, and the Federal Aviation Administration in the U.S. Department of Transportation have offered financial assistance to communities affected by base closures. *Id.* at 14.

137. Remarks Announcing the Defense Conversion Plan and an Exchange with Reporters, 29 WEEKLY COMP. PRES. DOC. 1219 (July 2, 1993).

I am ordering an unprecedented Federal effort in the form of a new five-point program to ensure that when we close these bases we also open a new and brighter economic future for the affected workers and their communities.

. . . Third, we will establish a fast-track cleanup program for environmental problems. This has been an enormous problem in the past in trying to move bases to commercial purposes.

. . . .

This Government-wide effort will cost over \$5 billion in the next 5 years.

*Id.* at 1219, 1220

138. Instruction number 4715.7 “[i]mplements the Fast-Track Cleanup (FTC) Program to expedite restoration and transfer or lease of property at closing and realigning installations.” DEPT OF DEF., *supra* note 58, ¶ 1.6. The DOD is required to “[c]onduct the FTC program to expedite restoration and transfer or lease of property at closing and realigning installations.” *Id.* ¶ 6.3; see also MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 8.4.1 (“[The FTC] is a policy adopted to expedite completion of environmental restoration and integrate reuse needs and priorities with environmental restoration authorities and transfer at closing and realigning installations.”); U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-95-70, MILITARY BASES: ENVIRONMENTAL IMPACT AT CLOSING INSTALLATIONS 6 (1995) (“DOD established the Fast Track Cleanup program in 1993.

1996,<sup>139</sup> a national defense authorization bill also amended the Base Closure Act of 1990 to authorize the conveyance of closed installations to state and local redevelopment authorities prior to completion of environmental restoration.<sup>140</sup>

Enacted in December 2001, a national defense authorization bill amended the Base Closure Act of 1990 to authorize a fifth round of base closures and realignments in 2005.<sup>141</sup> Pursuant to the authorization bill,<sup>142</sup> the DOD certified the need for an additional BRAC round in March 2004.<sup>143</sup> Also pursuant to the authorization bill,<sup>144</sup> the DOD promulgated selection criteria for the fifth round in February 2004.<sup>145</sup> The DOD is

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Although the program has addressed impediments to quick cleanup and transfer of property, certain actions have not achieved the desired or initially planned results.”).

139. National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201, 110 Stat. 2422 (1996).

140. *Id.* § 334(a), 110 Stat. at 2486; *see also* 42 U.S.C. § 9620(h)(3)(C) (2000) (providing for early transfer authority under CERCLA); MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 22.3.1 (“The Early Transfer Authority (ETA) provided by CERCLA . . . allows federal property to be transferred to a non-federal entity before completion of all necessary remedial actions. It is D[O]D’s policy that ETA be used whenever doing so is beneficial both to D[O]D and the transferee.”). In addition, the Base Closure Act of 1990 stated that “[i]n carrying out any closure or realignment under [the Base Closure Act of 1990], the [DOD] shall ensure that environmental restoration of any property made excess to the needs of the [DOD] as a result of such closure or realignment be carried out as soon as possible.” Defense Base Closure and Realignment Act of 1990, Pub. L. No. 101-510, § 2905(a)(2), 104 Stat. 1808, 1814.

141. *See* National Defense Authorization Act for Fiscal Year 2002, Pub. L. No. 107-107, §§ 3001-3006, 115 Stat. 1012, 1342-51 (2001); *see also* National Defense Authorization Act for Fiscal Year 1998, Pub. L. No. 105-85, § 2824(a)(1), 111 Stat. 1629, 1998 (1997) (“The Secretary of Defense shall prepare and submit to the congressional defense committees a report on the costs and savings attributable to the rounds of base closures and realignments conducted under the base closure laws and on the need, if any, for additional rounds of base closures and realignments.”).

142. § 3001, 115 Stat. at 1342 (enacting section 2912 of Base Closure Act of 1990).

143. U.S. GEN. ACCOUNTING OFFICE, GAO-04-760, MILITARY BASE CLOSURES: ASSESSMENT OF DOD’S 2004 REPORT ON THE NEED FOR A BASE REALIGNMENT AND CLOSURE ROUND 23 (2004). The DOD certification of the need for an additional BRAC round “is underscored by the department’s desire to realize broader objectives in the 2005 round, including fostering jointness, transformation, assessing common business oriented functions on a cross-service basis, and accommodating the potential redeployment of some forces from overseas bases back to the United States.” *Id.*; *see also* U.S. DEP’T OF DEF., REPORT REQUIRED BY SECTION 2912 OF THE DEFENSE BASE CLOSURE AND REALIGNMENT ACT OF 1990, AS AMENDED THROUGH THE NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2003, at 1 (2004), *available at* [http://www.dod.mil/brac/docs/04\\_0\\_body032403.pdf](http://www.dod.mil/brac/docs/04_0_body032403.pdf); *id.* at 3 (“This report highlights that excess infrastructure does exist and is available for reshaping or needs to be eliminated. This report estimates that the Department possesses, in aggregate, 24 percent excess installation capacity.”).

144. § 3002, 115 Stat. at 1344 (enacting section 2913 of Base Closure Act of 1990).

145. Notice, 69 Fed. Reg. 6948 (Feb. 12, 2004).

directed to recommend the closure or realignment of DOD installations for the fifth round in May 2005.<sup>146</sup>

The Deputy Under Secretary of Defense for Environmental Security, an office the DOD established in May 1993,<sup>147</sup> is responsible for day-to-day implementation of the DERP.<sup>148</sup> Consistent with section 211 of SARA, section 120 of CERCLA, the Base Closure Act of 1988, and the Base Closure Act of 1990, the DOD has organized the DERP into three separate program categories.<sup>149</sup> Under the program, the DOD, in general, engages in (i) Installation Restoration activities,<sup>150</sup> (ii) Military Munitions Response activities,<sup>151</sup> and (iii) Building Demolition and Debris Removal activities.<sup>152</sup>

146. § 3003, 115 Stat. at 1345-46 (enacting section 2914 of Base Closure Act of 1990). “[T]he upcoming round is expected to encompass more than a capacity-reduction and cost-savings effort; rather, it is also an effort to align the defense infrastructure with the transformation of its forces.” U.S. GEN. ACCOUNTING OFFICE, *supra* note 143, at 4.

147. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-94-142, ENVIRONMENT: DOD’S NEW ENVIRONMENTAL SECURITY STRATEGY FACES BARRIERS 1 (1994). The DOD expanded the Office of Environmental Security “to focus on specific missions, including cleanup, compliance, conservation, pollution prevention, and environmental technology.” *Id.*

148. DEP’T OF DEF., *supra* note 58, ¶ 5.2. The Deputy Under Secretary of Defense for Environmental Security is under the Under Secretary of Defense for Acquisition and Technology. *Id.* at 4.

149. See MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 6 (describing the three program categories); *id.* ¶ 6.1 (“The following program categories have been established to describe the types of environmental restoration activities that occur under the DERP . . .”).

150. See *id.* ¶ 6.1.1. The DOD established an Installation Restoration Program in 1975. U.S. GEN. ACCOUNTING OFFICE, *supra* note 138, at 14. The program was incorporated into the DERP in 1986. *Id.*

151. See MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 6.1.2.

152. See *id.* ¶ 6.1.3. This organization also is consistent, in particular, with 10 U.S.C. § 2701(b).

Goals of the program shall include the following:

(1) The identification, investigation, research and development, and cleanup of contamination from hazardous substances, pollutants, and contaminants.

(2) Correction of other environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment.

(3) Demolition and removal of unsafe buildings and structures, including buildings and structures of the Department of Defense at sites formerly used by or under the jurisdiction of the Secretary.

10 U.S.C. § 2701(b)(1)-(3) (2000). For example, Military Munitions Response corresponds to 10 U.S.C. § 2701(b)(2). Building Demolition and Debris Removal corresponds to 10 U.S.C. § 2701(b)(3).

Under the DERP, the DOD inventories active installations, FUDS, and BRAC installations in need of environmental restoration.<sup>153</sup> Consistent with the risk management approach that characterizes the DERP,<sup>154</sup> the DOD then prioritizes those installations and sites for restoration,<sup>155</sup> which is executed under a management action plan crafted for each installation or site.<sup>156</sup> “Sites remain in the DERP until all required response actions have been completed.”<sup>157</sup>

In some instances, the environmental restoration of an installation may require the indefinite imposition of physical, legal, or administrative land use controls “to prevent or reduce risks to human health, safety, and the environment.”<sup>158</sup> Pursuant to section 113(k) of CERCLA,<sup>159</sup> the DOD

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153. See MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 13 (detailing site inventory management, performance measures, and reporting); *id.* ¶ 13.2 (“The Restoration Management Information System (RMIS) is a tool for implementing the required inventory management approach.”).

154. MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 5; see also *id.* ¶ 5.1 (“[The] D[O]D employs a risk management approach in the environmental restoration program.”); *id.* ¶ 5.2 (“In risk management, several sources of information are used collectively to make decisions about the need for, and the timing of, response actions.”).

155. See *id.* ¶ 16 (explaining priority setting and sequencing). The DOD has “adopted a risk management strategy in which sites with a higher relative-risk receive priority over sites with a lower relative-risk. The [Relative-Risk Site Evaluation] RRSE framework is the foundation of that strategy.” *Id.* ¶ 16.3.1; see DEP’T OF DEF., *supra* note 91, at 7-9 (describing site prioritization); see also U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-99-25, ENVIRONMENTAL CLEANUP: DOD’S IMPLEMENTATION OF THE RELATIVE RISK SITE EVALUATION PROCESS 1 (1998) (“DOD adopted the [RRSE] process in 1994 to address inconsistencies in the evaluation methods it used to prioritize contaminated sites.”); U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-97-135, ENVIRONMENTAL PROTECTION: INFORMATION USED FOR DEFENSE ENVIRONMENTAL MANAGEMENT 6 (1997) (“To direct resources to cleanup sites that pose the greatest risk to human health and the environment, DOD has developed a methodology for evaluating the relative risk at its sites.”). The RRSE framework was adopted after the release of a GAO report that was critical of the previous prioritization process. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-94-133, ENVIRONMENTAL CLEANUP: TOO MANY HIGH PRIORITY SITES IMPEDE DOD’S PROGRAM (1994); see also U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-94-133, ENVIRONMENTAL CLEANUP: CASE STUDIES OF SIX HIGH PRIORITY DOD INSTALLATION 1 (1994).

156. See MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 17 (explaining management action plans); *id.* ¶ 17.1 (footnote omitted) (“The Management Action Plan (MAP) or its equivalent is a key document for managing the environmental restoration program at an installation or FUDS.”).

157. *Id.* ¶ 24.1.

158. *Id.* ¶ 21.1 (“LUCs [land use controls] are a common component of any response action that does not allow for unrestricted land use following the completion of the response action or when the response action allows for unrestricted use, but there is a need to protect the integrity of the remedy.”). If an environmental restoration results in restricted land use, then the DOD shall review the restoration at least every five years “to ensure that the remedy continues to protect human health and the environment.” *Id.* ¶ 23.2.



maintains an administrative record for each environmental restoration under the DERP.<sup>160</sup>

“Due to the cost and complexity of restoration work, [the DOD] must plan its activities years in advance to ensure that adequate funding is available for the DERP to progress smoothly toward completion of environmental restoration requirements.”<sup>161</sup> In preparation for annual DERP budget requests, the DOD prepares cost-to-complete estimates for environmental restoration projects.<sup>162</sup> An annual budget proposal takes approximately two years to prepare.<sup>163</sup>

The DOD has identified over 30,000 sites for environmental restoration at active installations, FUDS, and BRAC installations.<sup>164</sup> Between 1984—two years prior to SARA—and 2003, the DOD spent approximately \$25 billion dollars on environmental restoration.<sup>165</sup> The total cost of the DERP for the complete environmental restoration of all active installations, FUDS, and BRAC installations cannot be estimated with precision. In December 2001 the General Accounting Office (GAO) concluded that “DOD has not yet developed the policies, procedures, and methodologies needed to ensure that cleanup costs required for all of its ongoing and inactive or closed operations are identified, consistently estimated, and appropriately reported.”<sup>166</sup>

159. 42 U.S.C. § 9613(k) (2000).

160. MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 19 (outlining records management procedures).

The Administrative Record serves two purposes. First, CERCLA § 113(k) requires that the Administrative Record act as a vehicle for public participation in selecting a response action. Second, under CERCLA § 113(j), judicial review of any issue concerning the adequacy of any response action is limited to the contents of the Administrative Record.

*Id.* ¶ 19.2.2.

161. DEP'T OF DEF., *supra* note 91, at 20.

162. See MANAGEMENT GUIDANCE FOR DERP, *supra* note 58, ¶ 15; *id.* ¶ 15.1 (“The cost-to-complete estimate for environmental restoration is an important planning tool in the budget process.”).

163. DEP'T OF DEF., *supra* note 91, at 20.

164. *Id.* at 1.

165. *Id.* at 21. In September 1991 the DOD estimated that the environmental restoration of active installations and FUDS would be \$24.5 billion. U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-92-37, DOD ESTIMATES FOR CLEANING UP CONTAMINATED SITES IMPROVED BUT STILL CONSTRAINED 1 (1991).

166. U.S. GEN. ACCOUNTING OFFICE, GAO-02-117, ENVIRONMENTAL LIABILITIES: CLEANUP COSTS FROM CERTAIN DOD OPERATIONS ARE NOT BEING REPORTED 3 (2001); see *id.* at 21 (“DOD lacks leadership to ensure comprehensive reporting of the cleanup costs for ongoing operations and certain inactive/closed operations on active installations.”).

In 2003 there were 298 active RABs.<sup>167</sup> Through 2003 the DOD had executed fifty-one agreements with states and territories under the Defense and State Memorandum of Agreement Program.<sup>168</sup> Through 2003 the ATSDR had completed 151 public health assessments for DERP facilities,<sup>169</sup> and the EPA had executed 118 intergovernmental agreements with the DOD.<sup>170</sup>

With respect to the FUDS Program, the DOD has identified over 9500 properties for potential inclusion in the program.<sup>171</sup> The DOD has estimated the cost of environmental restoration for eligible properties to be between \$15 and \$20 billion.<sup>172</sup> The Secretary of the Army is the DOD Executive Agent for the FUDS Program,<sup>173</sup> which the USACE executes through its seven geographic divisions and twenty-two districts.<sup>174</sup>

The total cost of BRAC-related environmental restoration alone, which was \$7 billion through the end of September 2001,<sup>175</sup> is expected to reach \$10.5 billion.<sup>176</sup> With respect to practice ranges on active installations, FUDS, and BRAC installations, all of which may contain UXO, munitions, and munitions constituents, the GAO has reported that

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167. DEP'T OF DEF., *supra* note 91, at 29 ("The RAB program is now one of the largest public involvement efforts through a federal agency.").

168. *Id.* at 32.

169. *Id.* at 34.

170. *Id.* at 35.

171. Through October 2000, the DOD had identified 9171 properties for inclusion in the FUDS Program. U.S. GEN. ACCOUNTING OFFICE, GAO-01-557, ENVIRONMENTAL CONTAMINATION: CLEANUP ACTIONS AT FORMERLY USED DEFENSE SITES 1 (2001) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO-01-557]. "The 9,171 potential FUDS properties currently identified are distributed across every state, the District of Columbia, and six U.S. territories and possessions." *Id.* at 2. The DOD, however, has dismissed the need for environmental restoration for 4070 FUDS. *Id.* at 14. *But cf.* U.S. GEN. ACCOUNTING OFFICE, *supra* note 68, at 4 ("[T]he [DOD] does not have a sound basis for determining that about 38 percent, or 1,468, of 3,840 [FUDS] do not need further study or cleanup action.").

172. U.S. GEN. ACCOUNTING OFFICE, GAO-01-557, *supra* note 171, at 1. Between 1984 and 2001, the USACE had spent \$2.6 billion on FUDS environmental restoration. *Id.* at 3.

173. DEP'T OF DEF., *supra* note 58, ¶ 1.8.

174. DEP'T OF DEF., *supra* note 91, at 63. *See generally* U.S. ARMY CORPS OF ENG'RS, DEP'T OF THE ARMY, ENGINEER REGULATION NO. 200-3-1, ENVIRONMENTAL QUALITY: FORMERLY USED DEFENSE SITES (FUDS) PROGRAM POLICY (2004), available at [http://www.epa.gov/fedfac/pdf/army\\_fuds\\_policy\\_062004.pdf](http://www.epa.gov/fedfac/pdf/army_fuds_policy_062004.pdf).

175. *See, e.g.*, U.S. GEN. ACCOUNTING OFFICE, GAO-02-433, *supra* note 122, at 21.

176. *Id.* at 3; *see also* U.S. GEN. ACCOUNTING OFFICE, GAO/NSIAD-96-172, MILITARY BASE CLOSURES: REDUCING HIGH COST OF ENVIRONMENTAL CLEANUP REQUIRES DIFFICULT CHOICES (1996).

over fifteen million acres of land are contaminated.<sup>177</sup> The DOD-estimated cost for environmental restoration of contaminated sites is between \$8 and \$35 billion.<sup>178</sup> In December 2003, however, the GAO reported that the “DOD has made limited progress in its program to identify, assess, and clean up sites that may be contaminated with military munitions.”<sup>179</sup>

In addition to UXO,<sup>180</sup> the DOD is concerned with munitions constituents. The DOD has identified 200 chemical contaminants associated with munitions on operational practice ranges, none of which, however, is regulated by the EPA under the Safe Drinking Water Act.<sup>181</sup> Of the 200 identified chemical contaminants, “20 are of great concern due to their widespread use and potential environmental impact.”<sup>182</sup> Nonetheless, the GAO has reported that the “DOD does not have a comprehensive policy requiring sampling or cleanup of the more than 200 chemical contaminants associated with military munitions on operational ranges.”<sup>183</sup> The DOD has proposed that it be exempt by statute from compliance with CERCLA and RCRA for operational practice ranges.<sup>184</sup>

In 2003 the USACE initiated the Chemical Warfare Materiel (CWM) Scoping and Security Study, “the first nationwide effort to identify,

177. U.S. GEN. ACCOUNTING OFFICE, GAO-04-147, *MILITARY MUNITIONS: DOD NEEDS TO DEVELOP A COMPREHENSIVE APPROACH FOR CLEANING UP CONTAMINATED SITES 1* (2003) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO-04-147]. The DOD has identified 2307 sites with potential munitions contamination. *Id.* at 8. *But cf.* U.S. GEN. ACCOUNTING OFFICE, GAO-04-601, *DOD OPERATIONAL RANGES: MORE RELIABLE CLEANUP COST ESTIMATES AND A PROACTIVE APPROACH TO IDENTIFYING CONTAMINATION ARE NEEDED 1* (2004) [hereinafter U.S. GEN. ACCOUNTING OFFICE, GAO-04-601] (identifying 10,444 operational practice ranges).

178. U.S. GEN. ACCOUNTING OFFICE, GAO-04-147, *supra* note 177. *But cf.* U.S. GEN. ACCOUNTING OFFICE, GAO-04-601, *supra* note 177 (estimating cost at \$16-\$165 billion to clean up operational ranges). “DOD’s estimate that it would cost between \$16 billion and \$165 billion to clean up unexploded ordnance, discarded military munitions, and munitions constituents on operational ranges is questionable.” *Id.* at 15.

179. U.S. GEN. ACCOUNTING OFFICE, GAO-04-147, *supra* note 177; *see also* Vernon Loeb, *Unexploded Arms Require Big Cleanup at 16,000 U.S. Sites: EPA Papers Note Major Health Risks*, WASH. POST, Nov. 25, 2002, at A4.

180. The EPA has identified sixty-seven fatalities and 137 injuries since World War I due to civilian exposure to UXO. *See* DPRA INC., WORK ASSIGNMENT NO. 1, UXO INCIDENT REPORT 5 (2001), *available at* <http://www.epa.gov/fedfac/pdf/2001UXOreport.pdf>.

181. U.S. GEN. ACCOUNTING OFFICE, GAO-04-601, *supra* note 177, at 12. *Contra* 40 C.F.R. § 141.40 (2004) (explaining monitoring regulations for unregulated contaminants).

182. U.S. GEN. ACCOUNTING OFFICE, GAO-04-601, *supra* note 177, at 14 (“TNT, propanetriol trinitrate (nitroglycerin), Royal Demolition Explosive, and perchlorate are among the 20.”).

183. *Id.* at 24.

184. *Id.* at 11.

determine a relative priority, and develop cost estimates for future actions at sites where historical documentation indicates that CWM was used, produced, stored, or tested.”<sup>185</sup>

### C. National Priorities List

Under section 120 of CERCLA,<sup>186</sup> the DERP is subject to the requirements of Superfund.<sup>187</sup> The scope of the environmental restoration required under CERCLA, however, varies with circumstances.

A response under Superfund to a release or threatened release of a hazardous substance can be a removal or a remediation.<sup>188</sup> A removal, of course, involves the short-term removal of the hazardous substance.<sup>189</sup> A remediation involves a long-term environmental restoration “taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger.”<sup>190</sup>

Not all releases or threatened releases of a hazardous substance are entitled to remediation under CERCLA. Most are entitled just to removal. Section 105 of Superfund requires a national hazardous substance response plan—the National Contingency Plan (NCP)—with “procedures and standards for responding to releases of hazardous substances, pollutants, and contaminants.”<sup>191</sup> The statute requires the NCP to include “criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable taking into account the potential urgency of such action, for the purpose of taking removal action.”<sup>192</sup>

Finally, section 105 requires a list, developed on the basis of the foregoing criteria, of national priorities for environmental restoration—the National Priorities List (NPL).<sup>193</sup> The statute also requires each state

185. DEP’T OF DEF., *supra* note 91, at 66.

186. 42 U.S.C. § 9620 (2000) (applying CERCLA to the Federal Government).

187. *Id.* § 9620(a)(1) (“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, [CERCLA] in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity . . .”).

188. *Id.* § 9601(25) (defining response).

189. *See id.* § 9601(23) (defining removal).

190. *Id.* § 9601(24) (defining remedial action).

191. *Id.* § 9605(a).

192. *Id.* § 9605(a)(8)(A).

193. *Id.* § 9605(a)(8)(B).

to submit a list of priorities for possible inclusion on the NPL.<sup>194</sup> Superfund requires the NPL “for the purpose of taking remedial action.”<sup>195</sup> A removal under Superfund thus is available for all releases or threatened releases of a hazardous substance, but a remediation is available just for releases or threatened releases on the NPL.<sup>196</sup>

Consistent with section 105 of CERCLA, the EPA has adopted the NCP.<sup>197</sup> The purpose of the 300-page regulation “is to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.”<sup>198</sup> Subpart B of the regulation addresses the organization and responsibilities for responses to discharges of oil and releases of hazardous substances;<sup>199</sup> subpart C addresses the development of plans for responses;<sup>200</sup> subpart D addresses the steps for responses to discharges of oil;<sup>201</sup> and subpart E addresses the steps for responses to releases or threatened releases of a hazardous substance.<sup>202</sup>

Subpart E, Hazardous Substance Response, provides for notification to the EPA of releases or threatened releases of a hazardous substance,<sup>203</sup> evaluations of releases for removal,<sup>204</sup> and the implementation of removal.<sup>205</sup> A removal may be financed with federal funds under

194. *See id.* (“Within one year after December 11, 1980, and annually thereafter, each State shall establish and submit for consideration by the President priorities for remedial action among known releases and potential releases in that State . . .”).

195. *Id.* § 9605(a)(8)(A).

196. *See, e.g.,* *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1046 (2d Cir. 1985).

197. *See generally* National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. pt. 300 (2003). The National Contingency Plan (NCP) also was adopted pursuant to section 311 of the Clean Water Act. 33 U.S.C. § 1321 (2000). The President delegated the promulgation of the NCP to the EPA. *See* Exec. Order No. 12,777, 56 Fed. Reg. 54,757 (Oct. 22, 1991).

198. 40 C.F.R. § 300.1 (2003).

199. *Id.* §§ 300.100-.185.

200. *Id.* §§ 300.200-.220.

201. *Id.* §§ 300.300-.335.

202. *Id.* §§ 300.400-.440; *see also id.* §§ 300.500-.525 (describing state involvement in hazardous substance response); *id.* §§ 300.600-.615 (designating trustees for natural resources); *id.* §§ 300.700 (allowing for participation by other persons); *id.* §§ 300.800-.825 (establishing administrative record for selection of response record).

203. *Id.* § 300.405(a)(2).

204. *Id.* § 300.410(a) (“A removal site evaluation includes a removal preliminary assessment and, if warranted, a removal site inspection.”).

205. *Id.* § 300.415; *id.* § 300.415(b)(1) (“At any release, regardless of whether the site is included on the National Priorities List (NPL), . . . the [EPA] may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of release.”). A removal may require the preparation of an engineering evaluation/cost analysis (EE/CA). *Id.* § 300.415(b)(4)(i) (“The EE/CA is an analysis of removal alternatives for a site.”).

CERCLA up to two million dollars.<sup>206</sup> “Removal actions shall, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned.”<sup>207</sup> A removal may include fences and site control precautions, drainage controls, and the stabilization of berms, dikes, impoundments, and contaminated soil.<sup>208</sup>

Subpart E also provides for evaluations of releases for remediation,<sup>209</sup> the development of national priorities for remediation,<sup>210</sup> the consideration of remediation alternatives,<sup>211</sup> and the implementation of remediation.<sup>212</sup> Remediation alternatives are considered through a remedial investigation/feasibility study (RI/FS) that “assess[es] site conditions and evaluate[s] alternatives.”<sup>213</sup> “The primary objective of the [FS] is to ensure that appropriate remedial alternatives are developed and evaluated . . . .”<sup>214</sup> Thus an RI/FS includes a detailed analysis of remediation alternatives.<sup>215</sup> The selection of a remediation alternative is documented in a record of decision (ROD).<sup>216</sup> The implementation of remediation involves a remedial design/remedial action (RD/RA) period<sup>217</sup> and, if required, a subsequent period of operation and maintenance of the remediation.<sup>218</sup>

206. *Id.* § 300.415(b)(5).

207. *Id.* § 300.415(d).

208. *Id.* § 300.415(e)(1)-(4).

209. *Id.* § 300.420(a). “The evaluation may consist of two steps: a remedial preliminary assessment (PA) and a remedial site inspection (SI).” *Id.*

210. *Id.* § 300.425(a).

211. *Id.* § 300.430(a)(1) (“The purpose of the remedy selection process is to implement remedies that eliminate, reduce, or control risks to human health and the environment.”); *id.* § 300.430(a)(1)(i) (“The national goal of the remedy selection process is to select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste.”). The selection process is based on three program management principles. *See id.* § 300.430(a)(1)(ii). The selection process also is based on six EPA expectations. *See id.* § 300.430(a)(1)(iii).

212. *Id.* § 300.435.

213. *Id.* § 300.430(a)(2). The development of a remedial investigation/feasibility study requires the participation of “local officials, community residents, public interest groups, or other interested or affected parties.” *Id.* § 300.430(c).

214. *Id.* § 300.430(e)(1).

215. *Id.* § 300.430(e)(9).

216. *Id.* § 300.430(f)(5). The EPA “shall make the final remedy selection decision and document that decision in the [record of decision].” *Id.* § 300.430(f)(4)(i).

217. *Id.* § 300.435(b); *id.* § 300.435(a). (“The remedial design/remedial action (RD/RA) stage includes the development of the actual design of the selected remedy and implementation of the remedy through construction.”).

218. *Id.* § 300.435(f)(1) (“A state must provide its assurance to assume responsibility for [operation and maintenance], including, where appropriate, requirements for maintaining institutional controls . . .”).

The development of national priorities for remediation—the NPL—concerns the “criteria as well as the methods and procedures EPA uses to establish its priorities for remedial actions.”<sup>219</sup> A release or threatened release of a hazardous substance that is placed on the NPL pursuant to these criteria and methods is eligible for environmental remediation, i.e., a long-term environmental restoration.<sup>220</sup> In addition, a release on the NPL is eligible for federal funds under CERCLA.<sup>221</sup> Finally, a release or threatened release on an active DOD installation, on a used defense site, or on a BRAC installation, the environmental restoration of which is financed through the DERP, can be placed on the NPL, although it typically is ineligible for federal funds under Superfund.<sup>222</sup>

Three methods are available for inclusion of a release on the NPL.<sup>223</sup> First, if the release exceeds a threshold score under an EPA Hazard Ranking System, then the release can be placed on the NPL.<sup>224</sup> Second, if (i) the ATSDR has warned the public of the release, (ii) “the EPA [has] determine[d] that the release poses a significant threat to public health[,] and” (iii) the EPA has determined that a remediation of the release would be more cost-effective than a removal, then the release can be placed on the NPL.<sup>225</sup> Finally, a release can be placed on the NPL if “[a] state (not including Indian tribes) has designated a release as its highest priority. States may make only one such designation.”<sup>226</sup>

The NPL itself is appendix B to the NCL.<sup>227</sup> The NPL includes a General Superfund Section (Table 1) and a Federal Facilities Section (Table 2).<sup>228</sup> Through December 2004 there were 800 sites listed on

219. *Id.* § 300.425(a).

220. *Id.* § 300.425(a)-(b).

221. *Id.* § 300.425(b)(1) (“Only those releases included on the NPL shall be considered eligible for Fund-financed remedial action.”). *But cf. id.* § 300.425(b)(2) (“Inclusion of a release on the NPL does not imply that monies will be expended, nor does the rank of a release on the NPL establish the precise priorities for the allocation of Fund resources.”).

222. *See id.* § 300.425(b)(3).

223. *Id.* § 300.425(c)(1)-(3).

224. *Id.* § 300.425(c)(1). *See generally id.* pt. 300 app. A; *id.* ¶ 1.0 (“The Hazard Ranking System (HRS) is the principal mechanism the U.S. Environmental Protection Agency (EPA) uses to place sites on the National Priorities List (NPL). The HRS serves as a screening device to evaluate the potential for releases of uncontrolled hazardous substances to cause human health or environmental damage.”).

225. *Id.* § 300.425(c)(3)(i)-(iii).

226. *Id.* § 300.425(c)(2); *see id.* § 300.5 (“State means the several states of the United States [and] the District of Columbia . . .”).

227. *Id.* pt. 300 app. B.

228. *Id.*

Table 1 and 145 sites listed on Table 2.<sup>229</sup> The NPL is revised routinely.<sup>230</sup> The EPA assists with, but does not take the lead on, the environmental restoration of Federal Facilities on the NPL.<sup>231</sup>

In Washington, D.C., a single site is on the NPL.<sup>232</sup> The Washington Navy Yard, located on the Anacostia River in Southeast Washington is an active DOD installation.<sup>233</sup> The Navy Yard was not designated for inclusion on the NPL by the District of Columbia. Instead, the EPA proposed to include the site in March 1998.<sup>234</sup> In July 1998 the NPL was revised to include the Washington Navy Yard.<sup>235</sup>

In addition to the Washington Navy Yard, numerous other active DOD installations, FUDS, and BRAC installations are included on the NPL.<sup>236</sup> In March 2003 the GAO reported that twenty-one FUDS were on the NPL.<sup>237</sup>

Nonetheless, all active DOD installations, FUDS, and BRAC installations in need of environmental restoration are eligible for long-term environmental remediation consistent with the requirements of the

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229. The original NPL, adopted in September 1983, listed 406 sites. Amendment to National Oil and Hazardous Substance Contingencies Plan, National Priorities List, 48 Fed. Reg. 40,658, 40,660 (Sept. 8, 1983) (to be codified at 40 C.F.R. pt. 300).

230. See, e.g., National Priorities List for Uncontrolled Hazardous Waste Sites, 63 Fed. Reg. 40,182, 40,182-83 (July 28, 1998) (to be codified at 40 C.F.R. pt. 300); National Priorities List for Uncontrolled Hazardous Waste Sites, Proposed Rule No. 24, 63 Fed. Reg. 11,340, 11,340 (proposed Mar. 6, 1998) (to be codified at 40 C.F.R. pt. 300). A site can be deleted from the list upon completion of environmental remediation. 40 C.F.R. § 300.425(e) (2003). Through March 2005 the EPA had deleted 280 sites from Table 1 and twelve sites from Table 2. U.S. ENVTL. PROTECTION AGENCY, NPL SITE TOTALS BY STATUS AND MILESTONE, <http://www.epa.gov/superfund/sites/query/queryhtm/npltotal.htm> (Mar. 17, 2005).

231. National Priorities List for Uncontrolled Hazardous Waste Sites, 70 Fed. Reg. 7182, 7183 (Feb. 11, 2005) (to be codified at 10 C.F.R. pt. 300) ("EPA generally is not the lead agency at Federal facilities Section sites, and its role at such sites is accordingly less extensive than at other sites.").

232. 40 C.F.R. pt. 300 app. B tbl.2 (2003).

233. See *id.*

234. National Priorities List for Uncontrolled Hazardous Waste Sites, Proposed Rule No. 24, 63 Fed. Reg. at 11,345. The EPA also proposed to include, *inter alia*, the Norfolk Naval Shipyard in Portsmouth, Virginia. *Id.*

235. National Priorities List for Uncontrolled Hazardous Waste Sites, 63 Fed. Reg. at 40,187-88. The NPL also was revised to include, *inter alia*, Fort George G. Meade in Maryland. *Id.*

236. In September 1994 the DOD was engaged in the environmental restoration of over 1700 installations, ninety-two of which were on the NPL. U.S. GEN. ACCOUNTING OFFICE, *supra* note 147, at 3.

237. U.S. GEN. ACCOUNTING OFFICE, GAO-03-146, ENVIRONMENTAL CONTAMINATION: DOD HAS TAKEN STEPS TO IMPROVE CLEANUP COORDINATION AT FORMER DEFENSE SITES BUT CLEARER GUIDANCE IS NEEDED TO ENSURE CONSISTENCY 1 (2003).



NCP. Under the DERP, the structure and process set forth in the NCP for environmental remediation are applicable to all DERP sites regardless of NPL status.<sup>238</sup> Thus the NCP process is applicable to “all restoration sites, including those under [Military Munitions Response activities], regardless of their NPL status.”<sup>239</sup> In general, however, the EPA does not assist with the environmental restoration of DOD installations, FUDS, and BRAC installations not on the NPL.<sup>240</sup>

In principle, therefore, the environmental restoration under the DERP of Spring Valley, which is not on the NPL, is subject to the same rigorous structure and process as the environmental restoration of the Washington Navy Yard, which is on the NPL. If the principle reflected the practice, however, then there would be no need for the inclusion of DOD installations, FUDS, and BRAC installations on the NPL.

The environmental restoration of Spring Valley under the DERP otherwise appears to be almost routine or commonplace in view of the Herculean task before the USACE—30,000 contaminated sites, 15 million acres of land contaminated with UXO, munitions and munitions constituents, and seventy years for the environmental restoration of FUDS alone.<sup>241</sup> American University is just one old U.S. Army base among thousands of active installations, FUDS and BRAC installations in need of environmental restoration, some of which installations are on the NPL.

In some respects, however, the environmental restoration of Spring Valley reflects a unique chain of events unprecedented in the twenty-year saga of the DERP. A distant outpost in 1917, American University, in 2005, is in the middle of a large residential neighborhood in a large metropolitan area.<sup>242</sup>

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238. See DEP'T OF DEF., *supra* note 91, at 4.

239. *Id.* But cf. U.S. GEN. ACCOUNTING OFFICE, *supra* note 147, at 6 (“The imposition of the entire detailed CERCLA process to the minor sites on DOD installations wastes valuable resources where cleanup of even relatively few high-priority sites could strain resources and force difficult choices.”).

240. In March 2003 the GAO reported that the “EPA has historically had little involvement in the cleanup of the approximately 9000 FUDS that are not on its [NPL] and for which EPA is usually not the primary regulator.” U.S. GEN. ACCOUNTING OFFICE, *supra* note 237, at 19; *see id.* at 22 (“Without an agreement on roles and responsibilities, DOD and EPA have been unable to establish an effective working relationship on FUDS or have had to undertake extra efforts to come to an agreement on how a cleanup should be conducted. An example of this is the Spring Valley FUDS . . .”). *Contra* U.S. ENVTL. PROTECTION AGENCY, EPA POLICY TOWARDS PRIVATELY-OWNED FORMERLY USED DEFENSE SITES, [http://www.epa.gov/fedfac/documents/final\\_fuds\\_policy\\_with\\_itrhead.htm](http://www.epa.gov/fedfac/documents/final_fuds_policy_with_itrhead.htm) (Mar. 21, 2002).

241. DEP'T OF DEF., *supra* note 91, at 7.

242. See AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, SPRING VALLEY IN WASHINGTON DC, <http://www.atsdr.cdc.gov/sites/springvalley/> (last updated

### III. SPRING VALLEY ENVIRONMENTAL RESTORATION

#### A. Chemical Munitions

Within the context of the DERP and the FUDS Program, the USACE undertook the environmental restoration of the Spring Valley neighborhood in Northwest Washington in January 1993, after an excavation for new home construction in the neighborhood “unearthed a cache of munitions [from] World War I.”<sup>243</sup> The neighborhood, which is approximately 660 acres,<sup>244</sup> is home to American University, Sibley Hospital, approximately 1200 private residences, numerous commercial properties, and over two dozen foreign embassies.<sup>245</sup> To assist with hazard assessment, the District of Columbia fire department summoned a U.S. Army ordnance disposal team from Aberdeen Proving Ground in Maryland.<sup>246</sup> An evacuation of the neighborhood was ordered.<sup>247</sup>

Through January 1993, the U.S. Army, in Phase I of Operation Safe Removal, unearthed and removed over 140 shells and projectiles from the Spring Valley construction site.<sup>248</sup> The U.S. Army also completed a report in which Spring Valley was recommended for inclusion in the FUDS Program.<sup>249</sup> Throughout the rest of 1993, in Phase II of Operation Safe Removal, the U.S. Army “undertook a major historical research

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Feb. 11, 2005).

243. Weil & O’Donnell, *supra* note 1 (“Three houses were evacuated in the Spring Valley area of upper Northwest Washington yesterday and part of the neighborhood was cordoned off late last night after excavation work unearthed a cache of munitions dating to World War I.”).

244. 2001 *Spring Valley Hearing*, *supra* note 10, at 262 (testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

245. 2002 *Spring Valley Hearing*, *supra* note 4.

246. Weil & O’Donnell, *supra* note 1; see also Brooke A. Masters, *Liquids Found in Spring Valley Shells May Be Toxic Chemicals*, WASH. POST, Jan. 8, 1993, at B6; Avis Thomas-Lester & Brooke A. Masters, *25 Houses Evacuated as WWI Shells Examined: Officials Say Spring Valley Not Threatened*, WASH. POST, Jan. 7, 1993, at B1.

247. See Martin Weil, *Kelly Orders Compliance in Evacuation: Munitions Site Work Near End, Army Says*, WASH. POST, Jan. 27, 1993, at B6; Martin Weil, *Some Staying Put in Spring Valley: Army Officials Cleaning Up Munitions Ask Kelly To Aid Evacuations*, WASH. POST, Jan. 26, 1993, at D1. See generally Hamil R. Harris, *Spring Valley Residents Unite To Survive War Zone: Peace Returns After Three Weeks of Evacuations To Remove Shells*, WASH. POST, Feb. 4, 1993, at D.C.2.

248. Linda Wheeler, *Army Ends Evacuations in Spring Valley: Last of 141 Shells Removed from NW Site; 2nd Phase of Cleanup Set*, WASH. POST, Jan. 31, 1993, at B7; see also Hamil R. Harris, *Army Locates Second Possible Munitions Site: Area Near Original Spring Valley Dig*, WASH. POST, Feb. 3, 1993, at D5.

249. Memorandum from John Sassi, Chief, Environmental and International Division, U.S. Army Corps of Engineers, to Commander, Baltimore District, U.S. Army Corps of Engineers (May 26, 2000).

effort.”<sup>250</sup> On the basis of the research, the U.S. Army then surveyed almost 500 properties in Spring Valley with metal detection and ultrasonic equipment.<sup>251</sup> The detection of sub-surface metal objects necessitated fifteen excavations for possible munitions in 1994.<sup>252</sup> No additional significant quantities of chemical munitions were unearthed.<sup>253</sup> In May 1994 the U.S. Army and the District of Columbia government executed a Memorandum of Agreement.<sup>254</sup>

In June 1995 the USACE concluded in a RI report that no additional World War I chemical munitions were buried in Spring Valley.<sup>255</sup> The U.S. Army thus decided that no additional environmental restoration in Spring Valley was required.<sup>256</sup> This decision was affirmed in June 1996.<sup>257</sup>

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250. *2001 Spring Valley Hearing*, *supra* note 10, at 262-63 (testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

251. *Id.* at 263. The U.S. Army divided Spring Valley into two tracts of land—Operable Unit 1 (Spring Valley except for the “Captain Rankin” area) and Operable Unit 2 (the “Captain Rankin” area). *Id.* at 116 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA). In addition, 250 soil samples were analyzed. *Id.*; see also Santiago O’Donnell, *No Munitions Mother Lode*, WASH. POST, Aug. 16, 1993, at D7; Martin Weil, *Artillery Projectile Is Found in Northwest*, WASH. POST, Oct. 13, 1993, at D3 (“Noting that the projectile was found on the ground in a relatively busy area, [the U.S. Army] said it was unlikely it had been there long. Probably, [the U.S. Army] suggested, someone found it elsewhere and left it there.”).

252. Peter Y. Hong, *Army To Hunt Old Munitions Again in D.C.*, WASH. POST, Mar. 14, 1994, at A1 (“Army officials also combed the weapon research facility’s records, now kept at Fort McClellan, Ala., and the National Archives, to determine what activities were performed at specific sites. Based on those records, Army officials were able to determine where chemical weapons were tested or discarded . . .”).

253. See, e.g., *Search Finds No Buried Shells*, WASH. POST, Mar. 18, 1994, at B5; Linda Wheeler, *What Army Finds Isn’t Dangerous: Wire Dug Up as Hunt for Weapons Resumes*, WASH. POST, Mar. 16, 1994, at D3. *But see WWI Shell Unearthed*, WASH. POST, May 17, 1994, at B7 (“A metal object buried in the Spring Valley area of Northwest Washington was determined yesterday to be a World War I mortar shell, and residents around the site will be evacuated Thursday while it is removed, the Army said.”); Record of Decision for the Operation Safe Removal Used Defense Site ¶ 2.5.1 [hereinafter Record of Decision] (“Since the initial discovery of 141 buried munitions, three intact munitions have been recovered [in Spring Valley].”), *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 195.

254. See *2002 Spring Valley Hearing*, *supra* note 4, at 81 (testimony of James Buford, Interim Director, District of Columbia Department of Health (DOH)).

255. 1 PARSONS ENG’G SCI., INC., REMEDIAL INVESTIGATION REPORT FOR THE OPERATION SAFE REMOVAL FORMERLY USED DEFENSE SITE, WASHINGTON, D.C. ¶ 1.11 (1995) (“Based on the historical records search, geophysical survey, soil analyses, and intrusive investigations at the OSR FUDS, the Army concludes that no chemical warfare material, ordnance, or hazardous soil contamination remains within the OSR FUDS. Therefore, it is recommended that no further action be performed at the OSR FUDS.”). The report was issued in draft for public comment in March 1995. Record of Decision, *supra* note 253, ¶ 2.3.1, *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 194.

256. Record of Decision, *supra* note 253, ¶ 1.2.1, *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 188 (“This decision document presents a determination that no

In the course of Operation Safe Removal, a \$12 million project,<sup>258</sup> it was revealed that the U.S. Army, in 1986, had researched the possible disposal of World War I chemical munitions in Spring Valley.<sup>259</sup> Prompted by inquiries from American University, which commenced an excavation in April 1986 for a new field house,<sup>260</sup> the research had concluded, in a report prepared by the Department of the Army,<sup>261</sup> that the Federal Government long ago had removed the munitions to Aberdeen Proving Ground.<sup>262</sup>

In March 1995, a real estate enterprise active in Spring Valley development, the W.C. & A.N. Miller Companies (Miller), filed an administrative claim against the U.S. Army for over \$15 million in damages, losses, and expenses attributable to the burial of World War I

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further action will be taken at the Operation Safe Removal Formerly Used Defense Site (OSR FUDS) in Washington, D.C.”). The record of decision was inapplicable to the “Captain Rankin” area, the investigation of which was incomplete in June 1995. *Id.* ¶ 2.1.2, reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 190.

257. PARSONS ENG’G SCI., INC., REMEDIAL INVESTIGATION REPORT FOR THE SPAULDING AND CAPTAIN RANKIN AREAS, OPERATION SAFE REMOVAL FORMERLY USED DEFENSE SITE, WASHINGTON, D.C. ¶ 1.1.2.5 (1996).

258. *No More Munitions Unearthed in D.C.*, WASH. POST, Apr. 20, 1994, at B5. *But cf.* 2001 Spring Valley Hearing, *supra* note 10, at 228 (statement of Lewis D. Walker, Former Deputy Assistant Secretary of the Army, Environment, Safety, and Occupational Health) (stating that more than \$20 million was spent on the removal).

259. *See, e.g.,* Santiago O’Donnell, *Army Knew in ‘86 of Dump in NW: U.S. Decided Munitions Had Been Removed*, WASH. POST, Jan. 29, 1993, at B6. “[T]he Army concluded in its 1986 report that the area was safe because no munitions had been unearthed despite extensive farming and development there since World War I.” *Id.*

260. *See* 2001 Spring Valley Hearing, *supra* note 10, at 133 (“In 1986, while preparing for the construction of an athletic facility, AU discovered a 1921 student newspaper article claiming that the Army had buried munitions along the campus perimeter during the clean-up and dismantling process.”). The U.S. Army provided American University with on-site technical assistance for the excavation. *Id.* at 134. The U.S. Army surveyed the site for the excavation but found no indication of buried chemical munitions. *Id.*; *see also* Letter from Lewis D. Walker, Deputy for Environment, Safety and Occupational Health, to Donald L. Myers, Vice President for Finance and Treasurer, American University (Apr. 7, 1986), reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 157. The U.S. Army also developed a support plan to assist with construction of the field house. Letter from Lewis D. Walker, Deputy for Environment, Safety and Occupational Health, to Donald L. Myers, Vice President for Finance and Treasurer, American University (Aug. 5, 1986), reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 174.

261. *See* Memorandum from J.W. Williams, Historian, Department of the Army 1-3 (Oct. 29, 1986), reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 180-83; *see also* Memorandum from F.A. Thomassy, Department of the Army 1-2 (Nov. 13, 1986), reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 184-85; *id.* at 1, reprinted in 2001 Spring Valley Hearing, *supra* note 10, at 184 (“Records reviewed produced no official documentation of the alleged burial of munitions on the American University Experimental Station properties.”).

262. O’Donnell, *supra* note 259.

chemical munitions in Spring Valley.<sup>263</sup> The U.S. Army Audit Agency reviewed the claim and, in two separate reports issued in July 1995,<sup>264</sup> concluded that the claim was without merit and that in 1986 the U.S. Army had no obligation to advise Miller of the possible disposal in Spring Valley of World War I chemical munitions.<sup>265</sup>

In February 1999 the U.S. Army returned to Spring Valley.<sup>266</sup> Prodded by the District of Columbia Department of Health (DOH),<sup>267</sup> the U.S. Army reanalyzed historical and archival records, photographs, and maps and concluded that it may not have surveyed in 1993-1994 for a possible disposal site for mustard gas and Lewisite.<sup>268</sup> The overlooked burial pit was not on the campus of American University, which was surveyed in 1993-1994, but in the backyard of a private residence for a foreign ambassador.<sup>269</sup> The USACE announced plans in February to commence an excavation in the backyard in March 1999.<sup>270</sup>

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263. See *2001 Spring Valley Hearing*, *supra* note 10, at 231-34 (statement of Francis E. Reardon, Auditor General of the Army).

264. Memorandum from Stephen E. Keefer, Regional Auditor General, U.S. Army Audit Agency, to Chief, Internal Review and Compliance Office, U.S. Army Corps of Engineers (July 27, 1995), *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 235; Memorandum from Stephen E. Keefer, Regional Auditor General, U.S. Army Audit Agency, to Chief, Eastern U.S. Tort Branch, U.S. Army Claims Service 1 (July 27, 1995) [hereinafter *Review of Claim Against the Army*], *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 240.

265. *2001 Spring Valley Hearing*, *supra* note 10, at 233 (statement of Francis E. Reardon, Auditor General of the Army); see also *Review of Claim Against the Army*, *supra* note 264. In addition, “[t]he Army fulfilled its responsibilities during World War I by storing and disposing of chemical weapons in accordance with laws and regulations applicable at the time of operations.” *Id.*

266. Steve Vogel, *Search To Resume near AU for WWI Chemicals*, WASH. POST, Jan. 24, 1999, at C1 (“Six years after the discovery of buried World War I chemical munitions forced evacuations in a Northwest Washington neighborhood, the Army plans to return next month to look for suspected canisters of mustard or other poisonous agents buried in [Spring Valley].”).

267. See, e.g., *2001 Spring Valley Hearing*, *supra* note 10, at 78-91 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH); *id.* at 88 (“In January 1997, representatives of the District Government, EPA and the Corps of Engineers met in Washington, D.C. The District presented the report of our findings that suggested other contaminants may be buried in Spring Valley.”).

268. *Id.* at 261-82 (testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE). The site for the possible disposal pit—Operable Unit 3—was identified in January 1998. *Id.* at 117 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA).

269. Vogel, *supra* note 266.

270. Steve Vogel, *Army To Detail Plans To Dig in D.C. for Mustard Gas Canisters from WWI*, WASH. POST, Feb. 3, 1999, at M10; see also Steve Vogel, *Army To Discuss Digging for Gas Canisters in Korean Ambassador's Yard*, WASH. POST, Feb. 4, 1999, at Va. 3; Steve Vogel, *Old Artillery Shell Unearthed in NW*, WASH. POST, Feb. 17, 1999, at B2.

### B. Arsenic Contamination

By 1999, the USACE, and the residents of Spring Valley, were concerned not just with chemical munitions but also with contamination due to their toxic constituents.<sup>271</sup> The USACE and the EPA were particularly concerned about arsenic, a naturally occurring substance that is also a component of Lewisite.<sup>272</sup> Thus the investigation that commenced in the spring of 1999 searched not just for chemical munitions but for arsenic contamination as well.<sup>273</sup>

The excavation in the backyard of the foreign ambassador,<sup>274</sup> over the course of fourteen months, uncovered 680 items associated with chemical munitions in two separate burial pits.<sup>275</sup> The excavation was followed by chemical analysis of soil samples taken from the yard of an adjacent property.<sup>276</sup> The analysis confirmed the presence of widespread arsenic contamination.<sup>277</sup> The contamination necessitated the removal of soil

271. Steve Vogel, *Army Unveils Plans for NW Chemical Dig: Residents Worried About Possible Contamination of Soil*, WASH. POST, Feb. 5, 1999, at B8 (“But it was fears about lingering health hazards in the soil that had residents most worried.”); see also Steve Vogel, *Concerns Still Cloud WWI Mustard Gas Site*, WASH. POST, Feb. 7, 1999, at Prince William Extra 5.

272. *2001 Spring Valley Hearing*, supra note 10, at 125-26 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA); *id.* at 125 (“The fact is that up until roughly the late nineties, 1997, 1996, 1997, 1998, this was a munitions site and it was not an arsenic site. Arsenic wasn’t indicated to be a problem until the late nineties.”); Steve Vogel, *Arsenic Found in Ambassador’s NW Yard: Army Excavation of WWI Munitions Also Unearths Poison at Neighbor’s Home*, AU, WASH. POST, Jan. 27, 2000, at B3.

273. *2002 Spring Valley Hearing*, supra note 4, at 26-27 (“However, since early 1999, with the additional discovery of buried ordnance and elevated levels of arsenic-contaminated soil at the South Korean property, *the arsenic levels in the soil have become the primary focus of soil cleanup efforts.*” (emphasis added)). In the fall of 2000 the USACE advised American University of the need for chemical analysis of soil samples taken from the campus. See generally *id.* at 131 (statement of Benjamin Ladner, President, American University).

274. Steve Vogel, *Army Prepares To Dig for WWI Chemicals: Northwest Excavation To Start March 29*, WASH. POST, Mar. 17, 1999, at B9.

What was once a peaceful, ornamental garden in the South Korean ambassador’s back yard in Northwest Washington has been prepared in the last several weeks for an Army assault: a \$4 million operation to excavate the grounds this month for canisters of mustard or other toxic World War I chemical agents . . . .

*Id.*

275. *2001 Spring Valley Hearing*, supra note 10, at 88-89 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH).

276. *Id.* at 89.

277. Vogel, supra note 272.

An Army excavation of buried World War I chemical munitions has found widespread arsenic contamination in the back yard of the South Korean ambassador’s home in Northwest Washington. Elevated levels of the poison

from the backyard.<sup>278</sup> Through 2001 additional excavations were commenced on adjacent properties.<sup>279</sup>

Over time, the USACE, with EPA assistance and with DOH cooperation, broadened the chemical analysis of Spring Valley soil to approximately 1200 residential and 400 nonresidential properties in Spring Valley and to American University.<sup>280</sup> Throughout 1999 and 2000, "an intensive and gradually expanding circle of soil sampling was finding arsenic and leading to the eventual decision to assess every property in Spring Valley."<sup>281</sup> The analysis continued throughout 2001 and 2002 and into 2003.<sup>282</sup>

In particular, the USACE commenced a chemical analysis of soil samples from approximately ninety-one acres of residential and

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have also been measured at two adjacent sites, a neighbor's yard and a small wooded area at American University.

*Id.* The concentration of naturally occurring arsenic in U.S. soil is three to five parts per million (ppm). *2001 Spring Valley Hearing, supra* note 10, at 87-88 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH). The concentrations of arsenic discovered in Spring Valley exceeded 1000 ppm. *Id.* at 87.

278. *2001 Spring Valley Hearing, supra* note 10, at 89 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH); *see 2002 Spring Valley Hearing, supra* note 4, at 24 ("By May 2001, the [USACE] had removed about 4,560 cubic yards of arsenic-contaminated soil from the South Korean property and the adjacent property.")

279. Amy Argetsinger & Steve Vogel, *Excavation by Military Forces Some AU Closings: Buildings, Homes To Be Emptied for Dig; Neighbors Concerned*, WASH. POST, Jan. 8, 2001, at B1; Steve Vogel, *Dig at AU Turns Up No Clear Sign of Munitions*, WASH. POST, Jan. 12, 2001, at B3; Steve Vogel, *WWI Chemicals Removed from Spring Valley Yard: Army Unearths Mustard Gas, Variant*, WASH. POST, July 6, 2001, at B1.

280. Steve Vogel, *Army Engineers To Test All Spring Valley Sites: Arsenic Search Expanded After Complaints*, WASH. POST, Mar. 25, 2001, at B2 ("The Army Corps of Engineers unveiled a plan last night to test every property in Spring Valley for arsenic contamination, a proposal that greatly expands the search for leftover toxins from World War I weapons testing in the Northwest Washington neighborhood."). The USACE met with the EPA and the Department of Health in March 2001 to discuss a soil analysis protocol. *2001 Spring Valley Hearing, supra* note 10, at 91 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH). The chemical analysis of all Spring Valley soil commenced in May 2001. *2002 Spring Valley Hearing, supra* note 4, at 25. *See generally* Daniela Deane, *Soil Tests Alter the Process in Spring Valley*, WASH. POST, Feb. 10, 2001, at G1 ("Soil samples, arsenic levels, a reluctance to talk: There's been a sea change in how real estate is conducted in Spring Valley, one of Northwest Washington's most desirable neighborhoods, and site of chemical weapons testing during World War I.")

281. *2001 Spring Valley Hearing, supra* note 10, at 117 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA).

282. *See* 1 PARSONS, ENGINEERING EVALUATION/COST ANALYSIS FOR ARSENIC IN SOIL: SPRING VALLEY OPERABLE UNITS 4 AND 5 WASHINGTON, D.C. ¶ 3.1.0.4 (2003), available at <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/EECA/Volume1.pdf>; *see also* Steve Vogel, *D.C. Wants Arsenic Testing Area Expanded: Contamination Suspected on Other Sites; Study Finds Little Exposure in Residents*, WASH. POST, May 29, 2002, at B2; Steve Vogel, *Some D.C. Sites Need More Arsenic Tests: NW Land Checked for WWI Toxins*, WASH. POST, Aug. 22, 2001, at B3.

nonresidential properties in August 2000.<sup>283</sup> In June 2001 the USACE commenced a chemical analysis of soil samples from the other approximately 577 acres in Spring Valley.<sup>284</sup>

In response to fears of widespread arsenic contamination throughout Spring Valley,<sup>285</sup> the DOH, in December 2000, surveyed the entire neighborhood “to see whether there [were] cancer deaths or other health problems that might be related to arsenic contamination from buried World War I chemical munitions.”<sup>286</sup> An epidemiological analysis concluded in January 2002, however, that the rate of cancer deaths in Spring Valley was average.<sup>287</sup>

Several events of 2001 contributed to increased public awareness of, and to public involvement in, the environmental restoration of Spring Valley. First, a chemical analysis of soil samples taken from the playground of the Child Development Center on the American University campus detected an elevated concentration of arsenic

283. PARSONS, *supra* note 282, ¶¶ 1.4.0.1, 3.1.1.1. The ninety acres—Operable Unit 4—included eighty homes. *Id.* ¶ 3.1.1.1. See generally PARSONS ENG’G SCI., INC., REMEDIAL INVESTIGATION/FEASIBILITY STUDY: SPRING VALLEY OPERABLE UNIT 4 (2000), available at [http://gis.parsons.com/springvalley/PDFs/OU4\\_wmp\\_intro.pdf](http://gis.parsons.com/springvalley/PDFs/OU4_wmp_intro.pdf).

284. PARSONS, *supra* note 282, ¶¶ 1.4.0.1, 3.1.0.4. The 577 acres—Operable Unit 5—was divided into a Central Testing Area (CTA) of approximately 132 acres and a Comprehensive Sampling Area (CSA) of approximately forty-five acres. *Id.* ¶¶ 3.1.2-3.1.3. The CTA contained 361 homes and the CSA contained 793 homes. *Id.* See generally PARSONS ENG’G SCI., INC., WORK PLAN FOR SEDGWICK TRENCH AREA INVESTIGATION: REMEDIAL INVESTIGATION/FEASIBILITY STUDY SPRING VALLEY OPERABLE UNIT 5 WASHINGTON, D.C. (2001), available at <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/SSP/SedgewickPlan.pdf>. The CSA consisted of land on which there had been no tests of chemical munitions in 1917-1918. PARSONS, *supra* note 282, ¶ 3.2.2.

285. See, e.g., Steve Vogel, *Arsenic, Illnesses Worry D.C.: Unusual Ailments near Tainted Sites*, WASH. POST, Jan. 27, 2001, at A1.

New findings of arsenic, combined with several cases of unusual illnesses on one street, have caused concern among city and federal officials that there might be an environmental problem of growing magnitude in the Spring Valley neighborhood of Northwest Washington, where chemical weapons were tested by the Army more than 80 years ago.

*Id.*

286. Steve Vogel, *Health Fears Spur District To Survey Spring Valley: Buried Munitions Leave Arsenic Contamination*, WASH. POST, Dec. 21, 2000, at B1 (“[W]ord of the city’s decision came as a relief to some residents who suspect a link between health problems and Spring Valley’s unusual history.”).

287. Steve Twomey, *Spring Valley Cancer Death Rate Normal, Study Shows: Arsenic Tests, Removal Continue*, WASH. POST, Jan. 1, 2002, at B1 (“A new analysis has found that the Spring Valley neighborhood of Washington, long plagued by arsenic in its soil, has not experienced an abnormal number of deaths from cancer, the head of the mayor’s science advisory panel said yesterday.”).



contamination.<sup>288</sup> This startling and disturbing development resulted in a USACE request for an ATSDR Exposure Investigation.<sup>289</sup> The investigation concluded that no child or American University employee at the Child Development Center had been exposed to significant levels of arsenic.<sup>290</sup> The USACE completed a removal of the arsenic-contaminated soil in the playground of the Child Development Center in October 2001.<sup>291</sup>

Second, in March 2001, the Mayor of Washington, D.C., established a Spring Valley Scientific Advisory Panel (Panel).<sup>292</sup> The Panel was established two weeks after the Council of the District of Columbia (Council) held a public oversight roundtable on Spring Valley.<sup>293</sup> In April 2001 the Panel issued a report with six specific recommendations.<sup>294</sup>

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288. 2001 Spring Valley Hearing, *supra* note 10, at 90 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH). The chemical analysis detected an arsenic concentration "as high as" 498 ppm. *Id.*

289. *Id.* The ATSDR analyzed hair samples of children enrolled in the Child Development Center. *Id.*; *see also id.* at 112-15 (statement of Robert C. Williams, P.E., DEE, Assistant Surgeon General, U.S. Public Health Service, Director, Division of Health Assessment and Consultation, ATSDR, HHS); KENNETH H. CHASE ET AL., WASH. OCCUPATIONAL HEALTH ASSOCS., INC., ARSENIC EXPOSURE INVESTIGATION AT AMERICAN UNIVERSITY 1-5 (2001), *reprinted in* 2001 Spring Valley Hearing, *supra* note 10, at 209-13; Steve Vogel, *Neighbors Worry, Await Arsenic Tests: AU Grads, Workers Are Seeking Answers*, WASH. POST, Feb. 9, 2001, at B1; Steve Vogel, *American To Expand Arsenic Testing*, WASH. POST, Feb. 1, 2001, at B5 ("Tests for arsenic poisoning will be offered to students and employees of American University whose athletic or groundskeeping activities brought them into regular contact with soil that might have been contaminated by chemical weapons tests more than 80 years ago.").

290. 2002 Spring Valley Hearing, *supra* note 4, at 27.

291. *Id.* at 38 (statement of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health) (stating that approximately 1958 tons of soil was removed); *see also id.* at 52 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE); PARSONS, *supra* note 282, ¶ 2.4.4.2.

292. Mayor's Order No. 2001-32, 48 D.C. Reg. 2387 (Mar. 1, 2001).

293. *See* Notice of Joint Public Oversight Roundtable, 48 D.C. Reg. 862 (Feb. 2, 2001); Steve Vogel, *Quicker Pace Urged in Arsenic Testing*, WASH. POST, Feb. 15, 2001, at B7 ("At a D.C. council hearing, the EPA's acting regional director said residents were so upset at a community meeting Tuesday night that 'more aggressive and quicker evaluation' of whether residential properties are tainted should be done."); *see also Environmental Health and Safety Issues in Spring Valley/American University Park Arising from WWI Munitions Experiments: Joint Public Oversight Roundtable Before the D.C. City Council Comm. on the Judiciary, Comm. on Pub. Works & the Env't, Comm. on Human Servs.* (D.C. 2001) (statement of Colonel Charles J. Fiala, Jr. and Major Brian D. Plaisted, USACE, Baltimore District), *available at* <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/Minutes/Testimony/CityCouncil.pdf>; *id.* (testimony of Kenneth Orloff, Ph.D., ATSDR, HHS), *available at* <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/Minutes/Testimony/ATSDR.pdf>.

294. SPRING VALLEY SCIENTIFIC ADVISORY PANEL, GOV'T OF THE D.C. MAYOR'S HEALTH POLICY COUNCIL, REPORT OF THE DISTRICT OF COLUMBIA MAYOR'S SPRING

In general, the Panel urged the adoption by the DOH of a comprehensive plan “to address concerns about exposure to, and health effects of, contaminants in Spring Valley.”<sup>295</sup>

Third, in the spring of 2001, the U.S. Army established a Spring Valley RAB.<sup>296</sup> In August 2001 the RAB adopted a set of operating procedures.<sup>297</sup> The representatives on the Spring Valley RAB met each month between May 2001 and December 2004, with one exception (August 2002).<sup>298</sup> Quite often the USACE makes a presentation to the RAB.<sup>299</sup> The minutes of each meeting also are made available to the public.<sup>300</sup> Fourth, and finally, in July 2001, the District of Columbia Subcommittee of the House Committee on Government Reform (Subcommittee) held a hearing on the environmental restoration of Spring Valley.<sup>301</sup>

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VALLEY SCIENTIFIC ADVISORY PANEL 1-4, *reprinted in 2001 Spring Valley Hearing*, *supra* note 10, at 17-21.

295. *2001 Spring Valley Hearing*, *supra* note 10, at 13-14 (testimony of Bailus Walker, Jr., Ph.D., MPH, Chairman, District of Columbia Mayor’s Spring Valley Scientific Advisory Panel); *see also* Steve Vogel, *Panel Urges More Arsenic Health Tests in AU Area*, WASH. POST, June 10, 2001, at C1.

296. *2001 Spring Valley Hearing*, *supra* note 10, at 249 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health) (“This spring the Army established a restoration advisory board comprised of 14 community members as well as representatives from several involved agencies. The board provides an expanded opportunity for public input into the cleanup process.”).

297. *See, e.g.*, SPRING VALLEY RESTORATION ADVISORY BD., OPERATING PROCEDURES (2004), *available at* <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/RAB/OpProcedures.pdf>.

298. RESTORATION ADVISORY BOARD MEETING MINUTES, *at* <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/RABminutes.htm> (last updated Mar. 8, 2005).

299. *See, e.g.*, SPRING VALLEY RESIDENT OFFICE, U.S. ARMY CORPS OF ENG’RS, MINUTES OF THE FEBRUARY 8, 2005 RAB MEETING, <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/RAB/february082005.htm> (last visited Mar. 15, 2005).

300. *See, e.g.*, RESTORATION ADVISORY BOARD MEETING MINUTES, *supra* note 298.

301. Steve Vogel, *Full GAO Probe Urged on Buried Arsenic*, WASH. POST, July 28, 2001, at B1.

Members of Congress yesterday asked the General Accounting Office to investigate the government’s handling of buried chemical munitions in Spring Valley and also to assess possible military-related pollution at other sites in the District, including Catholic University, the University of the District of Columbia, Camp Simms and the Washington Navy Yard.

Steve Vogel, *Expanded D.C. Toxin Searches Requested*, WASH. POST, Aug. 2, 2001, at B1.

### C. Congressional Hearings

Chaired by Congresswoman Constance A. Morella (R-MD),<sup>302</sup> the Subcommittee heard from, inter alia, the U.S. Army and the USACE.<sup>303</sup> The U.S. Army observed that “[w]e are not aware of any other location where chemical agents were tested in what became a well-established residential neighborhood at the heart of a large metropolitan area such as Washington, DC.”<sup>304</sup> The U.S. Army also reported that the cost of the Spring Valley cleanup between 1993 and 2000 was over \$40 million.<sup>305</sup>

The USACE summarized the cleanup to date with the observation that “[p]ast decisions can always be criticized in hindsight, but [we] believe that they were made in good faith and with the best information available at the time.”<sup>306</sup> In addition, the hearing revealed that Catholic University in Northeast Washington also was used for the development of and experimentation with chemical munitions.<sup>307</sup>

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302. 2001 Spring Valley Hearing, *supra* note 10, at 1; see also *id.* at 8 (statement of Rep. Eleanor Holmes Norton, Chairwoman, House Subcomm. on the D.C.). Representative Norton (D-DC) requested an investigation by the GAO into “what occurred in Spring Valley and other D.C. neighborhoods, who was responsible, what levels of toxicity remain, what would constitute adequate remediation, what the health risks are and to whom, how the health risks may be eliminated, and what violations of law may be raised.” *Id.*

303. See *id.* at 251-57 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health); *id.* at 260-80 (testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

304. *Id.* at 254 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environmental, Safety and Occupational Health).

305. *Id.* at 256 (“The fiscal year 2001 requirement has grown to over \$10 million, \$7 million more than originally programmed.”); *id.* at 274 (testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE) (“Our current working estimate to complete the remainder of the project is \$34 million.”).

306. *Id.* at 259.

307. *Id.* at 93 (testimony of Theodore J. Gordon, Chief Operating Officer, D.C. DOH). “Catholic University was a small research spin-offsite from American University. Two very toxic chemical warfare agents were developed there, lewisite and ricin. They had approximately 35 chemists working there.” *Id.* at 107 (statement of Dr. Richard D. Albright, JD, MS, Environmental Specialist, Ordinance and Chemical Weapons Expert, D.C. DOH). Dr. Albright observed that “the District of Columbia ranks 10th among all States for potential buried ordnance sites.” *Id.*

In addition to the Panel,<sup>308</sup> the DOH,<sup>309</sup> the ATSDR,<sup>310</sup> the EPA,<sup>311</sup> American University,<sup>312</sup> and the Auditor General of the Army,<sup>313</sup> the Subcommittee heard from the Spring Valley RAB,<sup>314</sup> which had met for the first time in May 2001,<sup>315</sup> and the Spring Valley-Wesley Heights Citizens Association.<sup>316</sup> The Subcommittee also heard from Miller, whose President testified that “[p]rior to January 5, 1993, the Miller Companies had no knowledge about the Army’s burial of chemical munitions or related soil contamination in Spring Valley.”<sup>317</sup>

With increased public awareness and public participation, the environmental restoration of Spring Valley continued through 2001 and 2002. In May 2001 the USACE discovered a third burial pit in the

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308. *Id.* at 12-16 (testimony of Bailus Walker, Jr., Ph.D, MPH, Chairman, District of Columbia Mayor’s Spring Valley Scientific Advisory Panel); *see id.* at 16 (“[T]he Panel concludes that more data are needed for a full assessment of health risk of potential exposure to the contaminants in Spring Valley.”).

309. *Id.* at 78-91 (testimony of Ivan C.A. Walks, M.D., Chief Health Officer, DOH). The DOH summarized the current activities of the department and summarized the historical events and activities of the USACE. *Id.* at 79-82.

310. *Id.* at 112-15 (statement of Robert C. Williams, P.E., DEE, Assistant Surgeon General, U.S. Public Health Service, Director, Division of Health Assessment and Consultation, ATSDR, HHS). The ATSDR discussed its Exposure Investigation of the Child Development Center on the American University campus. *Id.* at 113-15.

311. *Id.* at 118-19 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA). Since 1993, “the [EPA] has provided critical skills and technical expertise in what is an extraordinarily complex cleanup effort. The [EPA] has decided to test for a full suite of possible contaminants and this decision helped in eventually uncovering the arsenic problem.” *Id.* at 118.

312. *Id.* at 133-36 (statement of Benjamin Ladner, President, American University). President Ladner observed that “the University has suffered injury as a result of the War Department’s failure to live up to its commitment to return our campus to its original condition.” *Id.* at 135.

313. *Id.* at 231-34 (statement of Francis E. Reardon, Auditor General of the Army).

314. *Id.* at 29-30 (statement of Sarah Stowell Shapley, Community Co-chair, Spring Valley Restoration Advisory Board).

315. *Id.* at 26 (“[T]here are 1,200 households [in Spring Valley] coping with the health and safety questions arising from the Army’s contamination, and also coping with the potentially declining property values of their homes.”).

316. *See id.* at 34-35 (statement of William C. Harrop, President, Spring Valley-Wesley Heights Citizens Association). The U.S. Army, the association argued, should have reported Spring Valley to the EPA in the early 1980s or at least by 1986 “when both AU and the United States received information from the analysis of aerial photography and a search of the records that contamination was likely in Spring Valley.” *Id.* at 32.

317. *Id.* at 41 (testimony of Edward J. Miller, Jr., President/CEO, W.C. & A.N. Miller Companies). “It is undeniable that mistakes were made and that the conclusion in 1995 that ‘no further action’ was needed was premature.” *Id.* at 45.

backyard of the foreign ambassador.<sup>318</sup> An excavation of the third burial pit uncovered almost 400 items associated with chemical munitions research and development.<sup>319</sup> Thereafter, the USACE planned to survey numerous other Spring Valley properties for additional buried ordnance.<sup>320</sup> The complete environmental restoration of the ambassadorial residence and the adjacent properties,<sup>321</sup> in accordance with a USACE engineering evaluation and cost analysis,<sup>322</sup> was anticipated by October 2002.<sup>323</sup>

In July 2001 American University filed an administrative claim against the U.S. Army for over \$86 million in damages, losses, and expenses attributable to the burial of World War I chemical munitions in Spring Valley.<sup>324</sup> In addition, it was reported again that the U.S. Army, in 1986, had researched the possible disposal of World War I chemical munitions in Spring Valley but had concluded that no investigation was warranted.<sup>325</sup> It also was reported that in 1995 the U.S. Army knew of elevated concentrations of arsenic contamination in Spring Valley when it concluded that no additional environmental restoration in Spring Valley was required.<sup>326</sup>

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318. *2002 Spring Valley Hearing*, *supra* note 4, at 24-25 (statement of David G. Wood, Director, Natural Resources and Environment, U.S. GAO). The third burial pit straddled an adjacent lot. *Id.* at 25.

319. *Id.* The 400 items included eleven pieces of ordnance with mustard gas and Lewisite. *Id.*

320. *Id.* at 26 (“As of April 2002, the [USACE] had estimated that a total of 200 properties would be surveyed for ordnance.”). In June 2002 the EPA observed that “[a]dditional caches [of chemical munitions] may be discovered, and if they are, significant additional work will need to take place.” *Id.* at 71 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA).

321. The three properties—Operable Unit 3—are located at 4801, 4825, and 4835 Glenbrook Road in Spring Valley. PARSONS, *supra* note 282, ¶ E.2. The soil was removed from 4801 and 4825 Glenbrook Road between December 2000 and August 2002. *Id.* ¶ 2.4.4. A house was built at 4801 Glenbrook Road prior to 1940. *Id.* ¶ 2.4.6. It was demolished and replaced prior to 1985. *Id.*

322. See generally PARSONS ENG’G SCI., INC., ENGINEERING EVALUATION/COST ANALYSIS: 4801, 4825, AND 4835 GLENBROOK ROAD WASHINGTON, D.C. (2000).

323. *2002 Spring Valley Hearing*, *supra* note 4, at 55 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

324. Steve Vogel, *AU Seeks \$87 Million in Burial of Weapons: Claim Alleges Army Mishandled Cleanup*, WASH. POST, July 14, 2001, at B5.

325. Steve Vogel, *Evidence of D.C. Toxins Unheeded: New Findings Back ‘86 Warning to U.S. on Buried Weapons*, WASH. POST, July 9, 2001, at A1 (“The federal government had strong evidence 15 years ago of possible buried chemical weapons and dangerous ground contamination in an upscale section of the District, but failed then and in subsequent years to fully investigate the threat, according to a review of government records and court filings.”).

326. Steve Vogel, *U.S. Ignored High Arsenic Level at NW Home in Mid-‘90s*, WASH. POST, July 25, 2001, at A1.

In December 2001 the Panel issued a second report with three specific recommendations.<sup>327</sup> The Panel recommended the development of a scientific basis or health-risk rationale for an EPA proposal to require the removal of arsenic-contaminated soil if the level of arsenic exceeded 20 ppm.<sup>328</sup> The Panel also urged the ATSDR to test for arsenic in samples of household dust in Spring Valley homes.<sup>329</sup>

Throughout 2002 and 2003, the USACE proceeded with a chemical analysis of soil samples from Spring Valley properties. In numerous instances, the chemical analysis indicated a concentration of arsenic in excess of 12.6 ppm,<sup>330</sup> the threshold for additional analysis.<sup>331</sup> However, the threshold for environmental remediation (i.e., the removal of arsenic-contaminated soil) was unclear. In May 2002 the USACE and the EPA, with the approval of the Panel, agreed on a threshold of 20 ppm.<sup>332</sup> Under this threshold,<sup>333</sup> the removal of arsenic-contaminated soil initially was required for seven Spring Valley residential properties, the American University Child Development Center, and the American University athletic fields.<sup>334</sup> Ultimately the threshold would require the

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327. SPRING VALLEY SCIENTIFIC ADVISORY PANEL, REPORT OF THE DISTRICT OF COLUMBIA MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL 1, 7-8, available at <http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley/Other/7-12-01.pdf> (last visited Mar. 15, 2005).

328. *Id.* at 7 (“The paramount consideration for the remediation of the Spring Valley neighborhood should be the management of overall risk to human health, present and future.”).

329. *Id.* The Panel also recommended a revision to the ATSDR protocol used to test for human exposure to arsenic. *Id.* at 8.

330. PARSONS, *supra* note 282, ¶ E.3.0.1. By 2003, the USACE had tested the soil of almost 1500 residential and nonresidential properties in Spring Valley. *Id.* ¶ 1.4.0.2 (“Of these, 287 sites also had the soil characterized for selected [chemical warfare material] constituents representative of past practices at that specific site.”). Of 364 tested sites, “51 sites exceeded the screening level of 12.6 mg/kg arsenic.” *Id.* ¶ 3.5.1. By December 2002 an excessive level of arsenic had been detected on 140 properties. Twomey, *supra* note 287 (“In a majority of the 140 cases, at least some soil in the yard will probably have to be removed—if the homeowner agrees—and taken to a landfill in Virginia.”); see also 2002 *Spring Valley Hearing*, *supra* note 4, at 51 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

331. PARSONS, *supra* note 282, ¶ 5.2.0.1. In five instances, the analysis also detected a de minimis amount of cyanide. *Id.* ¶¶ 3.5.2, 3.6.2. The 12.6 ppm threshold was based on an EPA analysis of background—i.e., naturally occurring—concentrations of arsenic in Spring Valley soil. *Id.* ¶ 5.2.0.1.

332. *Id.* ¶ 5.3.0.1.

333. *Id.* The EPA threshold for emergency removal of arsenic-contaminated soil is 43 ppm. *Id.* ¶ 5.3.0.3.

334. 2002 *Spring Valley Hearing*, *supra* note 4, at 52-54 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE). In the summer of 2002 the USACE began the removal of arsenic-contaminated soil from the American University athletic fields. PARSONS, *supra* note 282, ¶ 2.4.4.3; see also Debbi Wilgoren, *Spring Valley*

removal of almost 24,000 cubic yards of soil from almost 150 properties in Spring Valley over the course of several years.<sup>335</sup>

In March 2002 a second ATSDR Exposure Investigation commenced with DOH assistance.<sup>336</sup> An ATSDR analysis of biological samples collected from Spring Valley residents by the DOH indicated that no resident had been exposed to arsenic.<sup>337</sup> An ATSDR analysis of household dust samples concluded, however, “that yard soil contaminated with arsenic may be tracked into homes and could increase the potential for exposures.”<sup>338</sup> In June 2002 the EPA reported that “the vast majority of residents in Spring Valley appear to be at no unacceptable risk due to World War I era chemical weapons work.”<sup>339</sup>

In the spring of 2002 the USACE investigation of sites used for the development of and experimentation with chemical munitions, which expanded in 2001 to include Catholic University in Northeast Washington, again expanded to include several small sites in Maryland and Virginia.<sup>340</sup> An oblique tip to federal authorities in 1993 prompted the expanded search for buried chemical munitions.<sup>341</sup>

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*Excavation To Focus on 2 Sites: Army Scans Show Presence of Metal in WWI Test Area*, WASH. POST, Aug. 8, 2002, at B3.

335. PARSONS, *supra* note 282, ¶¶ 4.3.1.3-4.3.1.4.

336. *See, e.g., 2002 Spring Valley Hearing*, *supra* note 4, at 77-79 (testimony of James Buford, Interim Director, District of Columbia DOH); *id.* at 114 (statement of Robert C. Williams, P.E., DEE, Assistant Surgeon General, U.S. Public Health Service, Director, Division of Health Assessment and Consultation, ATSDR, HHS) (“Residents who lived at the 20 homes with the highest soil arsenic concentrations were invited to participate. A total of 32 people (23 adults and nine children) from 13 homes volunteered.”).

337. *Id.* at 79 (testimony of James Buford, Interim Director, District of Columbia DOH); *see also* Vogel, *supra* note 282.

338. *2002 Spring Valley Hearing*, *supra* note 4, at 115-16 (statement of Robert C. Williams, P.E., DEE, Assistant Surgeon General, U.S. Public Health Service, Director, Division of Health Assessment and Consultation, ATSDR, HHS); *id.* at 115 (“Household dust was tested in 13 homes. Levels of arsenic ranged from non-detected to 63 ppm.”).

339. *Id.* at 62 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA); *id.* at 63 (“Whereas the arsenic sampling is nearly complete, and we have a pretty thorough idea about the scope of the contaminated soil problem, the team does not have the same amount of certainty regarding ordnance.”). In the fall of 2002 some Spring Valley residents nonetheless received a real estate tax deduction from the District of Columbia government. *Some Spring Valley Homes Get Tax Reduction*, WASH. POST, Oct. 4, 2002, at B7 (“The deductions are due to ongoing concerns of possible chemical contamination from World War I munitions buried in the community, city officials said.”).

340. Steve Vogel, *Arsenic Inquiry Expands to Md., N.Va.*, WASH. POST, Apr. 27, 2002, at A1 (“The search for arsenic contamination left by World War I munitions and chemical testing has spread beyond the District’s Spring Valley neighborhood and into the suburbs of Maryland and Virginia, where documents show further weapons tests occurred.”).

341. Steve Vogel, *Decade-Old Tip Spurs Munitions Search: Workers May Have Buried WWI Weapons near Chain Bridge in the 1930s*, WASH. POST, May 16, 2002, at District

In May 2002 a third Panel report with five recommendations was issued.<sup>342</sup> The Panel recommended that the DOH establish a surveillance system for arsenic-related diseases in Spring Valley by time, place, and person.<sup>343</sup> The Panel also recommended that the USACE, the EPA, and the DOH develop specific plans to ensure that the environmental restoration of Spring Valley would not increase the exposure of Spring Valley residents to environmental contaminants.<sup>344</sup> In addition, the Panel urged the adoption of the EPA-proposed 20 ppm threshold for environmental remediation.<sup>345</sup>

The Subcommittee held a second hearing on the environmental restoration of Spring Valley in June 2002.<sup>346</sup> Of particular interest to the Subcommittee was the just-released GAO report on the progress of the Spring Valley environmental restoration.<sup>347</sup> The GAO summarized the report for the benefit of the Subcommittee.<sup>348</sup>

In particular, the GAO reported that the total anticipated cost of the Spring Valley environmental restoration would be \$125 million through 2007.<sup>349</sup> The GAO also reported that there were thirty FUDS in the

Extra 3 (“Pursuing a mysterious tip left by a caller nearly a decade ago, scientists are examining land near Chain Bridge in search of a site where chemical munitions from World War I may be buried.”). In 1993 an individual contacted the District of Columbia government and claimed that he had worked with the Civilian Conservation Corps during the Great Depression and had assisted with the burial of World War I munitions both inside and outside of Spring Valley. Harry Jaffe, *Ground Zero*, WASHINGTONIAN, Dec. 2000, at 78, 123.

342. SPRING VALLEY SCIENTIFIC ADVISORY PANEL, *supra* note 294, at 4-6, *reprinted in 2002 Spring Valley Hearing*, *supra* note 4, at 133, 136-38. See generally Steve Vogel, *D.C. Arsenic Panel Wants Illness Facts: Group Urges System for Spring Valley*, WASH. POST, May 30, 2002, at B1.

343. SPRING VALLEY SCIENTIFIC ADVISORY PANEL, *supra* note 294, at 4, *reprinted in 2002 Spring Valley Hearing*, *supra* note 4, at 136.

344. *Id.* at 5, *reprinted in 2002 Spring Valley Hearing*, *supra* note 4, at 137.

345. *Id.* The Panel also recommended that the USACE, the EPA, and the DOH continue to involve the public in the Spring Valley environmental restoration. *Id.* at 6, *reprinted in 2002 Spring Valley Hearing*, *supra* note 4, at 138. Finally, the Panel recommended that the ATSDR and the DOH expand the Exposure Investigation undertaken in March 2002. *Id.*

346. See, e.g., Steve Vogel, *Questions Remain on Arsenic Cleanup: Spring Valley Called ‘Safe Place To Live’ but GAO Report Incomplete*, WASH. POST, June 27, 2002, at B1.

347. U.S. GEN. ACCOUNTING OFFICE, *supra* note 67, at 31-33.

348. *2002 Spring Valley Hearing*, *supra* note 4, at 17-33.

349. *Id.* at 21, 31. “Through fiscal year 2001 . . . the [USACE] had spent about \$53.4 million on [the] Spring Valley [environmental restoration].” *Id.* at 22.

Furthermore, in fiscal year 2002, the Corps planned to allocate to Spring Valley about 8 percent of the national budget for FUDS—which has declined in recent years—and about 86 percent of the FUDS budget for the Baltimore District, which includes funding for FUDS in six states and the District of Columbia.



District of Columbia,<sup>350</sup> three of which were in need of, and eligible for, environmental restoration<sup>351</sup>—Catholic University in Northeast Washington;<sup>352</sup> Camp Simms in Southeast Washington,<sup>353</sup> which was on a tract of land now owned by the District of Columbia government;<sup>354</sup> and the Diamond Ordnance Fuze Laboratory in Northwest Washington, which was on land that is now occupied by the University of the District of Columbia.<sup>355</sup>

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*Id.* at 31. The \$125 million estimate assumes the removal of arsenic-contaminated soil on 160 properties. *See id.* at 34 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health).

350. *Id.* at 32. *Contra id.* at 45 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE) (stating that there are fifty-nine FUDS in the District of Columbia).

351. *Id.* at 72 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA). The EPA identified two additional FUDS—the Chesapeake and Ohio Canal near Chain Bridge and the so-called Conduit Road Field Test Site. *Id.* The USACE reported that there were fifty-nine FUDS in the District of Columbia, forty-five of which required no environmental restoration and eleven of which were ineligible for DOD environmental restoration. *Id.* at 45 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE). *See generally* Steve Vogel, *Carderock Area Eyed as WWI Chemical Test Site*, WASH. POST, Mar. 21, 2002, at B3 (discussing the Conduit Road Test Field Site).

352. *2002 Spring Valley Hearing, supra* note 4, at 72 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA). In March 2002 the USACE, the EPA, and the DOH concluded that “more information was needed before an informed decision could be made about the next steps to take in this investigation [of Catholic University].” *Id.* at 83 (testimony of James Buford, Interim Director, District of Columbia DOH).

353. Kevin Merida, *A Telling Detail: The Secret Behind the Warning on the Sign Across from the School*, WASH. POST, Oct. 13, 2002 (Magazine), at 8. Between 1904 and 1945, Camp Simms, in Southeast Washington, was used for target ranges by the U.S. Army, the District of Columbia National Guard, and federal and local law enforcement agencies. *Id.* In 1958 ninety-four acres of the 169-acre camp became Oxon Run National Park. *Id.*

354. *2002 Spring Valley Hearing, supra* note 4, at 82 (testimony of James Buford, Interim Director, District of Columbia DOH). A geophysical investigation of the site in 2001 concluded that “there was no buried ordnance remaining on the property.” *Id.* The need for environmental restoration has frustrated the economic development of the land in Southeast Washington. *See, e.g.,* Debbi Wilgoren, *Patience, Development Team Tells Residents: Delays on Camp Simms Project Leave Some Pessimistic*, WASH. POST, Mar. 21, 2004, at C1.

D.C. Mayor Anthony A. Williams mounted a makeshift stage at an abandoned National Guard camp on a hot spring day and announced that a long-promised supermarket and some upscale homes would be built on the desolate property. Three years later, the site in Southeast Washington holds little but weeds and trees.

*Id.*

355. *See 2002 Spring Valley Hearing, supra* note 4, at 72 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA).

In addition to the GAO, the Subcommittee heard from the U.S. Army,<sup>356</sup> the USACE,<sup>357</sup> the EPA,<sup>358</sup> the DOH,<sup>359</sup> the ATSDR,<sup>360</sup> the Panel,<sup>361</sup> the Spring Valley RAB, and the Spring Valley-Wesley Heights Citizens Association.<sup>362</sup> The three principal federal and state agencies responsible for the Spring Valley cleanup—the USACE, the EPA, and the DOH—all agreed that the agencies worked well together.<sup>363</sup> The U.S. Army stated that “the relationship between the partners is a model of collaboration and cooperation that should be applied at other cleanup sites.”<sup>364</sup> According to the USACE, the three agencies “have made great strides in our working relationship. All three parties agree that their effectiveness continues to improve as they move forward in openness and cooperation, drawing on the strengths that each brings to the fight.”<sup>365</sup>

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356. *Id.* at 36-43 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health). In an exchange with the District of Columbia Subcommittee of the House Committee on Government Reform, Mr. Fatz observed that the Spring Valley environmental restoration “is the highest priority in the FUDS program.” *Id.* at 99. He also opined that “Spring Valley is a safe place to live.” *Id.*

357. *Id.* 46-61 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

358. *Id.* at 64-73 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA). Mr. Voltaggio observed that “[a]fter 1995, it was recognized that this site changed its character. It was not just an ordnance disposal site. It was now an ordnance and disposal site that also had arsenic contamination.” *Id.* at 106.

359. *Id.* at 76-85 (testimony of James Buford, Interim Director, District of Columbia DOH).

360. *Id.* at 110-117 (statement of Robert C. Williams, P.E., DEE, Assistant Surgeon General, U.S. Public Health Service, Director, Division of Health Assessment and Consultation, ATSDR, HHS). The ATSDR was petitioned in March 2001 to conduct a Public Health Assessment in Spring Valley. *Id.* at 116. “[The] ATSDR will continue to work with other Federal and local health and environmental agencies and the residents to resolve questions and issues relating to the public health impact of environmental contamination in Spring Valley.” *Id.* at 117.

361. *Id.* 120-26 (testimony of Bailus Walker Jr., Ph.D., MPH, Chairman, District of Columbia Mayor’s Spring Valley Scientific Advisory Panel). The Panel discussed its April 2001 report and six specific recommendations, its December 2001 report and three specific recommendations, and its May 2002 report and five specific recommendations. *Id.* at 121-26.

362. *See id.* at 145 (testimony of Sarah Stowell Shapley, Community Co-Chair, Spring Valley Restoration Advisory Board); *see also id.* at 150 (testimony of William A. Harrop, President, Spring Valley-Wesley Heights Citizen Association).

363. *Id.* at 34-35 (testimony of Raymond J. Fatz, Deputy Assistant Secretary of the Army, Environment, Safety and Occupational Health).

364. *Id.* at 35.

365. *Id.* at 44 (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

The EPA explained that “the partnering effort has allowed the cleanup to move ahead with both speed and thoroughness.”<sup>366</sup> The DOH observed that “our relationship with the [USACE], ATSDR and EPA has been . . . superlative, in our working relationship.”<sup>367</sup> Indeed, the GAO reported that “[w]hile the entities have not agreed on all cleanup decisions, officials acknowledge that, by having formed a partnership, a means exists to foster communication and collaboration, and officials of all three entities stated that the partnership is operating effectively.”<sup>368</sup>

The RAB requested the Subcommittee’s assistance to obtain congressional appropriations that would permit the USACE to complete the environmental restoration of Spring Valley in four years.<sup>369</sup> The RAB argued that “the Spring Valley FUDS merit[] the special congressional support of an earmarked, mandated level-of-effort funding.”<sup>370</sup> It argued that an earmarked congressional appropriation was merited in part because the neighborhood “is a closely settled residential neighborhood with extensive and mature landscaping in a major American city.”<sup>371</sup> On the other hand, the Spring Valley-Wesley Heights Citizens Association criticized the adoption of a 20 ppm threshold for the removal of arsenic-contaminated soil, arguing that the threshold would delay the completion of environmental restoration.<sup>372</sup>

#### D. D.C. Council Hearings

The environmental restoration of Spring Valley progressed without significant development for over a year. In July 2003 two committees of the Council held a public oversight hearing on the cleanup.<sup>373</sup> The USACE reported to the Council that “[i]n the past year, we have made

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366. *Id.* at 63 (testimony of Thomas C. Voltaggio, Deputy Regional Administrator, Mid-Atlantic Region, U.S. EPA).

367. *Id.* at 75 (statement of Theodore Gordon, Senior Deputy Director for Public Health Assurance, District of Columbia DOH).

368. *Id.* at 19 (statement of David G. Wood, Director, Natural Resources and Environment, U.S. GAO).

369. *Id.* at 145-47 (statement of Sarah Stowell Shapley, Community Co-Chair, Spring Valley Restoration Advisory Board).

370. *Id.* at 146. An earmarked congressional appropriation for Spring Valley was merited, the RAB argued, because the Spring Valley FUDS had “the dubious distinction of being a ‘double danger’ FUDS, as we have both chemical and ordnance contamination.” *Id.* at 145.

371. *Id.* at 146.

372. *Id.* at 150-51 (testimony of William C Harrop, President, Spring Valley-Wesley Heights Citizens Association).

373. *See, e.g.*, Maha Al-Azar, *D.C. Gets Update on WWI Cleanup*, WASH. POST, July 15, 2003, at B5.

significant progress on the Spring Valley project.”<sup>374</sup> The USACE had completed a chemical analysis of ninety-six percent of the approximately 1500 residential and nonresidential properties in Spring Valley,<sup>375</sup> had removed the soil from twenty-two of approximately 140 contaminated properties,<sup>376</sup> and had completed the removal of “several thousand tons of arsenic-contaminated soil from . . . American University.”<sup>377</sup> The USACE also reported that “[b]esides arsenic, [an] extensive sampling effort has not identified any other chemicals of concern at the site.”<sup>378</sup>

The DOH, which (along with the ATSDR) had conducted an Exposure Investigation of children from the Child Development Center in January 2001 and a second Exposure Investigation of thirty-two Spring Valley residents in March 2002, reported on a third Exposure Investigation in the summer of 2002.<sup>379</sup> The third investigation involved forty Spring Valley residents—thirty-four adults and six children—just three of whom had a detectable level of arsenic.<sup>380</sup> The DOH also had reviewed the results of chemical analyses of the District of Columbia drinking water and had concluded that “the drinking water in Spring Valley has not provided a pathway of exposure to arsenic.”<sup>381</sup>

In an exchange with the Council, the DOH observed that “[m]ore weapons of mass destruction have been located in Spring Valley over the past four years than have been found in Iraq.”<sup>382</sup> The DOH also reported that over 4000 shells with chemical munitions inventoried in 1919 were unaccounted for.<sup>383</sup>

The public oversight hearing before the Council coincided with the release in July 2003 of an *Engineering Evaluation/Cost Analysis (EE/CA) for Arsenic in Soil for Spring Valley*.<sup>384</sup> The EE/CA provided a scientific basis for the removal of arsenic-contaminated soil from Spring Valley and reflected the results of the chemical analysis of soil between 2000

374. *Joint Public Hearing Before the D.C. Council Comm. on Pub. Works & the Env't and the Comm. on Human Servs.* 1 (D.C. 2003) (statement of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, USACE).

375. *Id.* at 2.

376. *Id.* at 2-3.

377. *Id.* at 3.

378. *Id.*

379. *Id.* at 6-8 (statement of Theodore J. Gordon, Senior Deputy Director, Environmental Health Science and Regulation Administration, DOH).

380. *Id.* at 9.

381. *Id.* at 5-6.

382. Maha Al-Azar, *supra* note 373.

383. *Id.*

384. See Letter from Thomas J. Bachovchin, Project Manager, Parsons, to Lan Reeser, Baltimore District Corps of Engineers 1 (Dec. 17, 2003).

and 2003.<sup>385</sup> The EE/CA recommended the excavation and landfill disposal of arsenic-contaminated soil in Spring Valley.<sup>386</sup> “This is the most effective alternative, achieves the project objectives in the timeliest manner, and has already been successfully implemented at various portions of the site.”<sup>387</sup>

The EE/CA observed that the arsenic-contaminated soil in Spring Valley could be attributable to natural background arsenic and to arsenic from pressure-treated wood products, pesticides, herbicides, and coal.<sup>388</sup> The EE/CA also analyzed but rejected five alternatives to soil excavation and landfill disposal:<sup>389</sup> (i) no remedial action;<sup>390</sup> (ii) institutional and engineering controls;<sup>391</sup> (iii) phytoremediation, which involves the use of certain ferns for absorption of arsenic from soil;<sup>392</sup> (iv) soil stabilization;<sup>393</sup> and (v) soil washing.<sup>394</sup> Consistent with EPA guidance,<sup>395</sup> each alternative was analyzed for effectiveness, ease of implementation, and cost.<sup>396</sup>

Specifically, with respect to effectiveness, each alternative was analyzed for (i) “compliance with applicable or relevant and appropriate requirements” (ARAR); (ii) long-term effectiveness; (iii) reductions in level and amount of contamination; and (iv) short-term effectiveness.<sup>397</sup> The ARAR for the removal of arsenic from Spring Valley soil were based on municipal requirements relative to erosion and sediment control, storm water management, fugitive dust emissions, noise control,

385. PARSONS, *supra* note 282, ¶¶ 3.1.0.4, 9.1.0.1.

386. *Id.* ¶ 9.1.0.1.

387. *Id.* ¶ E.6.0.1.

388. *Id.* ¶¶ 3.8.1, 4.1.1.1.

389. *Id.* ¶ 7.9, at 7-1 to 7-9; *id.* ¶ 7.0.0.2 (“The following analysis also considers that a single remedy for potentially 140 plus sites throughout Spring Valley may not be practical and that private home owners may want less intrusive alternatives.”).

390. *Id.* ¶ 7.1.1.1.

391. *Id.* ¶ 7.1.2.1 (“Options could include fencing the area; covering the area with concrete or brick for use as a patio or sitting area, for example; or planting the area with groundcover plants that do not require routine maintenance.”).

392. *Id.* ¶ 7.1.3; *id.* ¶ 7.1.3.1 (“Certain plants called hyperaccumulators absorb unusually large amounts of metals in comparison to other plants. One or a combination of these plants is selected and planted at a site based on the type of metals present and other site conditions.”).

393. *Id.* ¶ 7.1.4; *id.* ¶ 7.1.4.1 (“Soil stabilization is a remediation technique in which contaminated soil is treated with a binding/stabilizing agent such as iron to minimize the rate of contaminant migration and to reduce the toxicity of the soil.”).

394. *Id.* ¶ 7.1.5.

395. OFFICE OF SOLID WASTE & EMERGENCY RESPONSE, U.S. ENVTL. PROTECTION AGENCY, 9360.0-32FS, CONDUCTING NON-TIME-CRITICAL REMOVAL ACTIONS UNDER CERCLA 3 (1993), *available at* <http://www.epa.gov/superfund/resources/remedy/pdf/540f-94009-s.pdf>.

396. PARSONS, *supra* note 282, ¶ 7.2.0.1.

397. *Id.* ¶¶ 7.2-7.3.5, at 7-4 to 7-9.

hazardous waste determination, accumulation of hazardous waste, hazardous waste storage tank management, and land disposal.<sup>398</sup>

Under this analytical framework, the EE/CA eliminated the no action alternative, the soil stabilization alternative, and the soil washing alternative.<sup>399</sup> The EE/CA then presented a comparative analysis, based on the same analytical framework, of institutional controls, phytoremediation, and excavation and landfill disposal.<sup>400</sup> The third alternative—excavation and landfill disposal—was the most effective, the most feasible to implement, and the most expensive.<sup>401</sup> The cost of environmental restoration was \$127-197 per ton of soil for institutional controls, \$162-178 per ton of soil for phytoremediation, and \$437-546 per ton of soil for excavation and landfill disposal.<sup>402</sup>

The EE/CA recommended the excavation and landfill alternative, which necessitated an excavation to a depth of two feet of soil.<sup>403</sup> The document also indicated that the possible migration of arsenic from contaminated soil to groundwater would be addressed in a subsequent investigation and report.<sup>404</sup>

In the spring of 2003, it was reported that the USACE, in 2001, had engaged in chemical analysis of soil samples from four properties for 250 chemicals in addition to arsenic.<sup>405</sup> The EE/CA acknowledged that a chemical analysis of soil samples for “approximately 200 chemicals or compounds with documented usage” was performed at American University.<sup>406</sup> The results of the chemical analysis, however, were not presented in the EE/CA.<sup>407</sup>

With a scientific basis firmly in place for the removal of arsenic-contaminated soil from Spring Valley, the USACE proceeded with the environmental restoration of the neighborhood throughout 2002 and

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398. *Id.* ¶¶ 7.3.2, at 7-5 to 7-8.

399. *Id.* ¶¶ 7.6-7.6.6, at 7-10 to 7-15.

400. *Id.* ¶¶ 8-8.1.3, at 8-1 to 8-4.

401. *Id.* ¶¶ 8.1.1 & tbl.8.1, 8.1.2.

402. *Id.* ¶ 8.1.1 tbl.8.1.

403. *Id.* ¶¶ 9.1.0.1-9.1.0.2.

404. *Id.* ¶¶ 3.10.1.3-3.10.2.2.

405. Janet Trowbridge Bohlen, Editorial, *Chemical Warfare in Washington*, WASH. POST, Apr. 27, 2003, at B8.

406. PARSONS, *supra* note 282, ¶ 3.11.1.1.

407. *Id.* ¶ 3.11.2.1.

This EE/CA discusses how the AUES List investigation was performed and presents the data (Volume III). However, because of the complex nature of the data and the need for careful interpretation of the results, no evaluation of the results is included in this document. Pending completion of this evaluation, a separate report addressing all results will be submitted.

*Id.*

2003. In May 2004, the USACE launched an experiment in phytoremediation.<sup>408</sup> The experiment was prompted by the success of phytoremediation in an apple orchard in Dover, New Jersey that had elevated levels of arsenic due to insecticide use.<sup>409</sup> In that two-year experiment, the use of ferns reduced the concentration of arsenic by twenty-five percent.<sup>410</sup>

In October 2004 it was revealed that in 2003 a random chemical analysis of groundwater near the Washington Aqueduct, which provides Washington, D.C., with drinking water, indicated a dangerously elevated level not of arsenic but of perchlorate.<sup>411</sup> The Washington Aqueduct is operated by the USACE, which, it was reported, had argued against the need for immediate and aggressive action to investigate the source and migration of the perchlorate.<sup>412</sup> The chemical is not regulated by the EPA under the Safe Drinking Water Act.<sup>413</sup> In November a chemical analysis of water in the Washington Aqueduct indicated the nominal presence of perchlorate.<sup>414</sup> The concentration of perchlorate in the drinking water ranged between 1.2 and 1.8 parts per billion (ppb).<sup>415</sup>

In November 2004 two committees of the Council held a second public oversight hearing on the environmental restoration of Spring Valley.<sup>416</sup> The USACE reported that the removal of arsenic-contaminated soil from the neighborhood would not be completed until 2010.<sup>417</sup> In addition, the USACE reported the detection of a debris field on the

408. See, e.g., Manny Fernandez, *Toxin Cleanup Goes Natural: Army Uses Ferns To Absorb Spring Valley Arsenic*, WASH. POST, Aug. 26, 2004, at B3.

409. *Id.*

410. *Id.*

411. Carol D. Leonnig, *Groundwater Toxin near Aqueduct: Army Engineers Faulted for Inaction Since 2003 Finding*, WASH. POST, Oct. 27, 2004, at B5.

412. *Id.* ("The debate here echoes a contentious battle between the U.S. military and communities all over the country, including in Aberdeen [Proving Ground], over how much danger perchlorate poses to the public and whether the military should be forced to clean it up.").

413. See *id.*

The discovery of perchlorate near the reservoir . . . shows how this potential hazard is handled differently across the country. There is no federal standard for perchlorate, largely because the Department of Defense has fought it. In the absence of one, a handful of states have set their own public health and cleanup rules, with varying success.

*Id.*

414. Carol D. Leonnig, *Tests Find Poisonous Chemical in Water: Aqueduct Chief Says Substance Poses No Risk*, WASH. POST, Nov. 19, 2004, at B1.

415. *Id.*

416. See *D.C. Council Agenda*, WASH. POST, Nov. 11, 2004, at District Extra 4.

417. *Joint Public Hearing Before the D.C. Council Comm. on Pub. Works & the Env't and the Comm. on Human Servs. 2* (D.C. 2004) (written testimony of Colonel Robert J. Davis, Commander, Baltimore District, USACE).

campus of American University—the “Lot 18” site—that could be a fourth burial pit for waste associated with chemical munitions research and development.<sup>418</sup> The USACE reported that a chemical analysis of soil samples from approximately 300 of Spring Valley residential and nonresidential properties had detected no other chemicals “of concern” associated with chemical munitions.<sup>419</sup> Finally, the USACE announced “the start of a comprehensive groundwater quality study.”<sup>420</sup>

The EPA also reported on the progress of Spring Valley soil removal and on the investigation and remediation of Lot 18.<sup>421</sup> With respect to soil with minimal arsenic contamination, the EPA indicated that the use of phytoremediation could be an alternative to removal by 2005.<sup>422</sup> Finally, the EPA discussed its role in the USACE environmental analysis of Spring Valley groundwater.<sup>423</sup>

The DOH testified that two “rather extensive” department comparison studies and three DOH/ATSDR Exposure Investigations had revealed no increased incidence of cancer deaths due to exposure to arsenic and no indication of undue arsenic exposure, respectively.<sup>424</sup> The DOH also testified that a chemical analysis of Spring Valley drinking water had revealed a concentration of arsenic “well under” EPA drinking water standards.<sup>425</sup> Nonetheless, the DOH acknowledged that “[a]lthough we are not finding scientific evidence of a public health threat in Spring Valley at this time, that does not diminish the concerns of residents.”<sup>426</sup> In response to those concerns, the DOH announced the formation of a DOH Spring Valley internal work group.<sup>427</sup>

The public oversight hearing occurred one week after *The Northwest Current*, a weekly journal distributed in Northwest Washington,

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418. *See id.* at 2, 4.

419. *Id.* at 2-3.

420. *Id.*

421. *Joint Public Hearing Before the D.C. Council Comm. on Pub. Works & the Env't and the Comm. on Human Servs.* 3-6 (D.C. 2004) (testimony of Steven R. Hirsh, Senior Remedial Project Manager, U.S. EPA, Region III).

422. *Id.* at 4-5.

423. *Id.* at 6-7.

424. *Continuation of the Joint Public Hearing on the U.S. Army Corps of Engineers' Cleanup of World War I Munitions in the Spring Valley Area: Hearing Before the D.C. Council Comm. on Pub. Works & the Env't and the Comm. on Human Servs.* 4-5 (testimony of Gregg A. Pane, MD, Director, District of Columbia DOH).

425. *Id.* at 5 (“Our epidemiological review of cancer statistics and biological samples taken from Spring Valley residents does not suggest that arsenic exposure has occurred at levels associated with adverse health effects.”).

426. *Id.*

427. *Id.* at 7 (“The work group will be responsible for developing procedures to ensure that all health related information is collected and dealt with properly, including a hotline specifically designed to address community complaints, concerns and reports.”).



published a special twelve-page supplement entitled *Spring Valley: At Risk from WWI Poisons?*<sup>428</sup> Over the course of a year, the publication had surveyed 345 homes in Spring Valley and had discovered “160 cases of chronic, often life-threatening and rare diseases—roughly one in every six homes.”<sup>429</sup> Several health experts, however, questioned the unscientific and anecdotal nature of the survey.<sup>430</sup>

Apart from the premature halt to work in 1995-1999, the federal and state agencies responsible for the environmental restoration of Spring Valley appear to have made considerable progress in the past decade. The USACE has removed all known chemical munitions buried in Spring Valley, has conducted a chemical analysis of soil samples from all 1600 residential and nonresidential properties in the 670-acre neighborhood,<sup>431</sup> and has undertaken the removal of arsenic-contaminated soil from the campus of American University and from 160 properties in Spring Valley.<sup>432</sup>

The DOH has completed an epidemiological analysis of Spring Valley,<sup>433</sup> the ATSDR has conducted three Exposure Investigations in

428. Jon Ward, *Spring Valley Sick Blame Chemicals in WWI Dumping*, WASH. TIMES, Nov. 14, 2004, at A1; Charles Bermpohl, *Study Finds Diseases in 1918 Test Area*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B1, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf>.

429. Bermpohl, *supra* note 428 (“The survey, coordinated through The [Northwest] Current, showed 131 individuals afflicted with 56 separate diseases of which more than half—30—can be linked to arsenic and other lethal agents that were developed, tested and then buried in the neighborhood during and after the war that ended in 1918.”). The special supplement listed all 160 cases. Charles Bermpohl, *Diseases Show Possible Link to Arsenic, Other Poisons Tested at AU*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B2, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf>.

430. Charles Bermpohl, *Experts Question Results Without ‘Cause and Effect,’* NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B3, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf>; see also Charles Bermpohl, *Scientific Limits: Love Canal’s Pollution Never Proven To Be Cause of Diseases*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B3, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf>; Charles Bermpohl, *Dartmouth Study Complicates Arsenic’s Role in Disease*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B4, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf> (“A major criticism of The Current’s Spring Valley health survey is that it groups diseases that have known links to arsenic exposure with diseases that have no such connection.”); Charles Bermpohl, *Acute Effects of Buried Toxins Dramatic*, NORTHWEST CURRENT (Washington, D.C.), Nov. 10, 2004, at B4, available at <http://www.cpeo.org/pubs/Spring%20Valley%20diseases.pdf> (“The idea that deadly chemicals buried in the ground 85 years ago can rise like an army of vampires to strike at the living remains a controversial—and, to some, bitterly resented—notation in Spring Valley.”).

431. See *supra* notes 255-56, 375 and accompanying text.

432. See *supra* notes 291, 376-77 and accompanying text.

433. See *supra* notes 286-87 and accompanying text.

the neighborhood,<sup>434</sup> and the Panel has issued three separate reports with fourteen specific recommendations to protect the public health from environmental contamination.<sup>435</sup> The USACE has established a Spring Valley RAB, the Subcommittee has held two congressional hearings on the Spring Valley cleanup, and the District of Columbia Council has held a public oversight roundtable and a public oversight hearing.<sup>436</sup>

Nonetheless, the environmental restoration of Spring Valley appears to have no end in sight. In June 2002 the GAO estimated that the cleanup would continue through 2007.<sup>437</sup> That estimate, however, preceded the disclosure in October 2004 of elevated levels of perchlorate in groundwater near the Washington Aqueduct. In addition, the USACE EE/CA for Spring Valley, released in July 2003, includes no information on the chemical analysis of Spring Valley soil samples for approximately 200 chemicals in addition to arsenic. Finally, in November 2004 the USACE estimated that the cleanup would continue through 2010.

The USACE may complete the removal of arsenic-contaminated soil from Spring Valley by 2010, but this particular environmental contamination may not be the entire legacy of the AUES to the neighborhood.

#### IV. LITIGATION AND THE FEDERAL TORT CLAIMS ACT

##### A. *Federal Tort Claims Act*

The progress in the past decade in the environmental restoration of Spring Valley has been accompanied by civil litigation. Indeed, the risks associated with the burial in Spring Valley of World War I chemical munitions, and with the contamination of Spring Valley soil attributable to the development and disposal of World War I chemical munitions, have precipitated five civil suits against the Federal Government, the U.S. Army, the USACE, and American University since January 1993.<sup>438</sup>

To date, most of the suits against the Federal Government have been dismissed under the Federal Tort Claims Act (FTCA).

Under the principle of sovereign immunity, the United States is immune from suit unless the Federal Government agrees to be sued.<sup>439</sup>

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434. See *supra* note 379 and accompanying text.

435. See *supra* notes 294, 327, 342 and accompanying text.

436. See *supra* notes 293, 296, 301, 346 and accompanying text.

437. See *supra* note 349 and accompanying text.

438. See *infra* Part IV.B-D.

439. *United States v. Dalm*, 494 U.S. 596, 608 (1990).

Under the FTCA, the Federal Government agrees, in limited circumstances, to be sued:<sup>440</sup>

Subject to the provisions of chapter 171 of this title [28], the [federal] district courts . . . shall have exclusive jurisdiction of civil actions on claims against the United States, for money damages, accruing on and after January 1, 1945, for injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.<sup>441</sup>

Under the statute, the Federal Government agrees to be sued “under circumstances [in which] the [United States], if a private person, would be liable.”<sup>442</sup>

There are numerous exceptions to the FTCA.<sup>443</sup> For example, the Federal Government cannot be sued for claims related to postal matters, e.g., a lost package;<sup>444</sup> tax assessments or collections;<sup>445</sup> public health quarantines;<sup>446</sup> or assaults, false imprisonments, false arrests, or malicious prosecutions.<sup>447</sup> In particular, the FTCA is inapplicable to claims “based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.”<sup>448</sup>

The “discretionary function” exception to the FTCA “marks the boundary between Congress’ willingness to impose tort liability upon the United States and its desire to protect certain governmental activities from exposure to suit by private individuals.”<sup>449</sup> The exception is designed “to prevent the courts from ‘second-guessing,’ through decisions in tort actions, the way that government officials choose to

440. See, e.g., *Smith v. United States*, 507 U.S. 197, 201 (1993).

441. 28 U.S.C. § 1346(b)(1) (2000).

442. *Id.*

443. *Id.* § 2680.

444. *Id.* § 2680(b).

445. *Id.* § 2680(c).

446. *Id.* § 2680(f).

447. *Id.* § 2680(h).

448. *Id.* § 2680(a).

449. *United States v. S.A. Empresa de Viacao Aerea Rio Grandense*, 467 U.S. 797, 808 (1984).

balance economic, social, and political factors as they carry out their official duties.”<sup>450</sup>

The use of the “discretionary function” exception to bar a civil suit against the Federal Government is subject to a two-part judicial test.<sup>451</sup> First, in order for the exception to apply, the tortious action on which the suit is based must involve “an element of judgment or choice.”<sup>452</sup> Thus the suit is not barred if a federal statute or regulation required a federal employee to take the tortious action.<sup>453</sup> Second, the element of judgment or choice must involve the consideration of social, economic, or political policies and thus be the type of discretionary function that the exception was intended to shield from civil litigation.<sup>454</sup> The exception is applicable “only where ‘the question is not negligence but social wisdom, not due care but political practicability, not reasonableness, but economic expediency.’”<sup>455</sup>

A civil suit against the U.S. Government that is allowed to proceed under the FTCA must be decided “in accordance with the law of the [state in which] the [tortious] act . . . occurred.”<sup>456</sup> In addition, a civil suit against the Federal Government cannot proceed under the FTCA unless the plaintiff has exhausted his administrative remedies.<sup>457</sup> Under the FTCA, a civil suit can be filed against the Federal Government but not against an independent contractor of the Federal Government.<sup>458</sup> Finally, a six-year statute of limitations applies to civil suits against the United States,<sup>459</sup> and an action in tort “shall be forever barred” unless a proceeding for administrative remedies is commenced within two years after the tortious action accrues.<sup>460</sup> If a plaintiff files a civil suit against the United States after the two-year statute of limitations for

450. *Cope v. Scott*, 45 F.3d 445, 448 (D.C. Cir. 1995).

451. *Berkovitz v. United States*, 486 U.S. 531, 536 (1988); *see also* *Kennewick Irrigation Dist. v. United States*, 880 F.2d 1018, 1025 (9th Cir. 1989).

452. *Berkovitz*, 486 U.S. at 536; *see also* *United States v. Gaubert*, 499 U.S. 315, 322 (1991).

453. *Berkovitz*, 486 U.S. at 536.

454. *Gaubert*, 499 U.S. at 322-23.

455. *Sami v. United States*, 617 F.2d 755, 766-67 (D.C. Cir. 1979) (quoting *Swanner v. United States*, 309 F. Supp. 1183, 1170 (M.D. Ala. 1970)).

456. 28 U.S.C. § 1346(b)(1) (2000); *see also* *Caban v. United States*, 728 F.2d 68, 72 (2d Cir. 1984).

457. 28 U.S.C. § 2675 (2000). *See generally* *Administrative Claims Under Federal Tort Claims Act*, 28 C.F.R. pt. 14 (2004) (describing administrative claims under the Federal Tort Claims Act (FTCA)).

458. 28 U.S.C. § 2671 (2000).

459. *Id.* § 2401(a).

460. *Id.* § 2401(b). *See generally* *United States v. Kubrick*, 444 U.S. 111, 113 (1979).

administrative remedies, then the federal district court lacks subject matter jurisdiction over the claim under the FTCA.<sup>461</sup>

In *Cannon v. United States*,<sup>462</sup> the U.S. Court of Appeals for the Tenth Circuit remanded an FTCA suit with instruction to dismiss under the two-year statute of limitations.<sup>463</sup> The suit was filed for damage to mining interests on 1416 acres of land in the Yellow Jacket Area of the Dugway Mining District in Tooele County, Utah.<sup>464</sup> The damage was caused by U.S. Army tests near the end of World War II of high explosives, incendiaries and chemical munitions in the Yellow Jacket Area, which is adjacent to the Dugway Proving Ground operated by the U.S. Army.<sup>465</sup> "Over twenty-three tons of chemical weapons were dropped" in the Yellow Jacket Area.<sup>466</sup> The U.S. Army had agreed in 1945 to restore the land to its original condition but, as the Tenth Circuit observed, "The Army failed to keep its promise."<sup>467</sup>

Between 1945 and 1980, the land passed from grandparent to parent to four children,<sup>468</sup> two of whom filed an unsuccessful administrative claim against the U.S. Army in April 1998.<sup>469</sup> Between 1945 and 1950, the grandparent had filed three administrative claims against the U.S. Army, which had resulted in the payment of approximately \$2800 in damages.<sup>470</sup> Between 1957 and 1980, the parent had complained on numerous occasions to the Dugway Proving Ground but had filed no claim against the U.S. Army.<sup>471</sup> In December 1998 the two plaintiffs filed an FTCA suit against the Federal Government for \$8 million in damages.<sup>472</sup>

The U.S. Army had assessed the need for the environmental restoration of the Yellow Jacket Area three times: in 1979; in 1988,<sup>473</sup> after the DERP was established; and in August 1996, when the USACE

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461. *See Dahl v. United States*, 319 F.3d 1226, 1228 (10th Cir. 2003).

462. 338 F.3d 1183 (10th Cir. 2003).

463. *Id.* at 1184.

464. *Id.*

465. *Id.* ("The purpose of the Army's testing was to explore means of battling Japanese forces entrenched in caves in the Pacific Islands.")

466. *Id.* at 1185 n.1 ("The chemical weapons tested included the choking agent phosgene, the blood agent hydrogen cyanide, and the blistering agent mustard.")

467. *Id.* at 1184-85.

468. *See id.* at 1185-86.

469. *Id.* at 1188.

470. *Id.* at 1185.

471. *Id.* at 1185-86. The parent had acquired the land in 1954 "with knowledge of ordnance contamination." *Id.* at 1185.

472. *Id.* at 1188.

473. *Id.* at 1186 (citing U.S. ARMY TOXIC & HAZARDOUS MATERIALS AGENCY, REPORT NO. 140, INSTALLATION ASSESSMENT OF DUGWAY PROVING GROUND (1979); U.S. ARMY TOXIC & HAZARDOUS MATERIALS AGENCY, UPDATE OF THE INITIAL ASSESSMENT OF DUGWAY PROVING GROUND (1988)).

released an Engineering Evaluation/Cost Analysis for the Yellow Jacket Area FUDS.<sup>474</sup> The EE/CA indicated that the 1416 acres of land “was in fact highly contaminated with ordnance.”<sup>475</sup> The EE/CA also rejected a proposal for environmental restoration of the land, which would have cost over \$12 million.<sup>476</sup> Twenty months after the U.S. Army released the EE/CA for the Yellow Jacket Area, the plaintiffs filed a claim with the U.S. Army.<sup>477</sup> An FTCA suit in the U.S. District Court for the District of Utah followed eight months thereafter.<sup>478</sup>

The Federal Government sought the dismissal of the civil suit for lack of subject matter jurisdiction in part because the plaintiffs had not commenced a proceeding with the U.S. Army for administrative remedies within two years after the tortious action occurred in 1945.<sup>479</sup> The plaintiffs argued, however, that the statute was tolled until August 1996, when the EE/CA confirmed that the Yellow Jacket Area was contaminated.<sup>480</sup> The district court rejected this argument but denied the motion to dismiss because “the contamination . . . constituted a ‘continuing trespass and nuisance’ on the [land].”<sup>481</sup> After a bench trial, the district court entered a judgment for the plaintiffs.<sup>482</sup>

On appeal, the Tenth Circuit concluded that the plaintiffs knew or should have known in August 1994, when the USACE commenced a geophysical survey of the Yellow Jacket Area, of a potential claim against the Federal Government for the environmental contamination of the area.<sup>483</sup> According to the court, “At that point (if not before), the [plaintiffs] possessed adequate information about their injury and its cause to commence running of the limitations period. Yet they failed to seek counsel or initiate any investigation into the matter.”<sup>484</sup>

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474. *Id.* at 1187-88 (citing U.S. ARMY CORPS OF ENG’RS ENG’G & SUPPORT CTR., DRAFT: FORMERLY USED DEFENSE SITE ENGINEERING EVALUATION/COST ANALYSIS REPORT: YELLOW JACKET RANGES, SITE NO. J08UT109800, TOOELE COUNTY, UTAH (1996)). The analysis reflected the results of a geophysical survey of the Yellow Jacket Area commenced in July 1994. *Id.* at 1186. In August 1994 the USACE advised the plaintiffs of the need for the survey. *Id.* at 1186-87.

475. *Id.* at 1187.

476. *Id.* at 1188.

477. *Id.* at 1187-88.

478. *Id.* at 1183, 1188.

479. *Id.* at 1188.

480. *Id.* at 1188-89.

481. *Id.* at 1189 (“The court made no underlying factual findings to support its legal conclusion.”).

482. *Id.*

483. *See id.* at 1191-92.

484. *Id.* at 1192 (“Rather, the [plaintiffs] waited until the Government informed them [in August 1996] of the extent of their injury to file an administrative claim, and now assert they were unaware of ‘long-term’ damage to their property prior to release of the EE/CA

The Tenth Circuit also rejected, under Utah law, the “continuing trespass and nuisance” characterization fashioned by the district court.<sup>485</sup> Thus the Tenth Circuit held that the two-year statute of limitations under the FTCA barred the civil suit,<sup>486</sup> stating “[w]hile not condoning the Government’s abysmal failure over the past half-century to clean up the test site, we hold [the two-year statute of limitations] bars Plaintiffs’ FTCA claim for money damages.”<sup>487</sup>

Not all civil suits filed against the Federal Government in connection with the environmental contamination of a used defense site have run afoul of the statute of limitations, or the several exceptions to the FTCA. For example, in *Redland Soccer Club, Inc. v. United States Army*,<sup>488</sup> over 140 plaintiffs in three consolidated cases sought damages and injunctive relief in connection with alleged exposure to toxic wastes buried by the U.S. Army in a landfill on the New Cumberland Army Depot in Pennsylvania. The landfill subsequently was transferred to Fairview Township for a public park and converted into soccer fields.<sup>489</sup>

The soccer fields were used between 1982 and 1987. The USACE, under the DERP, tested the soil in the public park for environmental contamination in 1987.<sup>490</sup> “The testing demonstrated a ‘significant presence of contaminants in some areas’ of the Park and contamination in most of the soil and sediment samples.”<sup>491</sup> In January 1990 the USACE concluded in a remedial investigative report that the park was contaminated with polycyclic aromatic hydrocarbons.<sup>492</sup>

In June 1990 the first plaintiffs filed for damages and injunctive relief under the FTCA as well as under CERCLA and a Pennsylvania state

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draft report.”); *see, e.g.*, *Gustavson v. United States*, 655 F.2d 1034, 1036 (10th Cir. 1981) (“Lack of knowledge of the injury’s permanence, extent, and ramifications does not toll the [FTCA statute of limitations].”); *see also* *United States v. Kubrick*, 444 U.S. 111, 117-18 (1979).

485. *Cannon*, 338 F.3d at 1193-94 (“The Government’s failure to remove ordnance and contamination from the [Yellow Jacket Area] does not constitute a continuing trespass or nuisance under Utah law.”).

486. *Id.* at 1184.

487. *Id.*

488. 55 F.3d 827 (3d Cir. 1995).

489. *See id.* at 833-34; *id.* at 835 (“No one from the Depot or the Army informed the Township that the landfill contained potentially hazardous or toxic substances.”).

490. *Id.* at 835-36.

491. *Id.* at 836. In June 1988 the USACE concluded that the contamination posed no unacceptable health risk because the contamination was within proposed EPA levels for the concentration of contaminants in the soil. *Id.* In July 1988 the EPA concluded that the park was contaminated with lead, polycyclic aromatic hydrocarbons and volatile organic compounds. *Id.*

492. *Id.* at 837.

statute.<sup>493</sup> Ultimately, the plaintiffs included township employees who converted the landfill into soccer fields,<sup>494</sup> township residents who lived near the soccer fields,<sup>495</sup> and children and adults who played on and near the soccer fields.<sup>496</sup> With the exception of two children, the plaintiffs alleged no actual physical harm due to exposure to toxic wastes buried beneath the soccer fields.<sup>497</sup> Nonetheless, the FTCA claims sought damages for emotional distress and, in particular, for a medical monitoring regimen to guard against the onset of actual physical harm.<sup>498</sup>

The U.S. District Court for the Middle District of Pennsylvania granted several motions for summary judgment against the plaintiffs and entered a final order for the United States.<sup>499</sup> On appeal, the Third Circuit affirmed the final order except with respect to summary judgment against the two children,<sup>500</sup> one of whom suffered from leukemia and one of whom suffered from enlarged lymph nodes.<sup>501</sup>

On the claim for damages for a medical monitoring regimen, the Third Circuit affirmed the district court because the plaintiffs “failed to introduce evidence that their exposure required a different medical monitoring regimen than that which would normally be recommended for them absent exposure.”<sup>502</sup> On the claim for damages for emotional

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493. *Id.* at 843.

494. *Id.* at 837 (“The Township worker plaintiffs consist of seven individuals who either performed the excavation and levelling work while the former landfill was being converted into a soccer field or who mowed the grass and performed maintenance work at the Park after the field was constructed.”).

495. *Id.* at 838 (“The Neighbor Plaintiffs are twelve residents living in the immediate vicinity of the Park and the Creek, plus some relatives who regularly visited them.”).

496. *Id.* at 839 (“The remaining 128 plaintiffs are members of the Redland Soccer Association . . . adults and children who used the Park on a regular basis from 1982 to 1987 for soccer activities, and members of their immediate families who were with them during activities at the Park.”).

497. *See id.* at 838-39.

498. *See id.* at 843. The FTCA claims were supported by several expert reports, e.g., a January 1992 *Public Health Risk Assessment of a Soccer Field Near the New Cumberland Army Depot, Fairview, Township*, a May 1993 *Medical Surveillance for Individuals Exposed to Hazardous Waste on Land Known as “Marsh Run Park” in Fairview, Pennsylvania near the New Cumberland Army Depot*, and a May 1993 *Evaluation Contributions of Contaminants to the Fairview Township Soccer Field*. *Id.* at 839-42. The U.S. Army defended the claims with several expert reports of its own. *Id.* at 842-43.

499. *Id.* at 829.

500. *Id.* at 857.

501. *Id.* at 839. The FTCA claims filed on behalf of the two sick children were permitted to proceed to trial. *See id.* at 850-53.

502. *Id.* at 848; *see also* *Cummins v. Southeastern Pa. Transp. Auth. (“SEPTA”)* (*In re Paoli R.R. Yard PCB Litig.*), 35 F.3d 717, 787-88 (3d Cir. 1994).



distress, the Third Circuit affirmed the district court because the plaintiffs alleged no actual physical harm.<sup>503</sup>

*B. W.C. & A.N. Miller Cos. v. United States*

For the most part, the civil suit against the Federal Government for environmental contamination associated with the New Cumberland Army Depot failed prior to trial but nonetheless survived the statute of limitations, or the several exceptions to the FTCA. Although the record on FTCA suits over the environmental contamination of used defense sites is mixed, most of the civil suits filed against the Federal Government in connection with the environmental restoration of Spring Valley have failed. For example, in March 1996 Miller filed a civil suit against the U.S. Army in the U.S. District Court for the District of Columbia (D.C. District Court).<sup>504</sup> In March 1995 Miller had filed an administrative claim against the U.S. Army for over \$15 million in damages, losses, and expenses attributable to the burial of World War I chemical munitions in Spring Valley.<sup>505</sup> The U.S. Army reviewed the claim and, in July 1995, concluded that the claim was without merit and that the U.S. Army, in 1986, had no obligation to advise Miller of the possible disposal in Spring Valley of World War I chemical munitions.<sup>506</sup> The civil suit followed.

Miller filed a civil suit under the FTCA for damages associated with the burial by the U.S. Army of World War I chemical munitions, discovered in January 1993, on land leased by the U.S. Army for the AUES.<sup>507</sup> Miller claimed that the Army was negligent: (i) in the burial of chemical munitions in 1917-1920, (ii) in the failure to warn the public of buried chemical munitions in Spring Valley, (iii) in the conduct of the 1986 investigation into the possible disposal of World War I chemical munitions in Spring Valley, and (iv) in the failure to remove the buried chemical munitions prior to 1993.<sup>508</sup>

Miller sought approximately \$14 million in damages for expenses associated with (i) assistance with the 1986 investigation, (ii) legal proceedings against Miller by Spring Valley residents, and (iii) the adverse impact of the buried chemical munitions on the Spring Valley

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503. *Redland Soccer Club*, 55 F.3d at 848; see also *Wisniewski v. Johns-Manville Corp.*, 759 F.2d 271, 274 (3d Cir. 1985).

504. *W.C. & A.N. Miller Cos. v. United States*, 963 F. Supp. 1231, 1232 (D.D.C. 1997).

505. *2001 Spring Valley Hearing*, *supra* note 10, at 231 (statement of Francis E. Reardon, Auditor General of the Army).

506. *Id.* at 233.

507. *W.C. & A.N. Miller*, 963 F. Supp. at 1232-33.

508. *Id.* at 1234.

real estate business.<sup>509</sup> Miller claimed no U.S. Army negligence in the removal of buried chemical munitions in 1993 and claimed no physical harm attributable to the munitions.<sup>510</sup>

In July 1996 the U.S. Army filed a motion to dismiss or, in the alternative, for summary judgment.<sup>511</sup> The motion argued that “(1) the court [had no] subject matter jurisdiction over the . . . claims; (2) the claims [were] barred by the applicable statute of limitations; and (3) the plaintiff [had] failed to state a claim upon which relief [could] be granted.”<sup>512</sup> The D.C. District Court denied the motion in March 1997.<sup>513</sup>

The court held, first and foremost, that it had subject matter jurisdiction over the claim that the U.S. Army was negligent in the failure to warn the public of buried chemical munitions in Spring Valley.<sup>514</sup> The “discretionary function” exception to the FTCA, the D.C. District Court concluded, barred a claim of negligence in the burial of chemical munitions, barred a claim of negligence in the 1986 investigation, and barred a claim of negligence in the failure to remove the buried chemical munitions prior to 1993, but could not bar a claim of negligence in the failure to mark or warn of buried munitions.<sup>515</sup> The court stated that “[t]he failure to mark or warn of the buried munitions does not fall within the discretionary function exception to the FTCA.”<sup>516</sup>

Under the two-part judicial test for the use of the “discretionary function” exception, a civil suit is not barred if a federal statute or regulation required a federal employee to take the tortious action on which the suit is based.<sup>517</sup> The D.C. District Court found, however, that no federal statute or regulation prescribed a course of action relative to

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509. *Id.* at 1234-35.

510. *Id.* at 1235.

511. *Id.*

512. *Id.* at 1233.

513. *Id.*

514. *See id.* at 1235-42.

515. *See id.* at 1238-42. The court also concluded that it had subject matter jurisdiction despite the fact that the burial of chemical munitions occurred twenty-five years before the effective date of the FTCA. *Id.* at 1236-37. “The FTCA [e]stablishes [j]urisdiction [o]n [t]he [b]asis [o]f [w]hen [a] claim [a]ccrues, [r]ather [t]han [w]hen [t]he [t]ortious [c]onduct [o]ccurs.” *Id.* at 1236. In addition, the U.S. District Court for the District of Columbia (D.C. District Court) concluded that it had subject matter jurisdiction because the civil suit was filed against the Federal Government and not against an independent contractor of the Federal Government. *See id.* at 1237 (“[T]he plaintiff claims that the Army was negligent in failing to take appropriate action after learning from its independent contractor that there were ‘possible burial sites, shell and bomb pits, trenches and possible test areas.’ This claim is not barred by the independent contractor provision.”); *see also* *Carnes v. United States*, 186 F.2d 648, 650 (10th Cir. 1951).

516. *W.C. & A.N. Miller*, 963 F. Supp. at 1240 (emphasis omitted).

517. *See Berkovitz v. United States*, 486 U.S. 531, 536 (1988).

the burial of World War I chemical munitions and, thus, there was an “element of judgment or choice” that would preclude the suit under the discretionary function exception.<sup>518</sup>

In addition, for the exception to apply, the tortious action on which the suit is based must involve the consideration of social, economic, or political policies.<sup>519</sup> The D.C. District Court held that the burial of chemical munitions in 1917-1920, the conduct of the 1986 investigation, and the failure to remove the buried chemical munitions prior to 1993, all involved the consideration of social, economic, or political policies, barring suit under the FTCA.<sup>520</sup> Indeed, “numerous courts have applied the discretionary function exception in the context of military activities and the Government’s handling and disposal of hazardous materials.”<sup>521</sup> The failure to warn the public of buried chemical munitions in Spring Valley, however, involved no consideration of social, economic, or political policies.<sup>522</sup> “Here, the Army’s decision not to warn that it had buried munitions on private land is not the type of decision that involves social, economic, or policy considerations.”<sup>523</sup>

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518. *W.C. & A.N. Miller*, 963 F. Supp. at 1238-39.

519. *See United States v. Gaubert*, 499 U.S. 315, 322-23 (1991).

520. *W.C. & A.N. Miller*, 963 F. Supp. at 1240.

Whether or not the Army exercised the best judgment in disposing of its munitions—including its decision to bury munitions on private land, to leave the munitions buried until 1993, and to respond to its 1986 investigation as it did—are actions not properly subject to the Court’s inquiry in a FTCA suit.

*Id.*

521. *Id.*; *see also Dalehite v. United States*, 346 U.S. 15, 17-18, 35-45 (1953) (1947 Texas City, Texas explosion); *Kirchmann v. United States*, 8 F.3d 1273, 1274 (8th Cir. 1993) (environmental contamination due to construction of missile site); *Industria Panificadora, S.A. v. United States*, 957 F.2d 886, 887 (D.C. Cir. 1992) (allocation of law enforcement resources); *Allen v. United States*, 816 F.2d 1417, 1418, 1420-21 (10th Cir. 1987) (open-air nuclear weapons tests).

522. *W.C. & A.N. Miller*, 963 F. Supp. at 1240-42.

523. *Id.* at 1241; *see also Cope v. Scott*, 45 F.3d 445, 446, 448-52 (D.C. Cir. 1995); *Faber v. United States*, 56 F.3d 1122, 1123, 1125, 1127 (9th Cir. 1995) (holding that the exception was inapplicable to failure to warn of known dangerous conditions in national forest); *Sutton v. Earles*, 26 F.3d 903, 910 (9th Cir. 1994) (holding that the exception was inapplicable to failure to warn of known water hazard); *Andrulonis v. United States*, 952 F.2d 652, 655 (2d Cir. 1991) (holding that the exception was inapplicable to failure to warn of obvious dangerous conditions related to experiments with rabies virus); *Summers v. United States*, 905 F.2d 1212, 1215-16 (9th Cir. 1990) (holding that the exception was inapplicable to failure to warn of fire rings on national park beach); *Boyd v. United States*, 881 F.2d 895, 898 (10th Cir. 1989) (holding that the exception was inapplicable to failure to warn of dangerous conditions in swimming area); *Kennewick Irrigation Dist. v. United States*, 880 F.2d 1018, 1031-32 (9th Cir. 1989) (holding that the exception was inapplicable to decision not to remove unsuitable ground material in construction of irrigation canal); *ARA Leisure Servs. v. United States*, 831 F.2d 193, 195-96 (9th Cir. 1987) (holding that the exception was inapplicable to failure to maintain portion of road in safe condition);

The D.C. District Court also held that the civil suit filed by Miller was not “barred by the two-year FTCA statute of limitations.”<sup>524</sup> In this regard, the court concluded that the claim accrued when the buried chemical munitions were discovered in 1993.<sup>525</sup> Miller had filed an administrative claim against the U.S. Army in 1995.<sup>526</sup>

Finally, the court ruled that Miller had stated a cause of action for negligence under District of Columbia law.<sup>527</sup> The basis of the negligence was the failure to mark or warn of buried munitions.<sup>528</sup> “[T]he Court conclude[d] that, as a matter of law, the defendant owed a duty to warn the plaintiff, a subsequent occupant of the land, of the buried munitions.”<sup>529</sup> Thus the civil suit filed by Miller against the United States under the FTCA in March 1996 was permitted to proceed to trial in the D.C. District Court on the claim that the U.S. Army was negligent in its failure to warn the public of buried chemical munitions in Spring Valley.<sup>530</sup>

In February 1997 three Spring Valley residents filed a civil suit against the Federal Government under the FTCA for “negligence, public and private nuisance, and trespass.”<sup>531</sup> The suit also was filed against Miller “in common law tort for fraudulent misrepresentation, negligent misrepresentation, and rescission.”<sup>532</sup> The residents sought damages for loss of value in the sale of their homes.<sup>533</sup> The suit was consolidated with the Miller suit for administrative convenience.<sup>534</sup>

In April 1997 the United States sought reconsideration of the D.C. District Court decision that permitted the Miller suit to proceed towards trial.<sup>535</sup> The United States also filed a motion to dismiss the new civil suit filed under the FTCA.<sup>536</sup> Finally, Miller filed a motion to dismiss the

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Smith v. United States, 546 F.2d 872, 876-77 (10th Cir. 1976) (holding that the exception was inapplicable to failure to warn of collapsing thermal pool).

524. *W.C. & A.N. Miller*, 963 F. Supp. at 1242.

525. *Id.*

526. *2001 Spring Valley Hearing*, *supra* note 10, at 231 (statement of Francis E. Reardon, Auditor General of the Army).

527. *W.C. & A.N. Miller*, 963 F. Supp. at 1242-44.

528. *See id.* at 1243.

529. *Id.* (“Clearly, the duty to warn under these circumstances is an absolute necessity. No department of government can so callously conduct itself, placing segments of the public in serious jeopardy, without appropriate warning of the hazards that exist.”).

530. *See id.* at 1231-32.

531. *See W.C. & A.N. Miller Cos. v. United States*, 173 F.R.D. 1, 2 (D.D.C. 1997).

532. *Id.*

533. *Id.*

534. *Id.*

535. *Id.*

536. *Id.*

residents' suit or, in the alternative, for summary judgment.<sup>537</sup> In May the court denied the motion for reconsideration and granted the two motions to dismiss.<sup>538</sup> Because the residents in the new suit had not filed an administrative claim against the U.S. Army until 1996, three years after the buried chemical munitions were discovered, the FTCA suit ran afoul of the two-year statute of limitations.<sup>539</sup> In addition, because the residents, like Miller, resided in the District of Columbia, the D.C. District Court had no diversity jurisdiction over the new suit, and the court, in view of the dismissal of the FTCA suit, declined to exercise supplemental jurisdiction.<sup>540</sup> An appeal to the U.S. Court of Appeals for the D.C. Circuit was taken but voluntarily dismissed in September 1997.<sup>541</sup>

The civil suit filed by Miller against the United States under the FTCA never went to trial. In December 1998 the parties settled.<sup>542</sup> Under the settlement, the Federal Government agreed to pay Miller \$2.1 million.<sup>543</sup>

### C. Loughlin v. American University

In January 2002 a couple with two children (Loughlins), who lived in Spring Valley between 1994 and 2000, filed a \$32 million civil suit against the United States, American University, and a real estate partnership that sold the Loughlins their home on Glenbrook Road in Spring Valley in 1994.<sup>544</sup> The real estate partnership had purchased the land for the

537. *Id.*

538. *Id.* at 2-3. The court rejected the motion for reconsideration despite the argument that the March 1997 decision represented a premature disposition of the suit. *Id.* at 1. The D.C. District Court held that "[a] court may enter summary judgment, *sua sponte*, in favor of a party opposing summary judgment, even if, as in this case, that party has not made a formal cross-motion for summary judgment." *Id.* at 3; *see, e.g.*, *Celotex Corp. v. Catrett*, 477 U.S. 317, 326 (1986); *Leahy v. District of Columbia*, 833 F.2d 1046, 1047 (D.C. Cir. 1987).

539. *W.C. & A.N. Miller*, 173 F.R.D. at 5.

540. *Id.* A federal court is authorized to exercise supplemental jurisdiction over a state claim if related to a federal claim. 28 U.S.C. § 1367(a) (2000). If the federal claim is dismissed before trial, however, the federal court can decline to exercise supplemental jurisdiction over the state claim. *Id.* § 1367(c)(3). *See generally* *United Mine Workers of Am. v. Gibbs*, 383 U.S. 715, 725-27 (1966).

541. General Docket, *Hicks v. United States* (D.C. Cir. 1997) (No. 97-5167), at <http://pacer.cadc.uscourts.gov/cgi-bin/dktrpt.pl?CASENUM=97-5167&puid=01112150097> (on file with author).

542. *W.C. & A.N. Miller Cos. v. United States*, Civil A. No. 96-0453 (SS/DAR), Stipulation of Settlement and Mutual Release of Claims (Dec. 11, 1998), *reprinted in* 2001 *Spring Valley Hearing*, *supra* note 10, at 52.

543. *Id.*

544. *Loughlin v. United States*, 209 F. Supp. 2d 165, 168 (D.D.C. 2002), *vacated by* 393 F.3d 155 (D.C. Cir. 2004); *see also* Arthur Santana, *First Suit Filed over Chemicals in NW Soil: Family Alleges Toxic Exposure*, WASH. POST, Jan. 29, 2002, at B3 ("A Northwest

home from American University.<sup>545</sup> The Loughlins sued the United States, American University, and the partnership for negligence and failure to warn of buried chemical munitions and sued American University and the partnership for fraud, deceit, and outrageous conduct.<sup>546</sup>

In February 2002 the live-in nanny for the Loughlins from 1994 to 1999 (Gillum) filed a civil suit in the Superior Court of the District of Columbia against the United States, American University, and the partnership.<sup>547</sup> Simultaneously, Gillum filed an administrative claim with the U.S. Army for \$10 million.<sup>548</sup> Soon thereafter, the civil suit filed in D.C. Superior Court was removed to the D.C. District Court.<sup>549</sup> In March, the D.C. District Court dismissed the suit against the United States because Gillum had not yet exhausted her administrative remedies.<sup>550</sup> The suit against American University and the partnership, seeking damages for negligent failure to warn of buried chemical munitions,<sup>551</sup> was consolidated with the Loughlin suit.<sup>552</sup>

Finally, in February 2002 a Maryland resident (Saum) who lived in Spring Valley between 1947 and 1964 filed a civil suit in D.C. Superior Court against the United States and American University.<sup>553</sup> Simultaneously, Saum filed an administrative claim with the U.S. Army for \$10 million.<sup>554</sup> Soon thereafter, the civil suit filed in D.C. Superior

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Washington family yesterday became the first to sue concerning toxic munitions from World War I left beneath a large swath of their Spring Valley neighborhood.”). The Loughlin home was at 4825 Glenbrook Road, *id.*, one of three properties in USACE Operable Unit 3 in Spring Valley, PARSONS, *supra* note 282, ¶ 1.3.0.2. The soil was removed from 4825 Glenbrook Road between December 2000 and August 2002. *Id.* ¶ 2.4.4.1. *See generally* PARSONS ENG’G SCI., INC., *supra* note 322.

545. *Loughlin*, 209 F. Supp. 2d at 168. The Loughlins filed the civil suit against Glenbrook Limited Partnership as well as against Lawrence N. Brandt, Inc., Lawrence N. Brandt, and Robert Brandt. *Id.* at 167.

546. *Id.* at 168-69 (“In 1997, Kathi Loughlin was diagnosed with a brain tumor.”).

547. *Id.* at 167-68; *Loughlin v. United States*, 393 F.3d 155, 158 (D.C. Cir. 2004).

548. Plaintiff’s Complaint ¶ 5, *Gillum v. United States* (D.D.C. 2003) (No. 1:003CV00030).

549. *Loughlin*, 393 F.3d at 158. *See generally* 28 U.S.C. § 1441 (2000) (removal statute).

550. *Loughlin*, 209 F. Supp. 2d at 169 n.2; Plaintiff’s Complaint ¶ 7, *Gillum v. United States* (2003) (No. 1:03CV00030).

551. *Loughlin*, 209 F. Supp. 2d at 167; 169 (“Gillum has been diagnosed with and treated for actinic keratosis, which is a possible indicator of arsenic exposure and future cancer.”).

552. *Id.* at 167 & n.1.

553. Brief for Appellee Camille Saum at 3, 5, *Loughlin*, 393 F.3d 155 (No. 03-5284).

554. Plaintiff’s Complaint ¶ 5, *Saum v. United States* (D.D.C. 2003) (No. 1:03CV00029).

Court was removed to the D.C. District Court.<sup>555</sup> In March, the D.C. District Court dismissed the suit against the United States because Saum had not yet exhausted her administrative remedies.<sup>556</sup> The suit against American University, seeking damages for negligent failure to warn of buried chemical munitions,<sup>557</sup> also was consolidated with the Loughlin suit.<sup>558</sup>

In February 2002 the real estate partnership filed a cross-claim against the United States.<sup>559</sup> In June American University filed a cross-claim against the United States.<sup>560</sup> In September the partnership filed a cross-claim against American University.<sup>561</sup> In November 2002 American University filed a cross-claim against the partnership.<sup>562</sup>

Although the USACE undertook the environmental restoration of Spring Valley in Northwest Washington in January 1993 (after an excavation for new home construction in the neighborhood unearthed a cache of chemical munitions from World War I), the pleadings in the Loughlin suit revealed that in 1992 an excavation near the site of the Loughlin home undertaken by the real estate partnership unearthed a closed fifty-five-gallon drum.<sup>563</sup>

In March 2002 American University filed a motion to dismiss the three consolidated suits for failure to state a claim upon which relief could be granted.<sup>564</sup> The motion argued that the University was not negligent

555. *Loughlin*, 393 F.3d at 158. See generally 28 U.S.C. § 1441 (2000) (removal statute).

556. *Loughlin*, 209 F. Supp. 2d at 169 n.2; Plaintiff's Complaint ¶ 7, Saum v. United States (2003) (No. 1:03CV00029).

557. *Loughlin*, 209 F. Supp. 2d at 167, 168 (“[Saum] has suffered from a variety of autoimmune and blood-related problems since her childhood, including pernicious anemia, renal stenosis, and actinic keratosis.”).

558. *Id.* at 167 & n.1.

559. *Loughlin v. United States*, 230 F. Supp. 2d 26, 28-29 (D.D.C. 2002); Docket Report # 5, *Loughlin v. United States* (D.D.C. Feb. 19, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).

560. *Loughlin*, 230 F. Supp. 2d at 29 n.3; Docket Report # 49, *Loughlin v. United States* (D.D.C. June 20, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).

561. See *Loughlin*, 230 F. Supp. 2d at 29 n.2; Docket Report # 67, *Loughlin v. United States* (D.D.C. Sept. 3, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).

562. Docket Report # 89, *Loughlin v. United States* (D.D.C. Nov. 12, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).

563. *Loughlin*, 209 F. Supp. 2d at 168.

564. *Id.* at 167; Docket Report # 13, *Loughlin v. United States* (D.D.C. Mar. 13, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).

because under District of Columbia law<sup>565</sup> it had no affirmative obligation to warn the Loughlins, Gillum, and Saum of buried chemical munitions.<sup>566</sup> The D.C. District Court denied the motion in June.<sup>567</sup> The court concluded that the facts pled by the plaintiffs were sufficient, under the *Restatement (Second) of Torts*, to survive a motion to dismiss for failure to state a claim.<sup>568</sup> The court also distinguished the facts from precedent in which the D.C. District Court found no affirmative obligation to warn of hazardous conditions on conveyed land.<sup>569</sup>

The D.C. District Court also found that the claims filed by the Loughlins against American University and the partnership for deceit and misrepresentation were cognizable.<sup>570</sup> Finally, the court held that the claim filed by the Loughlins against American University and the partnership for outrageous conduct, which resulted in the intentional infliction of emotional distress, also was cognizable.<sup>571</sup> In support of this conclusion, the D.C. District Court quoted its decision in *W.C. & A.N. Miller Cos. v. United States*,<sup>572</sup> which stated, for example, that “[n]o department of the government can so callously conduct itself, placing segments of the public in serious jeopardy, without appropriate warning of the hazards that exist.”<sup>573</sup>

In May 2002 the United States filed a motion to dismiss the Loughlin complaint for lack of subject matter jurisdiction under the FTCA or, in the alternative, for summary judgment.<sup>574</sup> The United States also filed a

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565. See, e.g., *Thomas ex rel. v. City Lights Sch., Inc.*, 124 F. Supp. 2d 707, 709 (D.D.C. 2000) (describing the legal standard for negligent conduct in the District of Columbia).

566. *Loughlin*, 209 F. Supp. 2d at 169.

567. *Id.* at 167.

568. *Id.* at 170-71. See generally RESTATEMENT (SECOND) OF TORTS §§ 353, 364 (1965). Section 364 has been adopted in the District of Columbia. *Loughlin*, 209 F. Supp. 2d at 170; see also *Brown v. Consol. Rail Corp.*, 717 A.2d 309, 315-16 (D.C. 1998). Section 353 also has been adopted in the District of Columbia. See *Caporaletti v. A-F Corp.*, 137 F. Supp. 14, 17-19 (D.D.C. 1956), *rev'd on other grounds*, 240 F.2d 53 (D.C. Cir. 1957).

569. *Loughlin*, 209 F. Supp. 2d at 171-73; 325-343 E. 56th St. Corp. v. Mobil Oil Corp., 906 F. Supp. 669 (D.D.C. 1995).

570. *Loughlin*, 209 F. Supp. 2d at 173; see, e.g., *Railan v. Katyal*, 766 A.2d 998, 1009 (D.C. 2001) (stating the legal standard for fraudulent misrepresentation in the District of Columbia).

571. *Loughlin*, 209 F. Supp. 2d at 173-74; see, e.g., *Sturdza v. United Arab Emirates*, 281 F.3d 1287, 1305 (D.C. Cir. 2002) (discussing the legal standard for intentional infliction of emotional distress in the District of Columbia).

572. 963 F. Supp. 1231 (D.D.C. 1997).

573. *Loughlin*, 209 F. Supp. 2d at 174 (quoting *W.C. & A.N. Miller Cos. v. United States*, 963 F. Supp. 1231, 1243 (D.D.C. 1997)).

574. *Loughlin v. United States*, 230 F. Supp. 2d 26, 29 (D.D.C. 2002); Docket Report # 30, *Loughlin v. United States* (D.D.C. May 6, 2002) (No. 1:02-cv-00152-ESH), at [https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L\\_280\\_0-1](https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?441514828383344-L_280_0-1) (on file with author).



motion to dismiss the cross-claim filed by the real estate partnership for lack of subject matter jurisdiction under the FTCA.<sup>575</sup>

In November 2002 the D.C. District Court denied in part the U.S. motions to dismiss the Loughlin complaint, and the cross-complaint filed by the real estate partnership, for lack of subject matter jurisdiction under the FTCA.<sup>576</sup> The motions sought the dismissal of the complaint and the cross-complaint under the FTCA statute of limitations and under the “discretionary function” exception to the FTCA.<sup>577</sup> The court denied the motions to dismiss under the FTCA statute of limitations and deferred a decision on the motions to dismiss under the “discretionary function” exception.<sup>578</sup>

With respect to the U.S. motions to dismiss for lack of subject matter jurisdiction under the FTCA statute of limitations, the D.C. District Court observed that “the FTCA provides both the basis of subject matter jurisdiction and the cause of action. Because the jurisdiction question is inextricably intertwined with the merits of the action, the Court must treat the government’s motion as one for summary judgment.”<sup>579</sup> The court then denied the motions “because there are significant facts in dispute that preclude a finding that the statute of limitations bars the claims of the plaintiffs and of the cross-claimant.”<sup>580</sup>

The D.C. District Court also denied the U.S. motion for summary judgment against the Loughlins.<sup>581</sup> The motion sought the dismissal of

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575. *Loughlin*, 230 F. Supp. at 29. In addition, the real estate partnership filed a motion for summary judgment against the Loughlins. *Id.*

576. *Id.*

577. *Id.* Under the FTCA, the Federal Government agrees to be sued under circumstances in which the United States, if a private person, would be liable. 28 U.S.C. § 1346(b)(1) (2000). Thus “the United States cannot be held liable when there is no comparable cause of action against a private citizen.” *Loughlin*, 230 F. Supp. 2d at 441 (quoting *C.P. Chem. Co. v. United States*, 810 F.2d 34, 37 (2d Cir. 1987)); see also *Feres v. United States*, 340 U.S. 135, 141 (1950). The motions also sought the dismissal of the complaint and the cross-complaint for lack of subject matter jurisdiction under the FTCA “because no analogous private liability can be demonstrated.” *Loughlin*, 230 F. Supp. 2d at 44.

578. *Loughlin*, 230 F. Supp. 2d at 29. The D.C. District Court also denied the motions to dismiss for lack of subject matter jurisdiction under the analogous private cause of action requirement under the FTCA. *Id.* at 44-45 (“[T]he instant claims easily satisfies [sic] the analogous private liability requirement.”).

579. *Id.* at 36-37 (footnote omitted).

580. *Id.* at 38. “[T]he issue of when the claims accrued involves disputed issues of fact that cannot be resolved at this early stage. Consequently, the government’s motions must be denied.” *Id.* at 39. The D.C. District Court could not conclude that “the statute of limitations was triggered in . . . 1992 or [in] 1994. *Id.* at 42. The court also could not conclude that the statute was triggered in 1998. *Id.* at 44.

581. *Id.* at 51. In addition, the court denied the motion filed by the real estate partnership for summary judgment against the Loughlins. *Id.*; *id.* at 48 (“What the

the complaint “on the ground that the Loughlins assumed the risk of the harm that forms the basis for their claims.”<sup>582</sup> The court found, however, that there was a factual dispute regarding the extent that the Loughlins understood in 1994 the scope and magnitude of the contamination on their Glenbrook Road lot.<sup>583</sup>

The pleadings on the United States motions to dismiss brought to light new information on environmental contamination in Spring Valley. The pleadings revealed, for example, that the U.S. Department of Agriculture, between 1919 and 1945, operated a laboratory on the campus of American University for the development of pesticides and herbicides.<sup>584</sup> In addition, when a 1992 excavation for the Loughlin home unearthed a closed fifty-five-gallon drum, American University, which in 1990 had sold the land for the home to the real estate partnership, retained a private environmental consulting firm to test the soil.<sup>585</sup> The tests resulted in the removal of soil contaminated with an herbicide.<sup>586</sup>

The pleadings also revealed that in March 1994, before the Loughlins purchased the Glenbrook home, the couple retained a private environmental consulting firm to test the soil.<sup>587</sup> The tests found no contamination.<sup>588</sup> Nonetheless, when the Loughlins purchased the home in 1994, the couple insisted on a buy-back provision from the real estate partnership in the event that a subsequent government investigation concluded that the Glenbrook Road lot was contaminated.<sup>589</sup> In 2000 three years after the wife was diagnosed with a brain tumor,<sup>590</sup> the Loughlins exercised the buy-back provision.<sup>591</sup>

Finally, the pleadings on the U.S. motions to dismiss revealed a third instance in which a private environmental consulting firm was retained to

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Loughlins and [the partnership] knew with respect to the contamination of the property and whether [the partnership] failed to disclose or actively concealed information are material issues of fact that are disputed.”).

582. *Id.* at 45 (“[A]ssumption of risk is an available defense when a plaintiff has incurred a known risk.”) (quoting *Green v. United States*, 991 F. Supp. 15, 18 (D.D.C. 1998)); *see also* *Scoggins v. Jude*, 419 A.2d 999, 1004 (D.C. 1980).

583. *See Loughlin*, 230 F. Supp. 2d at 46-47; *see also* *Maalouf v. Swiss Confederation*, 208 F. Supp. 2d 31, 42 (D.D.C. 2002) (“[S]ummary judgment based on assumption of risk should therefore be granted only if no real dispute exists as to the plaintiff’s awareness of the relevant danger.”).

584. *Loughlin*, 230 F. Supp. 2d at 30.

585. *Id.* at 31.

586. *Id.*

587. *Id.* at 32.

588. *Id.*

589. *Id.*

590. *Id.* at 34.

591. *Id.* at 35.

test for contamination in Glenbrook Road soil.<sup>592</sup> The Loughlins lived between the foreign ambassador, whose backyard was excavated in 1998, and the president of American University,<sup>593</sup> on whose lawn in June 1996 a landscaping excavation unearthed several bottles with chemicals.<sup>594</sup> The tests conducted by the firm retained by American University soon thereafter indicated an elevated concentration of arsenic in the soil.<sup>595</sup>

Ten months after the D.C. District Court declined to dismiss the Loughlin complaint and the cross-complaint filed by the real estate partnership under the FTCA statute of limitations, the court granted the U.S. motions to dismiss under the “discretionary function” exception to the FTCA.<sup>596</sup> The court adopted the traditional two-part judicial test for the “discretionary function” exception and analyzed,<sup>597</sup> first, if the tortious actions involved “an element of judgment or choice” or a federal statute or regulation that required the actions to be taken and,<sup>598</sup> second,<sup>599</sup> if the element of judgment or choice involved the consideration of social, economic, or political policies and thus was the type of discretionary function that the exception was intended to shield.<sup>600</sup>

The D.C. District Court first concluded that the Federal Government had violated no federal statute or regulation, during World War I or since 1986, relative to the burial of World War I chemical munitions, in

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592. *Id.* at 33.

593. *See id.* at 33-34. The residences for the Loughlins (4825 Glenbrook Road), the South Korean ambassador (4801 Glenbrook Road), and the president of American University (4835 Glenbrook Road) comprised the three properties in USACE Operable Unit 3 in Spring Valley. PARSONS, *supra* note 282, ¶ 1.3.0.2.

594. *Loughlin*, 230 F. Supp. 2d at 33.

595. *Id.*

596. *See Loughlin v. United States*, 286 F. Supp. 2d 1, 1 (D.D.C. 2003). *See generally* Carol D. Leonnig, *Residents' Federal Lawsuits Blocked: Weapons Tested in Spring Valley*, WASH. POST, Sept. 17, 2003, at B8.

597. *Loughlin*, 286 F. Supp. 2d at 8. With respect to the “discretionary function” exception, “[i]t is entirely irrelevant to this issue whether the government was negligent, or otherwise failed to protect the public from harm.” *Id.*; *see also* Daigle v. Shell Oil Co., 972 F.2d 1527, 1540 (10th Cir. 1992).

598. *Loughlin*, 286 F. Supp. 2d at 8. Such a federal statute or “regulation must be mandatory and it must clearly and specifically define what the employees are supposed to do.” C.R.S. *ex rel.* D.B.S. v. United States, 11 F.3d 791, 799 (8th Cir. 1993). The statute or regulation “must take away the exercise of discretion.” *Gotha v. United States*, 115 F.3d 176, 181 (3d Cir. 1997). A broad statute or regulation that specifies no particular course of conduct leaves an element of judgment or choice. *See, e.g., Kelly v. United States*, 241 F.3d 755, 761 (9th Cir. 2001).

599. *See Loughlin*, 286 F. Supp. 2d at 19-30.

600. *Shansky v. United States*, 164 F.3d 688, 692 (1st Cir. 1999) (“The critical question is whether the acts or omissions that form the basis of the suit are susceptible to a policy-driven analysis, not whether they were the end product of a policy-driven analysis.”); *see also* *Macharia v. United States*, 334 F.3d 61, 66-67 (D.C. Cir. 2003).

the failure to warn the public of buried munitions, and in the environmental restoration of Spring Valley.<sup>601</sup> For example, a vintage *Gas Warfare Bulletin* and a *Manual of Gas Warfare*, the court concluded, imposed no legal requirement and were applicable to actual chemical warfare but not to the development of and experimentation with chemical munitions.<sup>602</sup> The court also concluded that the Federal Government had violated no federal statute or regulation in the environmental restoration of Spring Valley since 1986.<sup>603</sup> The government actions involved an element of judgment or choice and therefore were protected from suit under the discretionary function exception.

The D.C. District Court then concluded that the element of judgment or choice relative to the burial of World War I chemical munitions, in the failure to warn the public of buried munitions, and in the environmental restoration of Spring Valley, in World War I or since 1986, involved the consideration of social, economic, or political policies and thus was the type of discretionary function that the exception was intended to shield.<sup>604</sup> For example, in a failure to warn case, the court explained, “the proper focus . . . is not whether safety is at issue, but instead whether the alleged negligence in fact arose out of a decision grounded in policy considerations.”<sup>605</sup>

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601. See *Loughlin*, 286 F. Supp. 2d at 9-19.

602. *Id.* at 9-14; *id.* at 14 (“[T]he Court concludes that claimants have not demonstrated the existence of any mandatory directives issued during the World War I era that would have either forbidden AUES officials from burying chemical weapons in Spring Valley or required those officials to post warnings that they had done so.”); see also *Aragon v. United States*, 146 F.3d 819, 824 (10th Cir. 1998) (“An agency manual, in contrast to a regulation, is not necessarily entitled to the force and effect of law.”).

603. *Loughlin*, 286 F. Supp. 2d at 14-15, 19. For example, the *Management Guidance for the Defense Environmental Restoration Program*, the court concluded, provides the USACE with guidance but imposes no firm legal requirement. See *id.* at 16; see also *Wells v. United States*, 851 F.2d 1471, 1477 (D.D.C. 1988) (stating that government policies allow for discretion). A federal statute, the court observed, may impose a firm requirement but also may allow for discretion. See *id.* at 17 (relying on *Miller v. United States*, 163 F.3d 591, 595 (9th Cir. 1998), and *Tippett v. United States*, 108 F.3d 1194, 1197 (10th Cir. 1997)). Even CERCLA imposes no firm legal requirement for the Federal Government to warn the public of contamination in residential landfills. See, e.g., *Cisco v. United States*, 768 F.2d 788, 789 (7th Cir. 1985).

604. See *Loughlin*, 286 F. Supp. 2d at 19-30; *OSI, Inc. v. United States*, 285 F.3d 947, 953 (10th Cir. 2002) (“The nature of the military’s function requires that it be free to weigh environmental policies against security and military concerns.”). Thus the plaintiffs emphasized the failure of the Federal Government after World War I to warn the public of buried munitions in Spring Valley. *Loughlin*, 286 F. Supp. 2d at 20.

605. *Loughlin*, 286 F. Supp. 2d at 20. In some cases, a failure to warn involves no consideration of social, economic, or political policies. See *id.* at 21; see also, e.g., *Duke v. Dep’t of Agric.*, 131 F.3d 1407, 1412 (10th Cir. 1997) (failure to warn of hazards in Gila National Forest); *Faber v. United States*, 56 F.3d 1122, 1123 (9th Cir. 1995) (failure to

Indeed, a failure to warn, the D.C. District Court observed, often has involved the consideration of social, economic, or political policies when the failure was related to military activities.<sup>606</sup> “Giving notice . . . is not always simple, and in such complex cases the decision whether to do so will often involve considerations of the social, economic, and political factors protected by the discretionary function exception.”<sup>607</sup> Thus the court concluded that the failure of the Federal Government after World War I to warn the public of buried chemical munitions in Spring Valley “implicates the very kind of policy judgments that warrant protection under” the FTCA.<sup>608</sup> In this regard, the D.C. District Court repudiated its decision, in *W.C. & A.N. Miller*, that the failure to warn the public of buried chemical munitions in Spring Valley involved no consideration of social, economic, or political policies.<sup>609</sup>

Finally, the D.C. District Court held that the element of judgment or choice in the failure to warn the public of buried World War I chemical munitions since 1986 also involved the consideration of social, economic, or political policies.<sup>610</sup> The court agreed that “choosing not to release this information implicates public policy considerations.”<sup>611</sup> The court also

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warn of rock ledge); *Summers v. United States*, 905 F.2d 1212, 1217 (9th Cir. 1990) (failure to warn of hot coals on beach). In contrast, in some cases, a failure to warn involved the consideration of social, economic, or political policies. See *Loughlin*, 286 F. Supp. 2d at 21; see also, e.g., *Valdez v. United States*, 56 F.3d 1177, 1177, 1180 (9th Cir. 1995) (failure to warn of waterfall); *Kiehn v. United States*, 984 F.2d 1100, 1103 (10th Cir. 1993) (failure to warn of cliffs); *Zumwalt v. United States*, 928 F.2d 951, 951-52, 955 (10th Cir. 1991) (failure to warn of hiking trails); *Boyd v. United States*, 881 F.2d 895, 897-98 (10th Cir. 1989) (failure to warn of hazards in lake); *Bowman v. United States*, 820 F.2d 1393, 1395 (4th Cir. 1987) (failure to warn of road hazards).

606. See, e.g., *Minns v. United States*, 155 F.3d 445, 451 (4th Cir. 1998) (failure to warn servicemen of hazards associated with inoculations); *Maas v. United States*, 94 F.3d 291, 292 (7th Cir. 1996) (failure to warn of cancer risk); *Barnson v. United States*, 816 F.2d 549, 553 (10th Cir. 1987) (failure to warn of hazards in uranium mines); *Konizeski v. Livermore Labs (In re Consol. United States Atmospheric Testing Litig.)*, 820 F.2d 982, 997-98 (9th Cir. 1987) (failure to warn of dangers associated with nuclear testing).

607. *Loughlin*, 286 F. Supp. 2d at 22.

608. *Id.* at 23. The “discretionary function” exception is designed “to preclude judicial second-guessing of such core military policy judgments.” *Id.*; see, e.g., *Boyle v. United Techs. Corp.*, 487 U.S. 500, 511 (1988); *Black Hills Aviation, Inc. v. United States*, 34 F.3d 968, 976 (10th Cir. 1994). “In the present case, moreover, it does not appear that the Army had any specific knowledge of the dangers associated with burying gas munitions, especially insofar as those weapons were not leaking at the time they were buried.” *Loughlin*, 286 F. Supp. 2d at 24.

609. See *Loughlin*, 286 F. Supp. 2d at 25-27 (“Obviously, the Court is not bound by *Miller*, and for the reasons just explained, it is unable to agree with that case’s holding . . .”).

610. *Id.* at 30.

611. *Id.* at 28; see, e.g., *Lockett v. United States*, 938 F.2d 630, 638-39 (6th Cir. 1991).

agreed the public release of some information should not require the public release of all information.<sup>612</sup>

Thus the D.C. District Court, although sympathetic to the residents of Spring Valley, granted with prejudice the U.S. motions to dismiss the Loughlin complaint, and the cross-complaint filed by the real estate partnership, under the “discretionary function” exception to FTCA.<sup>613</sup> In the absence of an FTCA claim, the court could not exercise supplemental jurisdiction over the state claims and cross-claims filed in the Loughlin litigation.<sup>614</sup> Thus the D.C. District Court dismissed the state claims and cross-claims, which could of course be refiled in the D.C. Superior Court.<sup>615</sup>

Similarly, in separate orders, the D.C. District Court, for the same reasons, granted with prejudice a U.S. motion to dismiss the Gillum complaint under the “discretionary function” exception to the FTCA,<sup>616</sup> dismissed without prejudice the state claims filed in the Gillum litigation,<sup>617</sup> granted with prejudice a U.S. motion to dismiss the Saum complaint,<sup>618</sup> and dismissed without prejudice the state claims filed in the Saum litigation.<sup>619</sup>

In March 2002 the D.C. District Court had dismissed the Gillum suit against the United States because Gillum had not yet exhausted her administrative remedies.<sup>620</sup> Similarly, the D.C. District Court had dismissed the Saum suit against the United States because Saum had not

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612. *Loughlin*, 286 F. Supp. 2d at 29.

The fact that the government releases some information (whether because of prudence, beneficence, or any other reason) should not, and does not, preclude it from withholding other information based on other, seemingly more compelling policy considerations. . . .

. . . .

. . . The law is clear that an initial decision to warn does not preclude immunity for a subsequent failure to warn, at least as long as the government can show that the latter decision was reasonably related to the economic, social, and political considerations that drive the discretionary function exception.

*Id.* at 29, 30.

613. *Id.* at 30.

614. *See generally* 28 U.S.C. § 1367 (2000).

615. *Loughlin*, 286 F. Supp. 2d at 30.

616. *Gillum v. Am. Univ.*, 286 F. Supp. 2d 30, 31 (D.D.C. 2003).

617. *Id.*

618. *Saum v. Am. Univ.*, 286 F. Supp. 2d 31, 31 (D.D.C. 2003).

619. *Id.*

620. *Loughlin v. United States*, 209 F. Supp. 2d 165, 169 n.2 (D.D.C. 2002), *vacated by* 393 F.3d 155 (D.C. Cir. 2004).

yet exhausted her administrative remedies.<sup>621</sup> In January 2003 however, both Gillum and Saum had refiled their complaints.<sup>622</sup>

The Loughlins<sup>623</sup> and Gillum appealed the dismissals with prejudice in October 2003;<sup>624</sup> in November Saum also appealed.<sup>625</sup> An oral argument on the consolidated appeals was held before a three-judge panel of the U.S. Court of Appeals for the D.C. Circuit in October 2004.<sup>626</sup> In late December 2004 the D.C. Circuit affirmed the dismissal of the Loughlin, Gillum, and Saum complaints against the United States under the “discretionary function” exception to the FTCA.<sup>627</sup> The D.C. Circuit also vacated the June 2002 decision of the D.C. District Court, however, that denied the motion of American University to dismiss the Loughlin, Gillum, and Saum complaints against the school for failure to state a claim upon which relief could be granted.<sup>628</sup>

#### D. Jach v. American University

In August 2002 a Spring Valley couple (Jachs) launched an unsuccessful class-action suit against the United States, not under the FTCA, but under the Fifth Amendment.<sup>629</sup> The Jachs filed a complaint against the United States and American University on their own behalf and on behalf of a proposed class of similarly situated Spring Valley residents.<sup>630</sup> The complaint argued that the disposal of World War I chemical munitions in Spring Valley and the environmental contamination of the neighborhood was in effect an unconstitutional

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621. *Id.*

622. Plaintiff’s Complaint, *Gillum v. United States* (D.D.C. 2003) (No. 1:003CV00030); Plaintiff’s Complaint, *Saum v. United States* (D.D.C. 2003) (No. 1:003CV00030).

623. Docket Report, *Loughlin v. United States* (D.C. Cir. Oct. 8, 2003) (No. 03-5284) (WESTLAW, 393 F.3d 155 (D.C. Cir. 2004), Briefs and Other Related Documents).

624. Docket Report, *Gillum v. Am. Univ.* (D.C. Cir. Oct. 17, 2003) (No. 03-5286) (WESTLAW, *Loughlin v. United States*, 393 F.3d 155 (D.C. Cir. 2004), Briefs and Other Related Documents).

625. General Docket, *Saum v. United States* (D.C. Cir. 2003) (No. 03-5321), at <http://pacer.cadc.uscourts.gov/cgi-bin/dktrpt.pl?CASENUM=03-5321&puid=01112150097> (on file with author); General Docket, *Saum v. Am. Univ.* (D.C. Cir. 2003) (No. 03-5319), at <http://pacer.cadc.uscourts.gov/cgi-bin/dktrpt.pl?CASENUM=03-5319&puid=01112153240> (on file with author).

626. *Loughlin v. United States*, 393 F.3d 155 (D.C. Cir. 2004).

627. *Id.* at 172.

628. *Id.* (“In sum, the District Court had no subject matter jurisdiction over the FTCA action. The court had no supplemental jurisdiction . . . to entertain non-federal claims. Accordingly, . . . the District Court’s decision against AU on local claims is a nullity and must be vacated.”).

629. *Jach v. Am. Univ.*, 245 F. Supp. 2d 110 (D.D.C. 2003).

630. *Id.* at 111.

taking of land under the Fifth Amendment.<sup>631</sup> With respect to American University, the complaint was based on common law tort.<sup>632</sup>

The Jachs sought the imposition of a property value protection plan, which would require the purchase by the Federal Government of properties that could not be sold at fair market values due to the environmental contamination of Spring Valley.<sup>633</sup> The United States moved to dismiss the suit for lack of subject matter jurisdiction.<sup>634</sup> In particular, the Government argued that CERCLA divested the court of subject matter jurisdiction until the USACE completed the environmental restoration of Spring Valley.<sup>635</sup>

The court agreed, and in February 2003 dismissed the constitutional claim against the United States with prejudice and the state claims against American University without prejudice.<sup>636</sup> SARA amended CERCLA to include section 113(h), which states that “[n]o Federal court shall have jurisdiction under Federal law . . . to review any challenges to removal or remedial action [under CERCLA].”<sup>637</sup> The statute, the D.C. District Court held, barred the proposed class action suit.<sup>638</sup> The court explained, in particular, that the statute is applicable to constitutional claims as well as to claims under CERCLA and other federal environmental statutes.<sup>639</sup>

Finally, the D.C. District Court observed that the imposition of the property value protection plan could interfere with USACE development and implementation of a remediation plan for the

631. *Id.*; U.S. CONST. amend. V.

632. *Jach*, 245 F. Supp. 2d at 111.

633. *Id.* at 113.

634. *Id.* at 111.

635. *Id.*

636. *Id.* at 112, 117.

637. 42 U.S.C. § 9613(h) (2000); H.R. REP. NO. 99-253, pt. 5, at 25 (1985) (“The purpose [of section 113(h)] is to ensure that there will be no delays associated with a legal challenge of the particular removal or remedial action selected . . . .”); *Farmers Against Irresponsible Remediation v. EPA*, 165 F. Supp. 2d 253, 258 (N.D.N.Y. 2001) (“The rationale behind the enactment of this section rested heavily on Congressional findings that CERCLA . . . was not adequately allowing the EPA to rapidly clean up toxic waste sites that were endangering public health.”).

638. *Jach*, 245 F. Supp. 2d at 113-14; *see also* *Costner v. URS Consultants*, 153 F.3d 667, 674-75 (8th Cir. 1998); *N. Shore Gas Co. v. EPA*, 930 F.2d 1239, 1242 (7th Cir. 1991).

639. *See Jach*, 245 F. Supp. 2d at 115; *see also* *Broward Gardens Tenants Ass'n v. EPA*, 311 F.3d 1066, 1075 (11th Cir. 2002); *Clinton County Comm'rs v. EPA*, 116 F.3d 1018, 1027 (3d Cir. 1997); *McClellan Ecological Seepage Situation v. Perry*, 47 F.3d 325, 328-29 (9th Cir. 1995); *Barnet Aluminum Corp. v. Reilly*, 927 F.2d 289, 293 (6th Cir. 1991); *Schalk v. Reilly*, 900 F.2d 1091, 1097-98 (7th Cir. 1990); *Alabama v. EPA*, 871 F.2d 1548, 1560 (11th Cir. 1989).



environmental restoration of Spring Valley.<sup>640</sup> “Thus, the [plan] would create conflicting remedial goals that could delay both the development of the final remedial plan and the actual cleanup.”<sup>641</sup> The decision was not appealed.

Although Miller won \$2.1 million under a settlement with the Federal Government on a claim of negligent failure to warn the public of buried World War I chemical munitions in Spring Valley, the D.C. District Court, under the “discretionary function” exception, otherwise has dismissed all of the claims filed against the United States under the FTCA.<sup>642</sup> In addition, under current precedent, it appears that the D.C. District Court also would dismiss a claim of negligent failure to warn. Finally, the court has dismissed a constitutional claim related to the development and disposal of chemical munitions in Spring Valley.<sup>643</sup>

The record on FTCA suits over the environmental contamination of used defense sites is mixed. Nonetheless, the failure to date of litigation related to the environmental contamination of Spring Valley establishes an important precedent for the environmental restoration of other sites in the United States.

#### CONCLUSION

Commenced in 1993, halted from 1995 to 1999, and resumed five years ago, the environmental restoration of Spring Valley appears to have made considerable progress in the removal of buried World War I chemical munitions and in the removal of arsenic-contaminated soil. The USACE is expected to complete this response by 2010, but the recent detection of perchlorate near the Washington Aqueduct suggests the potential for environmental contamination beyond the elevated levels of arsenic in Spring Valley soil.

The progress to date in the environmental restoration of Spring Valley is no doubt attributable in large measure to the application by the USACE of the structure and process set forth in the NCP for environmental remediation under CERCLA. Otherwise applicable just to releases of hazardous substances on the NPL, the environmental remediation process employed by the USACE for Spring Valley has ensured an environmental restoration commensurate with an EPA response under Superfund to the worst releases of hazardous substances in the United States.

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640. *Jach*, 245 F. Supp. 2d at 116.

641. *Id.*; see also *Razore v. Tulalip Tribes of Wash.*, 66 F.3d 236, 239-40 (9th Cir. 1995).

642. See *supra* Part IV.B and note 627 and accompanying text.

643. See *Jach*, 245 F. Supp. 2d at 111, 115, 117.

Nonetheless, why isn't Spring Valley on the National Priorities List?

American University is just one old U.S. Army base among almost 10,000 used defense sites in the United States in possible need of environmental restoration. But Spring Valley otherwise is in a league of its own. No other defense site in the United States was used for the development of and experimentation with chemical munitions in World War I but thereafter was developed into a residential neighborhood in a large metropolitan area. Now the environmental contamination associated with the development and disposal of chemical munitions poses a potential threat to the Washington Aqueduct.

It is time to put Spring Valley on the NPL.

There is just one NPL site in Washington, D.C., the Washington Navy Yard, which was not designated for inclusion by the District of Columbia. The EPA itself revised the NPL in 1998 to include the site. Thus the District of Columbia still has the right under the NCP to designate a site for the NPL.

The inclusion of Spring Valley on the NPL will not improve the structure or process now employed by the USACE for the cleanup. Nor will Spring Valley become eligible for federal funds under Superfund. Nonetheless, the designation by the District of Columbia of Spring Valley for inclusion on the NPL could be expected to increase the involvement of the EPA in the current cleanup and in the investigation of possible perchlorate contamination. In addition, the placement of Spring Valley on the NPL would reflect a reinvigorated commitment on the part of federal and state officials to the cleanup of a residential neighborhood that faces not just five more years of environmental restoration but new threats of environmental contamination as well. NPL status for Spring Valley is certain to advance the cause of cleanup.

