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Environmental Contamination at U.S. Military Bases in South Korea and the Responsibility to Clean Up

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Editors' Summary

U.S. Forces Korea recently began returning military sites to South Korea and, so far, has returned around one-half of the sites designated to revert back to the country. South Korea desperately needs this land, as urban development in the country progresses. However, the returned sites suffer from contamination to both soil and groundwater at well above threshold levels determined by the Soil Environment Preservation Act and the Groundwater Act of South Korea. Though U.S. Department of Defense policy has been to remedy contamination rising to the level of "known imminent and substantial endangerment," so far, the United States and South Korea have not been able to agree on who bears responsibility for cleanup.

U.S. military forces have been stationed in South Korea for more than 50 years. Recently, after a decade-long consultation, the two nations agreed to integrate the U.S. forces in a new, concentrated site to accommodate the newly developed military goals of the force. In 2007, the U.S. government returned 31 out of 66 military sites designated to be returned to South Korea. On 23 of the sites returned, both soil and groundwater were found to be contaminated with various pollutants, such as benzene, arsenic, trichloroethylene (TCE), tetrachloroethylene (PCE), and heavy metals, such as lead, zinc, nickel, copper, and cadmium. The U.S. government has contended that under the Status of Forces Agreement (SOFA),[1] it is not responsible for cleaning up the bases.

The SOFA, initially signed in 1966, had not contained any environmental provisions until the 2001 amendment, under which environmental provisions were for the first time affixed to the sub-agreements of the SOFA. In the Memorandum of Special Understandings on Environmental Protection (the 2001 Memorandum),[2] the United States documented its policy to remedy contamination that presents "known imminent and substantial endangerment (KISE)" to human health. This policy statement was identical to the general policy established during the 1990s by the U.S. Department of Defense. Whether the requirement of KISE has been met or not has been left open. Throughout the negotiations over environmental concerns, the two countries have not been able to reduce the gap in understanding regarding U.S. environmental responsibility. The Korean Ministry of Environment has argued that the Korean environmental standard should apply in this matter, but the U.S. counterpart has denied its responsibility based on the absence of a clear agreement on the issue. Ultimately, the Korean government has accepted the return of those bases without a U.S. cleanup, as they are concerned that the environmental matter might be too burdensome and delay the process of relocation, harming the good relationship between the two nations. The U.S. government has taken advantage of its political dominance in this bilateral relationship with regard to the interpretation of and consultation on environmental provisions.

The main reason for this result is that the SOFA and other relevant agreements are lacking in substantive rules regarding the regulation of the U.S. government within Korea. In particular, agreements and rules on whether the U.S. military bases are legally subject to Korean environmental law are lacking. Even though the United States had pledged that it would create and apply its own environmental standards for the bases, which are more protective than

1. Agreement Under Article IV of the Mutual Defense Treaty Between the United States of America and the Republic of Korea, Regarding Facilities and Areas and the Status of United States Armed Forces in the Republic of Korea, July 9, 1966, 17 U.S.T. 1677 [hereinafter SOFA].
2. *See infra* II.B.

local standards, all of the standards that they established lacked enforcement mechanisms.

This Article begins with an overview of the situation at large, including the history of the U.S. Forces' presence in South Korea, the relocation plan agreed upon, and environmental conditions at the bases returned. This will be followed by an examination of the legal texts under which the U.S. and South Korean governments have conferred with each other as far as the environmental problems are concerned. Finally, the U.S. environmental policy for its overseas military bases, which is different from the policy for bases within U.S. territory, will be critically discussed and a conclusion will be reached regarding how this problem should be solved for the rest of the U.S. bases.

I. The Base Relocation Plan of U.S. Forces Korea and the Environmental Condition of Returned Bases

A. *The U.S. Military Forces in South Korea and the Base Relocation Plan*

U.S. military forces have been stationed in South Korea since 1953, when a cease-fire was declared in the Korean War. The U.S. presence is based on Article IV of the Mutual Defense Treaty between South Korea and the United States.[3] U.S. Military Forces deployed some 37,000 soldiers across 41 installations nationwide in South Korea on a total of 59,979 acres granted by the South Korean government.[4] In defending against hostile North Korea, South Korea has relied on the presence of U.S. military forces for its security.[5, 6]

In December 2004, the two countries signed two agreements[7] regarding the relocation of U.S. Forces Korea's (USFK) scattered installations. This would include the relocation of its headquarters from Yongsan, Seoul, to the Pyongtaek area, south of Seoul. The relocation was initially scheduled to be completed by 2008 but was then postponed to 2012[8] and again to 2017.[9] The USFK will close 34 installations and training areas on 66 sites occupying more than 43,670 acres, and return these lands to South Korea. In exchange, the South Korean government will grant 2,973 acres to the United States for new facilities in the Pyongtaek area. Once all of the plans are completed, the number of USFK installations will be reduced to 17, with much of the personnel consolidated around the Pyongtaek area.

The relocation agreements were a result of changes in U.S. military policy and in international circumstances. At the end of the Cold War, the threat of communism had all but disappeared, and threats from the weakened and impoverished North Korea were also waning. In addition, the development of new military technology and intelligence no longer demanded a large number of soldiers and heavily armed forces.[10] The U.S. government accordingly reduced the number of USFK troops by 12,000.[11]

3. "The Republic of Korea grants, and the United States of America accepts, the right to dispose United States land, air and sea forces in and about the territory of the Republic of South Korea as determined by mutual agreement." Mutual Defense Treaty art. IV, U.S.-S. Korea, Oct. 1, 1953, 5 U.S.T. 2368.
4. Office of the Deputy Undersecretary of Defense, U.S. Dep't of Defense (DOD), Base Structure Report (A Summary of DOD's Real Property Inventory): Fiscal Year 2004 Baseline 80 (2004).
5. For a brief history of the U.S.-South Korean relationship, see Youngjin Jung & Jun-shik Hwang, *Where Does Inequality Come From? An Analysis of the Korea-United States Status of Forces Agreement*, 18 Am. U. Int'l L. Rev. 1103, 1109-12 (2003). *See also* Joo-Hong Nam, America's Commitment to South Korea: The First Decade of the Nixon Doctrine 152 (1986). Joo-Hong Nam states:

   > South Korea's foreign policy in general, and its security policy in particular, have always been susceptible to American influence because of the asymmetrical relationship between the two countries . . . . It is axiomatic that South Koreans of every political persuasion have regarded an American predominance in the country's external relations as 'tolerable,' for they have recognized that the frustrations of an equal alliance are preferable to the dangers of Communist intimidation.

   Id.
6. There are various channels of consultation for security purposes between the Republic of Korea and the United States. The two countries have been holding Security Consultative Meetings (SCM) at the ministry level to discuss major security concerns of the two countries annually since 1968. For supplemental consultation on the future of the alliance and base relocation issues, the two countries have held Future of the Alliance (FOTA) meetings since 2003. Since 2005, the Security Policy Initiative (SPI) meetings succeeded the FOTA meetings. High-level security policymakers from both governments participate in the SPI meetings.
7. The full titles of these agreements are: Agreement on the Relocation of United States Forces From the Seoul Metropolitan Area, U.S.-S. Korea, Oct. 26, 2004, State Dep't No. 05-18, 2004 WL 3250838 [hereinafter Agreement on Relocation of U.S. Forces From Seoul]; Agreement Amending the Agreement of March 29, 2002 for the Land Partnership Plan, U.S.-S. Korea, Oct. 26, 2004, State Dep't No. 05-16, 2004 WL 3250836 [hereinafter 2004 Land Partnership Plan]. Earlier, in March 2002, the governments of the United States and Korea had agreed to the Land Partnership Plan under which the two parties outlined the timetable for the return of 28 installations. *See* Agreement for the Land Partnership Plan, U.S.-S. Korea, Mar. 29, 2002, State Dep't No. 02-652, 2002 WL 32813932.
8. On February 8, 2007, at the 11th SPI meeting in Seoul, high-level officials from both countries shared a consensus that rescheduling is inevitable. Sohn Wonjae, *Korea and the U.S. Agree to Postpone the U.S. Military Bases*, The Hankyoreh, Feb. 8, 2007 (S. Korea) (source in Korean), *available at* http://www.hani.co.kr/arti/politics/defense/189449.html.
9. Noh Hyunwoong & Lee Junghoon, *Why Did the U.S. Request Postponement of Base Relocation?*, The Hankyoreh, Oct. 22, 2008 (S. Korea) (source in Korean), *available at* http://www.hani.co.kr/arti/society_general/317366.html.
10. A senior DOD official commented in a news briefing that

    > we could talk some in the question and answer, but there are any number of illustrations where the capabilities today of American forces and our allied forces are vastly superior to what they were just a few years ago, to say nothing of 20, 30 or even 50 years ago, and there have been dramatic changes in capabilities and we need to account for that.

    The official also mentioned that the United States will withdraw heavy divisions from Germany and instead deploy a Striker Brigade. Foreign Press Center Briefing, U.S. Global Force Posture Review: Senior Administration Officials From the Departments of State and Defense, Aug. 16, 2004, *available at* http://2002-2009-fpc.state.gov/35246.htm.
11. "Richard Lawless, deputy defense undersecretary for Asian and Pacific affairs, announced a concept proposal June 6, 2004 that would allow the United States

The U.S. government consequently rewrote its military strategic plan abroad. The U.S. government considered changed international conditions and made new military policy in the Global Posture Review (GPR) to move the U.S. defense posture away from the Cold War model. The U.S. government adopted the idea of one military force throughout the world under which it uses those forces where there are most needed.[12]

The changed U.S. military strategy was launched in South Korea as the Korean government accepted the U.S. request. Under the changed policy, the role of the USFK was not only to prevent war on the Korean Peninsula, but also to help maintain peace throughout northeast Asia, or even further.[13] In pursuit of this new role, scattered U.S. bases in South Korea were not considered to be effective. Thus, a decision was made to consolidate them. The U.S. government also wanted to improve the infrastructure of the USFK, as much of it was in poor shape.[14] The South Korean government will provide for much of the costs of the relocation.

The South Korean government still believes that the presence of U.S. forces on the peninsula, regardless of its major function, helps maintain South Korean security or at least makes citizens feel safer, and accordingly it fosters the normal development of South Korea's vibrant economy. This explains why Korea willingly accepts such exorbitant costs for relocation and even supports the costs of maintaining the force. The South Korean government currently pays approximately 40% of the USFK's annual costs.[15]

The South Korean government also wanted the land to be returned because of the nation's increasing shortage of land and because of repeated conflicts between local citizens and U.S. soldiers.[16] Rapid urbanization in South Korea has swallowed up the buffer zones between U.S. installations and South Korean villages, causing friction between citizens and some USFK personnel. Both local governments and citizens have welcomed the return of vast areas of land.

B. Environmental Condition at the Former U.S. Bases That Were Recently Returned[17]

After the relocation treaties entered into force, the SOFA Joint Committee[18] undertook procedures for the return of several bases. From 2004 until May 2007, the SOFA Joint Committee conducted environmental surveys at 41 military sites, which had already been vacated and closed by the USFK.[19] However, the environmental survey was conducted within insufficient time.[20] The environmental survey was undertaken within just 105 days, including a background study, site investigation, sampling, lab analysis, and review of the results. The U.S. government was not cooperative with the South Korean government in the process of environmental surveys and consultation. Two Korean environmental consulting firms selected by the Korean government undertook environmental surveys at those sites. The U.S. government did not provide those firms with full information on history of use and site management at the beginning of the survey. Instead, it reluctantly provided the information at the request of those firms, near the deadline of the 30-day period.[21] The 60-day period for the site investigation was too short considering the number and extent of the subject sites. A memorandum made by the subcommittee for the Yongsan

to redeploy 12,500 troops from South Korea." *See* Jim Garamone, *Officials Discuss Global Posture Process*, Am. Forces Press Serv., June 9, 2004, *available at* http://www.defenselink.mil/news/newsarticle.aspx?id=26299. In May 2004, for example, the Pentagon announced plans to redeploy the 2d Brigade of the 2d Infantry Division from South Korea to Iraq. And in June, it was announced that one-third of the 37,000 U.S. troops stationed in South Korea would be withdrawn before the end of next year. The redeployment from South Korea is an example of the new order, embodying what DOD officials say is a new vision: transferring U.S. forces around the world from a static stance designed to handle cold war-era Soviet threats to an active one that can deal with new, dynamic threats. *Id.* The U.S. military has reduced the number of troops stationed in the United States starting in the 1980s. *See* Jessica K. Reynolds, *Military Base Closure Oversight Via Environmental Regulations: Replacing Judicial Review of Closure Decisions and Methods With Comprehensive Alternative Redevelopment Mechanisms*, 4 Alb. L. Envtl. Outlook 40, 41 (1999).

12. *See* Garamone, *id*.
> The United States is not just looking at one country, but over a whole region and among regions. It's not just what the United States has in Korea, but what is in Northeast Asia, that is relevant. Speed will be crucial. U.S. troops and their equipment must deploy to a trouble spot quickly. Defense officials in the past have said a small number of troops in a hot spot can often head off a problem before it escalates.
>
> *Id.*

13. *See also* Jaejeong Seo, *The U.S. 1-4-2-1 Military Strategy and Readjustment of U.S. Forces*, Human Right & Justice, Sept. 2004, at 25 (S. Korea) (source in Korean) (citing Ministry of National Defense, *Result of the Second Meeting of Future of the ROK-U.S. Alliance Policy Initiative*, MND News Release, June 5, 2003, at 2). The Rumsfeld plan envisions what it labels a "1-4-2-1 defense strategy," in which war planners prepare to: (1) fully defend the United States; (2) maintain forces capable of "deterring aggression and coercion" in four "critical regions" (Europe, Northeast Asia, East Asia, and the Middle East/Southwest Asia); (3) maintain the ability to defeat aggression in two of these regions simultaneously; and (4) be able to "win decisively" up to and including forcing regime change and occupying a country in one of those conflicts "at a time and place of our choosing." *See* Seo, *id* at 13-14.

14. *See* U.S. Gen. Accounting Office (GAO), Report to Congressional Committees, Defense Infrastructure: Basing Uncertainties Necessitate Reevaluation of U.S. Construction Plans in South Korea, GAO-03-643 (2003).

15. Kang, Taeho & Sohn Wonje, *Korea's Military Allowance to the U.S.*, The Hankyoreh, Feb. 2, 2007 (S. Korea) (source in Korean), *available at* http://www.hani.co.kr/arti/politics/defense/188045.html.

16. *See* Kimberly Marten, *Bases for Reflection: The History and Politics of U.S. Military Bases in South Korea*, 10 Int'l Relations Inst. Rev. 155 (Korea Univ. 2004) (detailing the recent controversy over the tragic fatal accident where two school girls were killed by an armored vehicle in a narrow local road).

17. Most of the detailed information on the environmental contamination and the consultation procedure was revealed through the National Assembly's investigation and inquiry during the Hearing on Environmental Remedy at the Returned USFK Bases (June 2007).

18. The Joint Committee was established for consultation on all matters based on SOFA Article XXVIII. The Joint Committee is composed of a representative of each party, USFK deputy commander for the U.S. and director general of North American Affairs Bureau, Ministry of Foreign Affairs and Trade for Korea, respectively. The Joint Committee is composed of eight permanent subcommittees and three temporary subcommittees. In 1993, on the request of South Korean government, a subcommittee for environment was established.

19. South Korean Ministry of Environment, Materials Submitted for the Hearing at the National Assembly on Environmental Remedy at the Returned USFK Bases (June 13, 2007) (S. Korea) (source in Korean).

20. *Id.*

21. Interview with Mintchul Kim, Deputy Project Manager, Korea Rural Community & Agriculture Corporation, which undertook environmental surveys in various U.S. military bases for the South Korean government. The author participated in the pre-hearing field investigation at Camp Edwards, Paju, by the National Assembly Environment-Labor Committee on June 18, 2007. At that time, the author had an interview with Mr. Kim.

Relocation Plan preserved the possibility of delay.[22] The consulting firms were short of time and requested an extension of time through the South Korean government; however, the U.S. government refused.[23] Those firms were barely able to complete the surveys in many sites, but in Camp Hialeah in Busan, they were unable to complete the survey. The survey and consultation at Camp Hialeah was stopped at the request of the U.S. government and accordingly the return of the base was postponed.[24]

According to the report by the Ministry of Environment to the South Korean National Assembly, 22 out of the 23 most recently returned sites were contaminated with hazardous substances, such as benzene, arsenic, trichloroethylene (TCE), PCE, lead, zinc, nickel, copper, and cadmium. In some of those sites, both soil and groundwater were found to be contaminated with various pollutants. The details of contamination of these 23 sites are shown in Table 1 (p. 10082).

Under the Soil Environment Preservation Act of Korea, 16 substances are designated as soil contaminants. The threshold concentration levels for those contaminants where cleanup is required are predetermined regardless of other conditions.[25] Standard A is applied to land for agricultural, residential, or recreational use, whereas Standard B is applied to land for industrial, road, or railway use. The threshold levels (mg/kg) for those contaminants by Standards A and B are as follows: Cd (1.5/12), Cu (50/200), As (6/20), Hg (4/16), Pb (100/400), Cr+6 (4/12), Zn (300/800), Ni (40/160), F (400/800), Organophosphorus compounds (10/30), PCBs (-/12), CN (2/120), Phenol (4/20), BTEX (-/80), TPH (500/2,000), TCE (8/40), PCE (4/24).[26] Groundwater standards (mg/L) are universal: Cd (0.01), As (0.05), CN (0), Hg (0), Organophosphorous (0), Phenol (0.005), Pb (0.1), Cr+6 (0.05), TCE (0.03), PCE (0.01), 1,1,1-trichloroethane (0.15), Benzene (0.015), Toluene (1), Ethylbenzene (0.45), Xylene (0.75), TPH (1.5).[27]

Soil contamination by total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylene (BTEX), and/or heavy metals was found at 22 sites. The contamination levels at those sites are significantly above the national threshold levels. For example, TPH concentration on average was 19,929 mg/kg, exceeding by almost 40 times the South Korean standard for A. The entire volume of contaminated soil from those 22 sites is estimated at 706,489m^3. At 19 sites, groundwater was found to be contaminated with TPH, benzene, phenol, xylene, TCE and/or PCE. Firing ranges were contaminated with lead.

Camp Page in Chuncheon, for example, is one of the most contaminated sites. The total area of the base was 639,342m^2; the volume of contaminated soil was 53,525m^3. The TPH concentration level for the soil was 50,552 mg/kg, 100 times the Korean standard, and BTEX 1,152 mg/kg, 14 times the Korean standard. Groundwater contamination was also serious. A 100 centimeter thick layer of petroleum was floating over groundwater. Within groundwater, the TPH concentration level was 708.9 mg/L, 470 times the Korean standard, Benzene 0.595 mg/L, 40 times the Korean standard, Xylene 1.549 mg/L, 2 times the Korean standard, and PCE 0.027 mg/L also 2 times the Korean standard.

II. The U.S. Responsibility for Environmental Remediation at the Bases Being Returned

According to the two relocation treaties, the governments of South Korea and the United States agreed that the United States would remedy the contaminated areas in accordance with the SOFA and other relevant agreements.[28] The list of the SOFA and relevant agreements is as follows.

- SOFA 1966
- Agreed Minutes to the SOFA as amended in 2001
- Memorandum of Special Understandings on Environmental Protection (2001) (2001 Memorandum)
- Joint Environmental Information Exchange and Access Procedures (2002)
- TAB A to the Joint Environmental Information Exchange and Access Procedures (Procedures for Environmental Survey and Consultation on Remediation for Facilities and Areas Designated to Be Granted or Returned) (2003) (2003 Consultation Agreement)

22. The memorandum states "prior to the grant or return of facilities and areas, environmental actions and consultations . . . will be planned and executed. The completion of such environmental procedures may be deferred if special conditions are mutually agreed to facilitate the relocation." Memorandum from SOFA Joint Comm. to Gov'ts of U.S. & S. Korea, Agreed Recommendation for Implementation of the Agreement Between the Republic of Korea and the United States of America on the Relocation of United States Forces From the Seoul Metropolitan Region (Yongsan Relocation Plan) §4(e) (2004) [hereinafter Subcommittee Memorandum], *reprinted at* 2004 WL 3250837.
23. Interview with Minchul Kim, *supra* note 21.
24. South Korean Ministry of Environment, Materials Submitted for the Hearing at the National Assembly on Environmental Remedy at the Returned USFK Bases (June 13, 2007) (S. Korea) (source in Korean).
25. The Korean environmental standard for cleanup is very different from the U.S. risk-based standard. The U.S. approach based on risk analysis is further discussed in Part III.B., *infra*.
26. South Korean Ministry of Environment, Rule for the Soil Environment Preservation Act §§1-5 (2005).
27. South Korean Ministry of Environment, Rule for Groundwater Act §7 (2006).
28. 2004 Land Partnership Plan, *supra* note 7, art. III, §7 reads:
    > Recognizing and acknowledging the importance of environmental protection in the implementation of the LPP, the Parties agree that the U.S. return of facilities and areas to the ROK, the ROK grant of areas and replacement facilities to the U.S., and other LPP actions including those necessary to protect the natural environment and human health and to remedy contaminated areas shall be in accordance with the SOFA and relevant agreements.

    The Agreement on Relocation of U.S. Forces From Seoul, *supra* note 7, art. 2, §8 also reads:
    > Recognizing and acknowledging the importance of environmental protection in the implementation of this Agreement, the Parties agree that the U.S. return of facilities and areas to the ROK, the ROK grant of the use of areas and replacement facilities to the U.S., and other relocation actions including those necessary to protect the natural environment and human health and to remedy contaminated areas shall be in accordance with the SOFA and relevant agreements.

Table 1. Level of Contamination at 23 Returned Sites

No.	Site	Area (m^2)	Soil Contamination		Groundwater contamination	
			Volume of Contaminated Soil (m^3)	Concentration of key contaminants (mg/kg)	Thickness of Floating Petroleum (cm) (Free Product)	Concentration (mg/l)
	Total	27,834,050	706,489			
1	Camp Greaves, Paju	236,778	4,707	TPH - 29,072 BTEX - 355 Pb - 10,275 Cu - 273	1	Benzene -0.344 Phenol - 0.033
2	Camp McNab, Jeju	49,810	2,938	TPH - 17,415	Oil sheen	-
3	Camp Stanton, Paju	271,000	29,633	TPH - 23,724	5	TPH - 42.74
4	Freedom Bridge, Paju	57,750	871	TPH - 11,971	1	TPH - 47.6
5	Camp Giant, Paju	95,000	25,071	TPH - 20,767	5	-
6	Camp Howze, Paju	636,088	65,625	TPH - 27,901 Pb - 970 Zn - 4,421 Cd - 3.7	Oil sheen	TPH - 301.76 Phenol 0.353
7	JSA, Paju (Camp Liberty Bell)	375,503	3,794	TPH - 6,770 Pb - 603	-	TPH - 9.22
8	JSA, Paju (Camp Bonifas)		13,029	TPH - 13,648 Pb - 5,346 Zn - 708	-	-
9	Camp Nimble, Dongduchon	58,274	21,710	TPH - 9,765	-	-
10	Camp LaGuardia, Uijongbu	136,782	18,789	TPH - 6,297 BTEX - 959 Zn - 2,554 Ni - 68	-	-
11	U.N. Compound, Yongsan	53,458	2,408	TPH - 24,452	-	-
12	Charlie Block, Paju	28,000	160	TPH - 14,249	-	-
13	Camp Colbern, Hanam	306,772	26,439	TPH - 14,378 BTEX - 275 Zn - 491 Ni - 205	-	-
14	Seoul RTO, Seoul	906	-	-	-	-
15	Camp Sears, Uijongbu	95,080	79,875	TPH - 36,781 BTEX - 193 Pb - 424 Cu - 613	90	TPH - 96.9 Benzene 0.047 Xylene1.092 Phenol 0.115
16	Camp Essayons, Uijongbu	207,637	72,580	TPH - 32,713 BTEX - 719	78	TPH -1,298 Benzene 0.238 Xylene -1.945
17	Camp Falling Water, Uijongbu	49,586	16,448	TPH - 16,427 BTEX - 170 Pb - 288 Zn - 964 Ni - 255 Cu - 1,069	13	TPH - 37.4
18	Camp Edwards, Paju	251,549	58,787	TPH - 12,108 Zn - 1,824	240	TPH - 8.96 Phenol 0.523
19	Camp Page, Chuncheon	639,342	53,525	TPH - 50,552 BTEX - 1,152	100	TPH - 708.9 Benzene 0.595 Xylene1.549 PCE - 0.027
20	Camp Kyle, Uijongbu	145,183	110,443	TPH - 11,546	488	-

No.	Site	Area (m^2)	Soil Contamination		Groundwater contamination	
			Volume of Contaminated Soil (m^3)	Concentration of key contaminants (mg/kg)	Thickness of Floating Petroleum (cm) (Free Product)	Concentration (mg/l)
21	Camp Gary Own, Paju	284,299	88,917	TPH - 47,819 BTEX - 243 Pb - 235 Zn - 1,114 Cd - 2.93	15	TPH - 2.99
22	Camp Gray, Dongjak	8,660	3,840	TPH - 7,710 BTEX - 1,699	78	TPH - 2.88
23	Koon-ni Range, Hwasung	23,717,140	6,960	TPH - 2,377 BTEX - 272 Pb - 3445 Zn - 783 Cd - 4.8 Cu - 259 Ni - 77	-	TCE - 0.042 Benzene 0.333 PCE - 0.079

SOFA is a binding treaty. The Agreed Minutes is a document in which the two Parties interpret SOFA provisions and adopt measures to implement SOFA. The Agreed Minutes is also a binding source based on the SOFA. The 2001 Memorandum is not binding, however, it is important because the two countries adopted procedural rules for environmental surveys and responses based on the agreement. In addition, this document contains a KISE provision as a standard for remedial action by the United States. Regardless of the binding force of each individual document itself, all of these documents are binding because the two relocation treaties clearly mention the application of these "SOFA and relevant agreements" with regard to the procedure and standard of remedy of returned sites.

The most relevant of these agreements is the 2003 Consultation Agreement, which was made by the SOFA Joint Committee. This agreement contains the procedures for environmental surveys and consultations for remediation. However, this agreement omits the standard of remediation. Instead, the governments agreed to undertake remedial actions in accordance with SOFA and relevant agreements. These agreements fall far short of clarity and sufficiency in terms of environmental remediation. The contents with regard to environmental responsibility are as follows.

A. No Immunity Under SOFA

The SOFA is concerned with the Korean government's grants of land for U.S. military use and the return of such lands. The granted lands could be returned at the request of the Korean government. The two countries should agree on the conditions under which the bases are returned through the SOFA Joint Committee.[29] Article IV provides that upon return of the bases, the United States is not obliged to restore the facilities and areas to the original condition in which they became available to the USFK.[30] At the same time, the South Korean government is not obliged to compensate for any improvement in facilities and areas. U.S. officials deny U.S. responsibility to remedy environmental contamination in facilities and areas under this provision, assuming that the exemption of duty to restore also applies to environmental contamina-

29. SOFA, *supra* note 1, art. II provides for the grant and return of facilities and areas:

> 1.(a) The United States is granted, under Article IV of the Mutual Defense Treaty, the use of facilities and areas in the Republic of Korea. Agreements as to specific facilities and areas shall be concluded by the two Governments through the Joint Committee provided for in Article XXVIII of this Agreement. "Facilities and areas" include existing furnishings, equipment, and fixtures, wherever located, used in the operation of such facilities and areas. (b) The facilities and areas of which the United States armed forces have the use at the effective date of this Agreement together with those facilities and areas which the United States armed forces have returned to the Republic of Korea with the reserved right of re-entry, when these facilities and areas have been re-entered by the United States armed forces, shall be considered as the facilities and areas agreed upon between the two Governments in accordance with subparagraph (a) above. Records of facilities and areas of which the United States armed forces have the use or the right of re-entry shall be maintained through the Joint Committee after this Agreement comes into force.
>
> 2. At the request of either Government, the Governments of the United States and the Republic of Korea shall review such agreements and may agree that such facilities and areas or portions thereof shall be returned to the Republic of Korea or that additional facilities and areas may be provided.
>
> 3. The facilities and areas used by the United States shall be returned to the Republic of Korea under such conditions as may be agreed through the Joint Committee whenever they are no longer needed for the purposes of this Agreement and the United States agrees to keep the needs for facilities and areas under continual observation with a view toward such return.

30. SOFA, *supra* note 1, art. IV reads:

> 1. The Government of the United States is not obliged, when it returns facilities and areas to the Government of the Republic of Korea on the expiration of this Agreement or at an earlier date, to restore the facilities and areas to the condition in which they were at the time they became available to the United States armed forces, or to compensate the Government of the Republic of Korea in lieu of such restoration.
>
> 2. The Government of the Republic of Korea is not obliged to make any compensation to the Government of the United States for any improvements made in facilities and areas or for the buildings and structures left thereon the expiration of this Agreement or the earlier return of the facilities and areas.

tion.[31] They argue that the compensation for residual value was bargained for the duty to restore the facilities and areas to their previous condition.[32]

However, the SOFA should be interpreted in accordance with the Vienna Convention,[33] Article 31, which states:

> 1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose. 2. The Context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes: (a) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty; (b) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty. 3. There shall be taken into account, together with the context: (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions; (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation; (c) any relevant rules of international law applicable in the relations between the parties. 4. A special meaning shall be given to a term if it is established that the parties so intended.[34]

Therefore, the ordinary meaning of "obligation to restore the facilities and areas to the condition in which they became available to the U.S. armed forces" should be conceived in the context. The "context" includes the treaty's preamble; annexes; any agreement related to the treaty that was made in connection with the conclusion of the treaty; and any instrument that was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty. Concerning whether SOFA Article IV waives any claim arising from facilities and areas, Article XXIII is relevant, providing that the two governments waive claims for certain damage.[35] Other than that provision, the treaty does not mention the waiver of claims. Under the rule *expressio unius est exclusion alterius*, Article IV cannot be considered as a waiver of claim provision.[36] The *contra proferentem* rule also supports this interpretation.[37] Any waiver of claims provision should be clear and unequivocal.[38] The right to compensation for damages cannot be waived by interpretation unless there are explicit words.[39] SOFA Article IV is neither clear nor unequivocal.

The SOFA provision should be interpreted in the light of its object and purpose. The SOFA itself did not address environmental responsibility. The provision was adopted when the SOFA was signed in 1966 and has never been amended.

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31. I infer its position from DOD's policy documents and some articles of U.S. military officials. One official argued:
> Although such agreements have not typically included specific provisions regarding environmental protection or remediation, other obligations are often sufficiently broad enough to encompass some environmental issues. Status of Forces Agreements may include claims and residual value provisions which apply to environmental contamination and, less often, may define our responsibility with regard to host-nation laws. In Japan and the Republic of Korea the host-nation has relieved the U.S. of any obligation to restore facilities and areas to their previous condition in exchange for a U.S. waiver of any obligation by the host-nation to pay residual value.

Richard A. Phelps, *Environmental Law for Overseas Installations*, 40 A.F. L. Rev. 49, 57-58 (1996). Another article mentions:
> Interestingly, along these lines both Japan and Korea in their applicable SOFAs have relieved the U.S. of any obligation to restore properties to their previous condition in exchange for a U.S. waiver of any obligation by the host-nation to pay residual value. Here the protection of the environment was in effect bargained away by the host-nations.

Margaret M. Carlson, *Environmental Diplomacy: Analyzing Why the U.S. Navy Still Falls Short Overseas*, 47 Naval L. Rev. 62, 82 (2000).

32. On the contrary, under NATO SOFA, the United States is responsible for remedying contamination. Germany is also responsible for compensation for residual value, as well. Agreement of 3 August 1959, as Amended by the Agreements of 21 October 1971, 18 May 1981, and 18 March 1993, to Supplement the Agreement Between the Parties to the North Atlantic Treaty Regarding the Status of Their Forces With Respect to Foreign Forces Stationed in the Federal Republic of Germany (effective 29 March 1998) Art.52, Re Art.63 8*bis*.

33. South Korea signed and ratified the Vienna Convention in 1980, but the United States is not a party to the Convention. Nevertheless, its provisions are considered customary international law by U.S. State Department officials and U.S. courts. Barry Carter & Phillip Trimble, International Law 110 (2d ed. 1995).

34. Vienna Convention on the Law of Treaties, May 23, 1969, U.N. Doc. A/CONF. 39/27Art. 31.

35. SOFA, *supra* note 1, art. XXIII reads:
> 1. Each Party waives all its claims against the other Party for damage to any property owned by it and used by its armed forces, if such damage: (a) was caused by a member or and employee of the armed forces of the other party, in performance of his official duties; or (b) arose from the use of any vehicle, vessel or aircraft owned by the other Party and used by its armed forces, provided either that the vehicle, vessel or aircraft causing the damage was being used for official purposes or that the damage was caused to property being so used. Claims for maritime salvage by one Party against the other Party shall be waived, provided that the vessel or cargo salved was owned by the other Party and being used by its armed forces for official purposes.
>
> 2. (a) In the case of damage caused or arising as stated in paragraph 1 to other property owned by either Party, the issue of liability of the other Party shall be determined and the amount of damage shall be assessed, unless the two governments agree otherwise, by a sole arbitrator selected in accordance with subparagraph (b) of this paragraph. The arbitrator shall also decide any counterclaims arising out of the same incident. (b) The arbitrator referred to in subparagraph (a) above shall be selected by agreement between the two Governments from among the nationals of the Republic of Korea who hold or have held high judicial office. (c) Any decision taken by the arbitrator shall be binding and conclusive upon the Parties. (d) The amount of any compensation awarded by the arbitrator shall be distributed in accordance with the provisions of paragraph 5 (e) (i), (ii) and (iii) of this Article. (e) The compensation of the arbitrator shall be fixed by agreement between the two Governments and shall, together with the necessary expenses incidental to the performance of his duties, be defrayed in equal proportions by them. (f) Each Party waives its claim in any such case up to the amount of 1,400 United States dollars or its equivalent in Korean currency at the rate of exchange provided for in the Agreed Minute to Article XVIII at the time the claim is filed.

36. The maxim *expressio unius est exclusion alterius* means that the expression of one thing is the exclusion of another. *See* Kee-Chang Kim, *Article 4 of Status of Forces Agreement and Environmental Contamination: A Distinction Between Restoration and Compensation*, 26 Korean J. Civ. L. 31, 44-48 (2004) (S. Korea) (source in Korean).

37. The *contra proferentem* rule means that "used in connection with the construction of written documents to the effect that an ambiguous provision is construed most strongly against the person who selected the language." Black's Law Dictionary, 327 (6th ed. 1990).

38. Kee-Chang Kim, *supra* note 36, at 46 (citing Sander v. Alexander Richardson Invs., 334 F.3d 712, 715 (8th Cir. 2003); Diesel "Repower" Inc. v. Islander Invs. Ltd., 271 F.3d 1318, 1324 (11th Cir. 2001); Stewart & Stevenson Servs., Inc. v. Pickard, 749 F.2d 635 (11th Cir. 1984); Dilks v. Flohr Chevrolet, 411 Pa. 425 (1963)).

39. *Id.* (citing Nauru v. Australia, ICJ Reports (1992) 247-50, ¶¶ 12-21; Ian Brownlie, Principles of Public International Law 604 (6th ed. 2003)).

In 1966, there was little awareness of environmental problems caused by hazardous chemical substances. The purpose of the SOFA is to provide the USFK with legal status, both for personnel working in South Korea and lands and buildings that they occupy. That is why Article II emphasized the "facilities and areas" by defining the inclusion of existing furnishings, equipment, and fixtures, wherever located, used in the operation of such facilities and areas. The intent of the Parties must therefore have been that the United States would have no obligation to restore the facilities and areas to the condition where there were no such furnishings, equipment, and fixtures. Article IV, ¶ 2 also exempts the South Korean government obligation to make any compensation to the United States for any improvements made in facilities and areas or for the buildings and structures left thereon. In 1966, when the SOFA was signed, the main concerns were the buildings and structures built by the U.S. forces. The obligation to restore facilities and areas could mean the obligation to destroy those buildings and structures. The clause refers only to buildings and structures and does not give the United States carte blanche to return the contaminated lands.[40]

As Article VII prescribes, the USFK has an obligation to respect South Korean law.[41] Any activity that is in violation of South Korean law cannot be justified through the interpretation of any SOFA provision. Exemption of obligation to restore facilities and areas cannot include any activities that violate relevant South Korean law. Only legitimate activities, such as construction of buildings and equipment in the areas granted, are eligible for the exemption of obligation to restore.

In interpreting the provision, any subsequent agreement between the Parties regarding the interpretation of the treaty or the application of its provisions, any subsequent practice in the application of the treaty that establishes the agreement of the Parties regarding its interpretation, and any relevant rules of international law applicable in the relations between the Parties should also be considered. In 2001, the two governments agreed upon some environmental obligations. The USFK agreed to respect South Korean environmental law[42] and to comply with stricter standards between U.S. and South Korean environmental laws.[43] The United States also pledged to promptly undertake remedying contamination that presents known imminent and substantial endangerment to human health.[44] In 2003, the two countries agreed to undertake a joint environmental survey on these bases and consult on the method of remedial actions. The United States agreed to remedy those bases at its own expense with due consideration of consultations.[45] These subsequent agreements are closely related to U.S. responsibility at the time of the return of the bases and therefore imply that SOFA Article IV does not exempt the United States from environmental responsibility to clean up contamination. After 2001, the USFK occasionally performed remedial action for contaminated soil.[46]

International law also imposes environmental responsibility on states. Principle 21 of the 1972 Stockholm Declaration on the Human Environment stipulates, "states have . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national Jurisdiction."[47] Even though the installations and areas granted to the USFK are within South Korea and subject to South Korean jurisdiction, the USFK has control over those facilities and areas and enjoys qualified immunity from South Korean jurisdiction. Therefore, the USFK has an obligation to respect these established international environmental norms. The U.S. interpretation is opposed to these established international norms.

In both South Korea and the United States, any polluter is strictly liable to clean up hazardous contamination retrospectively.[48] This liability is strict in terms that, whether neg-

40. M. Victoria Bayoneto, *The Former U.S. Bases in the Philippines: An Argument for the Application of U.S. Environmental Standards to Overseas Military Bases*, 6 Fordham Envtl. L.J. 111, 125-26 (1994).
41. SOFA, *supra* note 1, art. VII reads:
> It is the duty of members of the United States armed forces, the civilian component, the persons who are present in the Republic of Korea pursuant to Article XV, and their dependents, to respect the law of the Republic of Korea and to abstain from any activity inconsistent with the spirit of this Agreement, and, in particular, from any political activity in the Republic of Korea.
42. Agreed Minutes to the SOFA as amended in 2001.
43. Memorandum of Special Understandings on Environmental Protection (2001).
44. *Id.*
45. TAB A to the Joint Environmental Information Exchange and Access Procedures (Procedures for Environmental Survey and Consultation on Remediation for Facilities and Areas Designated to Be Granted or Returned) (2003).
46. *See* Ministry of National Defense Yongsan Project Team & Environmental Management Corporation, Yongsan Taxi Annex Environmental Joint Survey Final Report (2003). The report concludes:
> Through the Environmental Joint Working Group (EJWG) ROK and USFK consulted on the survey results. USFK took action to clean up the contaminated soils around S10 and SO 27 that had not been identified prior to the survey. USFK had an approved ROK contractor remove the contaminated soils out of the area. ROK visited the area and confirmed the cleanup. Through the joint soil sampling, ROK and USFK confirmed that the TPH level was acceptable after corrective action. Therefore, we recommend that it is environmentally acceptable that this area is returned to ROK as it is.

Id. at 28. *See also* Ministry of National Defense Yongsan Project Team & Environmental Management Corporation, Osan Beta South Environmental Joint Survey Final Report (2003). This report concludes:
> The survey results showed that this area had been used for Recycling Resource Recovery Program (RRRP) and training site until 2002, and waste residuals, empty cartridges, used bullet shells, empty drum, used container, etc. had been left on the site. ROK and USFK consulted on the survey results. USFK completed removal of residual materials as well as cleanup of contaminated soils in RRRP. ROK visited Osan AB (Beta site South) after USFK actions and confirmed that USFK had completed removal of residual wastes and associate contaminated soil. Through the joint soil sampling, ROK and USFK confirmed that the level of TPH in the RRRP area was acceptable after corrective actions. Therefore, we recommend that it is environmentally acceptable that this area is returned to ROK as it is.

Id. at 28.
47. Stockholm Declaration of the United Nations Conference on the Human Environment. Adopted by the U.N. Conference on the Human Environment at Stockholm, 16 June 1972. U.N. Doc. A/CONF.48/14 (June 16, 1972), *reprinted in* 11 I.L.M. 1416 (1972).
48. *See* the Soil Environment Preservation Act art. 10, Law No. 4906 (S. Korea) (1995) in South Korea, and the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §9607 (2007), ELR Stat. CERCLA §107 in the United States. In South Korea, the standard is lower by requiring certain designated hazardous substances to be found in excess of threshold level. According to the Soil Environment Preservation Act, when 16

ligent or not or whether violating law at the time of conduct or not, any polluter should be held liable to clean up certain contamination caused by the polluter. Especially under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),[49] no party can enjoy exemption from liability based on the contractual terms, such as indemnification or an "as is" clause, which means that no party can set aside his or her liability under the terms of previous contracts.[50]

Considering the contexts, purposes, and objects of the SOFA, subsequent agreements, and international law, it is more reasonable to interpret the exemption of duty to restore under SOFA Article IV as not to be concerned about environmental contamination caused by the USFK. In 2001, the South Korean Constitutional Court stated, in dicta, that SOFA Article IV neither provides U.S. forces with authority to contaminate facilities and areas nor allows the USFK to return those facilities and areas "as is" with contamination.[51] The Court ruled that SOFA Article IV was only concerned with the return of facilities and areas, but not environmental protection.

B. Responsibility to Clean Up and Standards for Cleanup

Based on the 2003 Consultation Agreement, the U.S. and South Korean governments established the Environmental Joint Working Group (EJWG).[52] They agreed to undertake a 105-day procedure of exchange of information (30 days), environmental inspection (60 days), and review of inspection (15 days) on the facilities and areas one year before the scheduled return or grant of new facilities and areas.[53] The EJWG reviews contaminations that may require remediation and determines the appropriate level of remediation, remedial methods, post-remedial measures, and timeframe.[54] They also agreed that with due consideration of consultations, remedial actions will be planned and executed in accordance with the SOFA and relevant agreements by the United States at its own expense for facilities and areas being returned.[55] The two governments also agreed to release information to the media or public regarding this process, or specific information on approval by the Co-chairpersons of the SOFA Environmental Subcommittee.[56]

Under this agreement, appropriate remedial action should be decided through consultation at the SOFA Environmental Subcommittee in accordance with the SOFA and relevant agreements. As described above, however, the SOFA itself does not contain any provision on environmental responsibility, and the relevant agreements are also silent over the standard of remediation for those bases returned. The 2001 Amendment to the Agreed Minutes to SOFA adopted an environmental provision that U.S. forces will take environment and human health seriously and respect South Korea's environmental laws. Article III, ¶ 2 reads:

> the United States Government recognize and acknowledge the importance of environmental protection in the context of defense activities, . . . commits itself to implementing this Agreement in a manner consistent with the protection of the natural environment and human health, and confirms its policy to respect relevant Republic of Korea Government environmental laws, regulations, and standards.[57]

The United States pledged to respect South Korean environmental laws. This "respect" provision is not new, because there was already a similar provision in the 1966 SOFA.[58] However, this time, the U.S. government proceeded further.[59] To implement this pledge, the United States signed

designated hazardous substances are found in excess of threshold levels designated by the law, the polluter is liable for the cleanup and compensation for any loss caused by the contamination. Once contamination by those hazardous substances surpasses threshold levels, hazards are presumed and the government does not have to provide further proof. Therefore, in South Korea and the United States, contamination by hazardous substances is taken very seriously.

49. 42 U.S.C. §§9601-9675, ELR Stat. CERCLA §§101-405.
50. *See* 42 U.S.C. §9607(e)(1), which states:

> No indemnification, hold harmless, or similar agreement or conveyance shall be effective to transfer from the owner or operator of any vessel or facility or from any person who may be liable for a release or threat of release under this section, to any other person the liability imposed under this section. Nothing in this subsection shall bar any agreement to insure, hold harmless, or indemnify a party to such agreement for any liability under this section.

Under this provision, any party may set aside liability between contracting parties but cannot set aside liability to the government that has implementing the law. Often, real estate is conveyed on the basis of "as is" at the closing date. The seller often argues that the term "as is" conveys all the liability, including CERCLA liability, to the purchaser. However, according to majority court rule, an "as is" provision merely provides a warranty disclaimer, and thus it precludes only claims based on breach of warranty, but does not shift CERCLA liability from the seller to the buyer. *See* Ganton Techs., Inc. v. Quadion Corp., 834 F. Supp. 1018, 24 ELR 20480 (N.D. Ill. 1993); Wiegmann & Rose Int'l Corp. v. NL Indus., 735 F. Supp. 957, 961-62, 20 ELR 21140 (N.D. Cal. 1990); Southland Corp. v. Ashland Oil, Inc., 696 F. Supp. 994, 1001, 19 ELR 20733 (D.N.J. 1988).

51. SOFA Article IV.1 Case, 2000 Hun-Ma 462, 13-2 Korean Constitutional Court Report, 781 (Nov. 29, 2001). In this case, petitioners were citizens living near the U.S. military bases. They brought a constitutional claim, alleging that the SOFA Articles III and IV were violating their constitutional right to enjoy good environment protected by Article 35 of the Constitution of Korea and the constitutional right to live in humane condition protected by Article 10 of the Constitution. They alleged that because of those SOFA provisions, the USFK ignored environmental due diligence to protect human health and environment on and off bases. The Constitutional Court of Korea refused to review their claim because of the lack of a viable case for violation of fundamental rights.
52. TAB A to the Joint Environmental Information Exchange and Access Procedures (Procedures for Environmental Survey and Consultation on Remediation for Facilities and Areas Designated to Be Granted or Returned) §3(b) (2003).
53. *Id.* §4.
54. *Id.* §5.
55. *Id.* §6.
56. *Id.* §7.
57. Amendment to the Agreed Minutes to SOFA, *supra* note 43, art. III, ¶ 2.
58. The United States understands this provision not to require the United States to comply with Korean law. Instead, "respect" the law of the host-nation has been interpreted by the sending states to require that they avoid actions that would derogate host-nation law—not that the sending states have made themselves subject to, or have agreed to specifically comply with, the laws of the host nation. Phelps, *supra* note 31, at 58.
59. When the two parties interpret the terms of the Memorandum, the "respect" provision should be considered. The provision at least sets "the spirit for the agreement as a whole and underlines the need for the sending states' forces to live in harmony with the people and the laws of the receiving state." The visiting forces have a duty to take necessary measures to that end. Rodney Batstone, *Respect for the Law of the Receiving State*, *in* The Handbook of the Law of Visiting Forces 61, 61 (Dieter Fleck ed., 2001) (citing Serge Lazareff,

the 2001 Memorandum with South Korea and adopted more tangible procedures for environmental protection.[60] Under the Memorandum, the United States would adopt and comply with environmental governing standards, which are updated every two years reflecting advancement of either U.S. or South Korean environmental standards.[61] The Unites States would establish the procedure for information exchange and access by South Korean officials to U.S. bases for environmental surveys, monitoring, and evaluations. The United States also pledged to consult on any apparent environmental risks on U.S. bases, assess the environmental condition, and "promptly" clean up contamination that poses "a known, imminent, and substantial endangerment to human health."[62]

The 2001 Memorandum was concerned with the day-to-day maintenance of the bases, for example, environmental governing standards, environmental performance reviews, and information exchanges between the two governments' officials in case of an environmental accident. The agreement did not deal with conditions or requirements of environmental responsibility at the time of return. The 2003 procedure only stipulated that the two governments would consult on the standards and methods of remedy at the facilities to be returned. Without any specific standards for remediation under the SOFA and relevant agreements, the requirement and level of remediation at the return of sites must have been decided in the consultation process.

However, the U.S. government contended that even if the United States takes responsibility for remediation, the standard for the remediation must be in accordance with the 2001 Memorandum. The 2001 Memorandum provides that the United States confirms its policy to promptly undertake remedial action when contamination poses KISE to human health.[63] The United States argues that the contamination at those bases does not present such a threat to human health[64] because U.S. military personnel had no health problems living there. Accordingly, the United States deems it is not responsible for any remedy.

The standard for cleanup under the 2001 Memorandum is KISE. The SOFA 2001 Memorandum adds the modifier "known" to the term "imminent and substantial endangerment (ISE)." "Known" is an adjective describing the "endangerment." "Known" itself means "understood, recognized, proven, perceived."[65] By adding "known" to ISE, the U.S. government intended to make the standard tougher to meet. According to a U.S. official, "'by its terms,' this basis for cleanup contemplates 'known' contamination, reflecting a policy aversion to excessive and expensive investigations or site studies."[66] However, once an investigation or study has been done and endangerment to human health has been found, the standard of KISE is no longer different from the U.S. domestic risk-based standard of ISE. Korean environmental law did not adopt risk-based standards but numerated minimum contamination level standards. Accordingly, the U.S. court's understanding of ISE could be useful in understanding KISE. The risk-based standard ISE has been used in some U.S. statutes, such as CERCLA, the Resource Conservation and Recovery Act (RCRA),[67] and the Safe Drinking Water Act (SDWA).[68]

CERCLA §106(a) provides the president with the authority to issue unilateral orders to potentially responsible parties to undertake remedial actions. The president can issue orders to take abatement action for any contamination that presents "an imminent and substantial endangerment to the public health or welfare or the environment" because of actual or threatened release of a hazardous substance.[69]

The federal courts have held that there may be an imminent and substantial endangerment in various cases.[70] In *United States v. Conservation Chemical Co.*,[71] where a site that was accessible by humans and wildlife was found contami-

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Le Statut des Forces de l'OTAN et Son Application en France 113-14 (1964)) [hereinafter Law of Visiting Forces].

60. Memorandum of Special Understandings, *supra* note 43. Basically, this kind of move by the United States was based on DOD's policy change described in U.S. DOD, Management of Environmental Compliance at Overseas Installations, Instruction No. 4715.5 (1996) [hereinafter DODI 4715.5].
61. The USFK already adopted Environmental Governing Standards (EGS) in 1997 following the prescription of DODI 4715.5, *id*. Thus, the provision on Environmental Governing Standards in the Memorandum was nothing but confirming U.S. policy. The 1997 EGS was updated as recently as 2004.
62. This provision reflects U.S. DOD, Environmental Remediation for DOD Activities Overseas, Instruction No. 4715.8 (1998) [hereinafter DODI 4715.8], a standard for remedial action at foreign U.S. bases.
63. The United States purposefully made this ambiguous by not defining the phrase in order to allow decisionmakers maximum flexibility. *See* Phelps, *supra* note 31, at 79.
64. The United States did not release the reason why those contaminated sites were not posing known KISE to human health. The USFK spokesman repeated that there were no sites posing KISE, but they were gratuitously doing remedial actions more than required. Erik Slavin, *South Korea Shelves Pollution Issue, Accepts 15 U.S. Sites: Seoul Cites Ongoing 'Security and Economic' Benefits*, Stars & Stripes (Pacific ed.), July 17, 2006, *available at* http://www.stripes.com/article.asp?section=104&article=38671.
65. The New Webster's Encyclopedic Dictionary of the English Language 473 (1st ed. 1969).
66. *See* Phelps, *supra* note 31, at 79.
67. 42 U.S.C. §§6901-6992k, ELR Stat. RCRA §§1001-11011.
68. 42 U.S.C. §§300f to 300j-26, ELR Stat. SDWA §§1401-1465.
69. CERCLA provides that:

> In addition to any other action taken by a State or local government, when the President determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, he may require the Attorney General of the United States to secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require. The President may also, after notice to the affected State, take other action under this section including, but not limited to, issuing such orders as may be necessary to protect public health and welfare and the environment.

42 U.S.C. §9606(a) (2007).

70. United States v. Ne. Pharm. & Chem. Co. (NEPACCO), 579 F. Supp. 823, 14 ELR 20212 (W.D. Mo. 1984) (finding that a relatively small quantity of hazardous substances that are toxic at low dosage levels are substantially likely to enter the groundwater and result in human and environmental exposure), *aff'd in part & rev'd in part on other grounds*, 810 F.2d 726, 17 ELR 20603 (8th Cir. 1986), *cert. denied*, 484 U.S. 1008 (1987); United States v. Seymour Recycling Corp., 618 F. Supp. 1, 14 ELR 20855 (S.D. Ind. 1984) (contaminated groundwater flows in the direction of a subdivision using well water); United States v. Hardage, 18 Env't Rep.Cas. (BNA) 1687 (W.D. Okla.1982) (numerous hazardous substances have reached private drinking water wells and have contaminated the groundwater and surface waters).
71. 619 F. Supp. 162, 16 ELR 20193 (W.D. Mo. 1985).

nated with numerous hazardous substances, the court held that "'endangerment' need not be an emergency, nor does it have to be immediate to be imminent" and "an endangerment is 'imminent' if factors giving rise to it are present even though the harm may not be realized for years."[72] "Substantial" does not require quantification of the endangerment. The court held that "an endangerment is 'substantial' if there is reasonable cause for concern that something may be exposed to a risk of harm by a release or a threatened release of a hazardous substance if a remedial action is not taken."[73] In *United States v. Ottati & Goss Inc.*, where numerous hazardous substances migrated from a facility and contaminated the surrounding soil and groundwater, a federal court held that there was an imminent and substantial endangerment finding that "'endangerment' means a threatened or potential harm and does not require proof of actual harm."[74] There are many other cases where ISE was found by the courts. In *United States v. Hardage*,[75] the court found that hazardous substances in groundwater traveling toward an aquifer posed an ISE. The court in *B.F. Goodrich Co. v. Murtha*[76] concluded that hazardous substances, which posed a risk of migrating from a landfill through groundwater to nearby residential wells and a brook, qualified as an ISE. In *Dague v. City of Burlington*,[77] the court found that leachate from a city landfill presented an ISE to the soil, groundwater, and surface waters under RCRA and the Clean Water Act (CWA).[78] *United States v. Valentine*[79] concluded that the site of an oil reclaiming facility posed an ISE under RCRA due to substantial risk of death and injury to wildlife. In *United States v. Vertac Chemical Corp.* the court found an ISE under RCRA and the CWA based upon an "acceptable but unproved theory" that dioxin, which was escaping from a herbicide manufacturer's plant into navigable waters, created a "reasonable medical concern over the public health."[80]

Based on these courts decisions, the U.S. Environmental Protection Agency (EPA) issued guidance in 1990 on imminent and substantial endangerment under CERCLA. According to the guidance,

> an endangerment is a threatened or potential harm. An endangerment is imminent if the conditions that give rise to it are present, even though the harm might not be realized for years. An endangerment is substantial if there is reasonable cause to believe that someone or something may be exposed to a risk of harm from a release or threatened release. This statutory element has been judicially interpreted to require only a limited showing. The mere threat of harm or potential harm to public health, public welfare, or the environment is sufficient. The endangerment need not be immediate to be imminent.[81]

EPA also presented that:

> the possible imminent and substantial endangerment must be set forth in the order. It is useful to include findings in the order which describe the potential or actual risk from the concentration levels detected in the release. However, such information is not required in the order itself to establish a possible imminent and substantial endangerment.[82]

Under the RCRA citizen suit provision, any person may commence a civil action on his own behalf against any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste that may present an imminent and substantial endangerment to health or the environment.[83] With regard to the meaning of "imminent and substantial endangerment," the U.S. Supreme Court held that "endangerment" can only be "imminent" if it "threaten[s] to occur immediately," and noted this language "implies that there must be a threat which is present now, although the impact of the threat may not be felt until later."[84] In many recent cases, the federal circuit courts have held that the term "endangerment" means a threatened or potential harm, and does not require proof of actual harm.[85]

72. *Id.* at 193.
73. *Id.*
74. 630 F. Supp. 1361, 1394, 16 ELR 20763 (D.N.H. 1985).
75. 761 F. Supp. 1501, 21 ELR 20706 (W.D. Okla. 1990).
76. 697 F. Supp. 89, 19 ELR 20357 (D. Conn. 1988).
77. 935 F.2d 1343, 21 ELR 21133 (2d Cir. 1991), *cert. granted in part*, 502 U.S. 1071 (1992), *rev'd in part on other grounds*, 505 U.S. 557, 22 ELR 21099 (1992).
78. 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607.
79. 856 F. Supp. 621, 24 ELR 21553 (D. Wyo. 1994).
80. 489 F. Supp. 870, 885, 10 ELR 20709 (E.D. Ark. 1980).
81. Memorandum from Don R. Clay, Assistant Adm'r, EPA Office of Solid Waste & Emergency Response, & James M. Strock, Assistant Adm'r, EPA Office of Enforcement & Compliance Monitoring, to Reg'l Adm'rs, Guidance on CERCLA Section 106(a) Unilateral Administrative Orders for Remedial Designs and Remedial Actions 5-6 (Mar. 13, 1990), 1990 WL 608678.
82. *Id.*
83. 42 U.S.C. §6972(a) (2007) provides:
> Except as provided in subsection (b) or (c) of this section, any person may commence a civil action on his own behalf . . . (1)(B) against any person, including . . . any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment . . . . The district court shall have jurisdiction . . . to restrain any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste referred to in paragraph (1)(B), to order such person to take such other action as may be necessary, or both.
84. Meghrig v. KFC Western, Inc., 516 U.S. 479, 485-86, 26 ELR 20820 (1996) (quoting Webster's New International Dictionary of the English Language 1245 (2d ed. 1934). In this case, the owner of property contaminated with petroleum products brought action against prior owners under RCRA for restitution of prior cleanup costs. The U.S. Supreme Court held that the citizen suit provision of RCRA does not authorize private cause of action to recover prior cost of cleaning up toxic waste that does not continue to pose danger to health or environment at the time of suit.
85. Parker v. Scrap Metal Processors, Inc., 386 F.3d 993, 1015, 34 ELR 20104 (11th Cir. 2004). In a citizen suit against a landfill operator where allegedly hazardous substances leaked into the environment, the federal circuit court held that defendants' past handling, storage, and disposal of hazardous wastes may have presented an imminent and substantial endangerment to the environment. In this case, the court found that:
> the evidence showed that Mr. Maddox and L.B. Recycling contracted with Laurence-David, Inc. to dispose of 1,000 drums of liquid waste. The EPA detected hazardous constituents, including lead and other heavy metals, leaking from these drums onto the ground. In addition, photographic evidence showed that Jason Maddox disposed of electrical transformers and car cushion materials at the SMP facility. The plaintiffs' expert testified that these items are known sources of

In the SDWA, there is a similar provision. Section 1431 provides EPA with emergency authority to pursue civil actions or issue administrative orders in cases where there may be an imminent and substantial endangerment to public health based on a present or likely contamination of a public water system or underground source of drinking water.[86] EPA's interpretation is even more expansive. According to EPA: "An endangerment is not actual harm, but a threatened or potential harm."[87] The Court also held that the Safe Drinking Water Act did not require proof of actual harm.[88]

In summary, according to the U.S. courts and EPA's interpretation, "imminent and substantial endangerment" means: (1) a threatened or potential harm; (2) the harm may not be realized for years; (3) the threat should be present; and (4) the harm should be serious though not quantified.

Even with such a short period of environmental survey, the contamination of soil and groundwater at many of the 23 sites was astonishing. The large amount of leaked oil caused contamination with various hazardous substances, such as benzene, TCE, PCE, phenol, and heavy metals at elevated concentrations. Many contaminated sites were found near borders of bases where villages are in close proximity. Further remedial actions are likely to find more contaminants, as 105 days is an extremely limited period of time. Whether the contamination poses KISE or not should be based on a sincere study and analysis by a third neutral party expert. Any one side cannot unilaterally decide the matter. However, in the negotiation for the 23 sites, neither side undertook a study to evaluate the risk, but, without any plausible explanation, the U.S. government denied that KISE was posed.

C. U.S. Refusal of Remediation

From 2005 to 2006, the consultation for the remediation of sites where surveys were completed took place in the EJWG and SOFA Environmental Subcommittee for approximately half a year.[89] However, it was said that the U.S. representatives merely repeated that the remediation is only available when the contamination poses KISE and that the contamination at those sites did not pose KISE.[90] Representatives from the South Korean Ministry of Environment argued that the levels of contamination at various sites were far beyond the minimum standard under domestic law and, therefore, the United States was responsible for cleanup. Thus, the consultation at the EJWG could not go any further. In 2006, the consultation took place in a new phase at a Security Policy Initiatives (SPI) meeting, in which representatives from each side participated and discussed broader security policy concerns. The change of phase, however, was a violation of the 2003 Consultation Agreement, which was discussed above. Since then, this environmental problem was handled in conjunction with other policy issues, such as South Korea-U.S. alliances.

Differences in the points of view over the standard of U.S. responsibility could not be reduced, even after prolonged negotiations.[91] The United States proposed a limited number of removal actions.[92] The proposal included eight areas of performances: (1) removal of underground storage tanks and removal and disposal of contaminated soil immediately around underground storage tanks (USTs); (2) removal of fuel from all storage tanks; (3) removal of all hazardous materials and hazardous waste, including polychlorinated biphenyl (PCB) items; (4) cleanup of visible spills at motor pools and hazardous material/waste collection points; (5) drainage and cleanup of heating and hot water systems; separate fuel from water; (6) drainage and reuse/disposal of refrigerants from AC systems; (7) removal of unexploded ordnance from the surface of firing ranges; and (8) removal and disposal of lead-and copper-contaminated soil in the target impact berms of firing ranges.[93] The United States also suggested it would remove some contamination using bioslurping methods[94] at some pilot sites where petroleum leakage was especially serious.

PCBs and lead, two substances that are defined as hazardous under the RCRA. The evidence established that the amounts of PCBs and lead found on the property were at levels that required SMP to notify the [Georgia Environmental Protection Department]. Additionally, there was testimony to the effect that materials found on the SMP facility were explosive, and that they could affect the central nervous system and cause problems in the upper respiratory system. The lead and heavy metals can affect a person's motor skills. Also, a witness testified that materials on the SMP facility spilled onto the ground, entered the soil, and killed trees. Accordingly, the defendants' disposal of hazardous waste harmed the environment and posed a threat to health. On the basis of the above evidence, this harm was substantial. Therefore, Mr. Maddox, L.B. Recycling, and SMP violated §6972(a)(1)(B).

Id. See also Cox v. City of Dallas, 256 F.3d 281, 31 ELR 20767 (5th Cir. 2001). The circuit court found that the Deepwood dump may present an imminent and substantial endangerment to health or the environment. The evidence includes the following: The Deepwood dump is adjacent to residences and is partially in the floodplain of the Trinity River; the dump is easily accessible to children; the Deepwood dump twice caught fire and burned, with the resulting fumes polluting the neighborhood air; a significant fire hazard continues to exist at the dump; the State's reports reveal that there is an imminent threat of the discharge of municipal solid waste into Elam Creek, a tributary of the Trinity River, because of the massive illegal dumping; the state itself has noted that waste at the Deepwood dump may cause contamination of surface water and groundwater through the leaching of contaminates from the debris by rainwater; asbestos, benzo(a)athracene, and benzene (in excess of state limits) have been detected at the Deepwood dump; and the city itself has long maintained that the Deepwood dump poses a hazard to the public health. *Id.* at 286-87.

86. *See* 42 U.S.C. §300i (2007).
87. U.S. EPA, Memorandum: Final Guidance on Emergency Authority Under Section 1431 of the Safe Drinking Water Act. Office of Ground Water and Drinking Water (Sept. 27, 1991) at 6.
88. United States v. Midway Heights County Water Dist., 695 F. Supp. 1072, 1076, 19 ELR 20142 (E.D. Cal. 1988) ("This court need not wait to exercise its authority until water district customers have actually fallen ill from drinking" contaminated water.).
89. From June 2005 to February 2006, the two parties consulted through various routes, including SOFA Subcommittee for Environment, but they could not reduce the gap. S. Korean Ministry of Environment, Report to the National Assembly on the Process of the Envionmental Consultation on the Returning of U.S. Bases (Oct. 10, 2006) (S. Korea) (source in Korean). [hereinafter S. Korean Ministry of Environment, Report].
90. *Id.* at 1.
91. *Id.*
92. At the 4th SPI, in September 2005, the United States proposed to remove USTs and contaminated soil from training ranges. On January 30, 2006, former USFK commander, Gen. Leon LaPorte, proposed, in addition, removal of floating petroleum for 6 months. *Id.* at 15.
93. *Id.*
94. According to the Federal Remediation Technologies Roundtable, the description of bioslurping is as follows:

The U.S. proposal of the eight removal actions plus bioslurping did not address contaminants, such as heavy metals, hazardous substances, and unexploded ordnances in the soil, water, and groundwater. Furthermore, U.S. conduct also fell far short of the remedial standards of South Korea and the United States. In the United States, CERCLA distinguishes the term removal action from remedial action. "Remedy" or "remedial action" means:

> those actions consistent with permanent remedy 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 to present or future public health or welfare or the environment.[95]

The U.S. proposal of the eight actions plus bioslurping cannot be considered sufficient enough in remedying the contaminated environment by definition. The U.S. proposal was rather similar to "removal action" under CERCLA.

At first, the South Korean government refused to accept the U.S. proposal. It found that the bioslurping methods could not clean up the groundwater, and removal of leaking USTs and the soil immediately around USTs was minimal, leaving vast amounts of contaminated soils untouched.

At a public meeting with South Korean veterans, then-USFK commander General B.B. Bell alleged that the South Korean government's request for remedy was overreaching.[96] In April 2006, the United States announced that it would undertake, as a remedy for those sites, the aforementioned actions and bioslurping at sites selected by the USFK commander.[97] Under this political pressure, the Korean government accepted the U.S. proposal. Two months later, the United States unilaterally informed the Korean government that it had finished those eight actions at 15 sites and that it would return those to South Korea by July 15, 2006.[98] On July 13, 2006, at the 9th SPI meeting,[99] the South Korean government accepted the U.S. unilateral decision without providing any reasoning to the South Korean people. In April 2007, the South Korean government officially approved the return of 14 out of 15 sites. In May 2007, nine more sites were officially returned, allegedly after having conducted bioslurping for six months at five sites.[100] In all of these 23 sites, the Untied States did not undertake any major remedial action for contaminated soil and groundwater. The Untied States did not even provide South Korean officials with the opportunity to confirm and verify that the U.S. actions had indeed taken place. The United States argued that these tasks had been done as a favor and not as an obligation, and therefore South Korean officials had no right to check them or request more to be done.[101]

The U.S. actions fall far short of compliance with South Korean environmental laws and regulations.[102] According to the South Korean Soil Environment Preservation Act, any polluter is liable for cleaning up contaminated soil and groundwater as it prescribes. Once the South Korean government takes over the former U.S. bases from the USFK, after final agreement on return, then it assumes all the environmental responsibility as well. Ultimately, the South Korean taxpayers will pay for cleanup. In 2009, the cost of cleanup by the South Korean government is estimated as 190 billion won[103] (US $162 million), according to the government report to the National Assembly.[104]

> Bioslurping is the adaptation and application of vacuum-enhanced dewatering technologies to remediate hydrocarbon-contaminated sites. Bioslurping utilizes elements of both bioventing and free product recovery, to address two separate contaminant media. Bioslurping combines elements of both technologies to simultaneously recover free product and bioremediate vadose zone soils. Bioslurping can improve free-product recovery efficiency without extracting large quantities of ground water. In bioslurping, vacuum-enhanced pumping allows LNAPL to be lifted off the water table and released from the capillary fringe. This minimizes changes in the water table elevation which minimizes the creation of a smear zone. Bioventing of vadose zone soils is achieved by drawing air into the soil due to withdrawing soil gas via the recovery well. The system is designed to minimize environmental discharge of ground water and soil gas. When free-product removal activities are completed, the bioslurping system is easily converted to a conventional bioventing system to complete the remediation. Operation and maintenance duration for bioslurping varies from a few months to years, depending on specific site conditions.
>
> Federal Remediation Technologies Roundtable, Technology: 4.33 Bioslurping, http://www.frtr.gov/matrix2/section4/4-35.html (last visited Nov. 15, 2009).

95. 42 U.S.C. §9601(24) (2007). In comparison, "removal actions" are relatively short-term responses to risks posed by releases or threatened releases of hazardous substances. *Id.* §9601(23). The U.S. proposal might pertain to removal actions but cannot be defined as a remedial action under the definition in CERCLA.
96. June 5 2006, Gen. B.B. Bell at a speech in the Korea Defense Security Forum meeting noted. Kim Jungsu, *The U.S. Military's Pressure on Environmental Remediation*, The Hankyoreh, June 9, 2006 (S. Korea) (source in Korean), *available at* http://www.hani.co.kr/arti/society/society_general/129788.html. He also had an interview with *Stars and Stripes* on April 14, 2006. *See* T.D. Flack, *Bell Says Alliance, Base Issues Must Be Resolved: General Aims for 50-50 Burden Sharing With S. Korea*, Stars & Stripes (Pacific ed.), Apr. 14, 2006, *available at* http://www.stripes.com/article.asp?section=104&article=36683.
97. On April 7, 2006, the United States sent a letter written by Richard Lawless, Deputy Defense Undersecretary for Asian and Pacific Affairs, as a final call, saying that they will undertake no more than the LaPorte proposal. S. Korean Ministry of Environment, Report, *supra* note 89, at 17.
98. On June 15, 2006, the United States sent another letter written by Richard Lawless to the South Korean government, *Id*. at 23.
99. *Id.* at 25.
100. The United States announced that they undertook removal of free products using bioslurping at Camp Sears, Camp Essayon, Camp Falling Water, Camp Edwards, and Camp Page. S. Korean Ministry of Environment, Report on the Process of Bases Return and Further Guidance (May 15, 2007) (S. Korea) (source in Korean) at 2.
101. *Id* at 5. The U.S. government also argued that "Korea receives the sites and infrastructure, which USFK estimates as worth more than $1 billion, at no cost." Hwang Hae-Rym & T.D. Flack, *Closed Bases Draw Korean Activists' Ire*, Stars & Stripes, June 1, 2007, *available at* http://www.stripes.com/article.asp?section=104&article=46309. However, infrastructures at the USFK facilities were essentially worn out and shabby. Most of them are subject to demolition. Demolition would carry significant costs.
102. In South Korea, the Soil Environment Preservation Act is generally applicable. In a recent example, the South Korean Ministry of Defense was ordered by the city of Pusan to remedy serious contamination caused by a South Korean Army facility. The Korean Army complied with the order by undertaking cleanup. The cleanup process took three years and cost 12.2 billion won (approximately $13 million). City of Pusan, Namgu Research Report, "Munhyun District Soil Remediation," (Nov. 2003). (S. Korea) (source in Korean).
103. S. Korean Ministry of Defense, Report to the National Assembly (2008). Shim Hyungjoon, *Heavy Metals in the Soil of 32 Out of 52 U.S. Military Bases Nationwide*, Herald Media, Oct. 6, 2009 (S. Korea) (source in Korean), *available at* http://www.heraldbiz.com/SITE/data/html_dir/2009/10/06/200910060602.asp.
104. Green Korea an Environmental NGO argued that since the investigation, the pollution spread significantly and the cleanup cost would also increase as much

III. Criticisms of U.S. Environmental Policy at Its Military Bases Overseas

A. *National Security Versus Environmental Security*

There has been tension between the national security interest and the national environmental interest. To be prepared for a potential war effort was the prime mission of the military. The number of military personnel and weapons and adequate training are important for military readiness. Testing and training of those military weapons and personnel inevitably impacts the environment. However, national security was always the highest priority. Along the same line, environmental protection was considered a barrier to the national security mission.[105]

However, as the cold war era eroded, that thinking started to change. The national security concern became less emphasized and military downsizing proceeded. At the same time, the serious environmental destruction caused by the military during past decades was revealed during the 1980s. In 1990, Richard Cheney, the Secretary of Defense at that time, declared that "[d]efense and the environment is not an either/or proposition. To choose between them is impossible in this real world of serious defense threats and genuine environmental concerns."[106] In the 1990s, the military began to take environmental protection into consideration and made efforts to organize the system of environmental compliance within the military.

This change of thought coincided with the end of the cold war when the national security concern suddenly dropped to the bottom; however, it did not last long. When the 9/11 attacks took place, sincerity was put to test. After 9/11, the Department of Defense proposed to amend various environmental laws to allow the military to easily comply and to limit citizens' access to the environmental decisionmaking process.[107] The military's environmental dedication was overtaken by heightened security concerns. The U.S. war on terrorism and the war with Iraq created a heightened emphasis on national security over environmental consciousness, resulting in significant budget cuts on environmental expenditures.[108]

B. *Double Standards*

1. Cleanup Standards

On U.S. territory, the military is not absolved of environmental responsibility. Under CERCLA, the U.S. Department of Defense (DOD) is also responsible for cleanup of any contamination it causes. DOD has undertaken restoration efforts under the Defense Environmental Restoration Program (DERP). The U.S. government has been spending $1.3 billion annually cleaning up military sites located in the United States, totaling approximately $20 billion over the past decade.[109]

Outside U.S. territory, environmental contamination is usually more serious, because of the laxer environmental standards of U.S. military forces overseas.[110] However, the U.S. government applies different standards for remediation overseas.[111] For its overseas military bases, the United States made a policy in 1998 not to spend any money on cleanup beyond the minimum necessary to eliminate "known imminent and substantial endangerments to human health and safety."[112] The 1998 policy provided local commanders some

as 320 billion won (roughly US $273 million). Choi, Hyun Joon, *Cleanup Cost for the Returned U.S. Bases Reached 320 Billon Won*, The Hankyoreh 2008.12.3 (S. Korea) (source in Korean), *available at* http://www.hani.co.kr/arti/society/society_general/325568.html.

105. *See* Stephen Dycus, National Defense and the Environment 2-10 (1996).

106. *Id.* at 2. During the 1990s, the concept of "environmental security" was born. Defending national security and protecting the environment are closely linked. Both share the ultimate goals of ensuring well-being. President George H.W. Bush described "environmental security" as a national security objective. According to the Pentagon in 1991: "Defending our national security and protecting our environment are closely linked. Both share the ultimate goals of ensuring our well-being and preserving our rich national heritage." *Id.* at 3.

107. Stephen dycus, *Osama's Submarine: National Security and Environmental Protection After 9/11*, 30 Wm. & Mary Envtl. L. & Pol'y Rev. 1, 1-2 (2005).

> [T]he Pentagon announced a highly organized, multi-year campaign entitled Readiness and Range Preservation Initiative ("RRPI"). RRPI was designed to promote sweeping changes in some of the United States' most important environmental laws. The initiative included proposals to amend the Clean Air Act, the Resource Conservation and Recovery Act, the Endangered Species Act, the Marine mammal Protection Act, the Migratory Bird Treaty Act, the Superfund law, and perhaps the Clean Water Act. Meanwhile, the Pentagon began moving on a broad front to foster regulatory reforms that would make it easier for the military to comply with these laws. In addition, the Bush administration sharply limited public access to government information that would enable public participation in environmental decisions affecting the military.

Id at 2-3. *See also* Nancye L. Bethurem, *Environmental Destruction in the Name of National Security: Will the Old Paradigm Return in the Wake of September 11?*, 8 Hastings W.-Nw. J. Envtl. L. & Pol'y 109, 128 (2002). The people of Hawaii Malama Makua settled with the U.S. Army to reduce the burden to prepare an environmental impact statement during military training in the Makua Valley after 9/11. The Military Environmental Responsibility Act bill did not move through any congressional committee after 9/11.

108. Bridget Dorfman, *Permission to Pollute: The United States Military, Environmental Damage, and Citizens' Constitutional Claims*, 6 U. Pa. J. Const. L. 604 (2004); Stephen Dycus, *Environmental Baby, Terrorism Bath Water*, Envtl. F., Sept./Oct. 2002, at 40, 45.

109. Major Amy L. Momber, *Federal Environmental Remediation Contractual and Insurance-Based Risk Allocation Schemes: Are They Getting the Job Done?*, 58 A.F. L. Rev. 61, 73-74 (2006).

110. Environmental problems latent in the U.S. bases are abundant, and environmental contamination at U.S. bases is not unique to South Korea alone. Regardless of their location, U.S. bases are operated according to the same standards established by DOD. *See* Ted H. Shettler, *Reverberations of Militarism: Toxic Contamination, the Environment, and Health*, Med. & Global Survival, Mar. 1995, at 1. U.S. bases in the Philippines were also seriously contaminated. The United States returned Clark Air Force Base and the Navy base at Subic Bay in 1992. Groundwater at these sites was later found to be contaminated with various hazardous substances, such as mercury, nitrate, propylbenzene, dieldrin, and lead. And in the soil at Clark Air Force Base, various hazardous substances, such as jet fuel, benzene, pesticides, oil, and PCBs were found. GAO reported to the U.S. Congress that the cleanup of those sites would cost as much as a "Superfund" site. *See* David Armstrong, *A Toxic Legacy Abroad: The Military Has Polluted in Ways That Would Be Illegal in the United States*, Boston Globe, Nov. 15, 1999; U.S. GAO, Military Base Closures: U.S. Financial Obligations in the Philippines, GAO/NSIAD-92-51 (1992); Michael Satchell, *The Mess We've Left Behind*, U.S. News & World Rep., Nov. 30, 1992, at 28.

111. There is criticism against the hypocritical U.S. position. "It is shockingly hypocritical for United States military forces to apply one set of environmental performance standards at home and another, laxer one everywhere else." Dycus, *supra* note 105, at 189.

112. DODI 4715.8, *supra* note 62, §5.1.1.

discretion in determining whether or not to fund remediation. Commanders may conduct further cleanups when "required to maintain operations," "to protect human health and safety,"[113] or required by international agreement.[114]

U.S. officials frequently emphasized the U.S. role of environmental stewardship. Once, a U.S. Navy official emphasized "environmental diplomacy."[115] Another comment was that

> [t]he DoD has proclaimed its leadership role in environmental compliance and protection. That philosophy is fundamental, and the continued focus on environmental stewardship by DoD components at their installations and facilities worldwide will ensure the access our country needs to accomplishment of its national security objectives.[116]

The U.S. takes a diplomatic perspective on the environmental problems it creates overseas. As long as the diplomatic relationship between the United States and its host country does not deteriorate, the United States tends not to take environmental problems seriously.

2. Environmental Standard in General

In the 1990s, the U.S. government set strict environmental standards for the military and created legal enforcement measures. The violation of environmental law is subject to criminal sanctions as dereliction of duty under Article 92 of the Uniform Code of Military Justice.[117]

The U.S. government established similar environmental standards for its overseas military bases.[118] The environmental standards for overseas bases reflect both U.S. domestic environmental standards and those of the host country. The environmental standards themselves may be of a high enough standard, as they are regularly reviewed and revised following changes in domestic standards. In South Korea, the USFK created the Environmental Governing Standard in 1997 and amended it in 2004. The environmental standard is comprised of 19 chapters.[119]

However, U.S. commitment to the foreign installations was highly suspicious, because of the absence of an effective enforcement mechanism. The governing standard does not create any rights or obligations enforceable against the United States, DOD, or any of its components, nor does it set a standard of care or practice for individuals.[120] Even if the standards are violated, there are no provisions for criminal or administrative sanctions.[121] It is difficult for the South Korean government to investigate and punish U.S. military personnel for any violation of any South Korean environmental standards because of the inability to gain access to the U.S. installations and jurisdictional problems.[122] U.S. military environmental obligations are correctly described as "self-imposed as a matter of policy rather than as a matter of law."[123] Without appropriate responsibility, it is hard to believe that U.S. forces personnel who are shortly to be transferred could follow any well-documented standards.

113. *Id.* §5.2.2.
114. *Id.* §5.2.3.1.
115. One commentator has noted:
> Although, members of the U.S. Armed Forces have always been diplomats of a sort, trying to leave a good impression in every port visited, never did the task require so much intricacy and finesse as the current international environmental obligations. The U.S. military has shifted from the simplistic, John Wayne-esque vision of the military mission to meet its objective by "breaking things and killing people." U.S. Navy members are very much called to be stewards of the environment and environmental diplomats abroad.

Carlson, *supra* note 31, at 63.
116. Phelps, *supra* note 31, at 88.
117. *See* Carlson, *supra* note 31, at 96.
> In the U.S., environmental criminal behavior is more easily addressed. DoD civilian employees are prosecuted by the Department of Justice or by the local state criminal prosecutors. Military violators would most likely be handled by the military criminal justice system governed by the Uniform Code of Military Justice (UCMJ). The military offender would be charged under Article 92 of the UCMJ, for violating an order or for dereliction of duty. The domestic DoD/DON instructions clearly establish a *duty* for environmental compliance.

Id. at 97.
118. In 1978, President Jimmy Carter issued Executive Order No. 12088, which mandated U.S. forces to comply with the host country's "environmental pollution control standards of general applicability." Exec. Order No. 12088, §1-801 (Oct. 13, 1978). In 1991, DOD established DOD Directive 6050.16, which created a minimum environmental protection standard applicable to DOD installations and facilities overseas. The minimum standard was embodied in an overseas environmental baseline guidance document(OEBGD) based on "generally accepted environmental standards" applicable to DOD facilities in the United States. It then designated DOD executive agents for nations with a significant DOD presence and directed them to prepare final governing standards(FGS) based essentially on a comparison of the OEBGD and host-nation environmental standards of general applicability to determine which is more protective of the environment. On "final development and distribution," the FGS becomes the applicable environmental protection standards for DOD installations. DOD Directive 6050.16 was later updated and replaced by DOD Instruction 4715.5 in 1996. For more detail, see Phelps, *supra* note 31, at 55-56.
119. The 19 chapters are: 1. Introduction, 2. Air Emissions, 3. Drinking Water, 4. Waste water, 5. Hazardous Materials, 6. Hazardous Waste, 7. Solid Waste, 8. Medical Waste Management, 9. Petroleum, Oil, and Lubricants, 10. Noise, 11. Pesticides, 12, Historic and Cultural Resources, 13. Endangered Species and Natural Resources, 14. Polychlorinated Biphenyls, 15. Asbestos, 16. Radon, 17. Environmental Effects Abroad of Major Federal Actions, 18. Spill Prevention and Response Planning, 19. Underground Storage Tanks.
120. U.S. Forces Korea, Environmental Governing Standard §1-5(b) (2004).
121. "The overseas regime, though, lacks precision in addressing criminally culpable environmental non-compliance . . . . [T]he OEBGD and FGS were not similarly drafted to support criminal prosecutions for non-compliance and establish clear evidence of 'duty' under Article 92 of the UCMJ." Carlson, *supra* note 31, at 97. Noncompliance of any environmental standard might be detected during a departmentwide audit every three years and addressed through subsequent administrative evaluation of the installation commandership. *See id.* at 96.
122. The SOFA provides members of USFK with protection from criminal jurisdiction of South Korea for offenses arising out of any act or omission done in the performance of official duty. SOFA, *supra* note 1, art. XXII(3)(a)(ii). However, with respect to offenses punishable by South Korean law but not by the law of the United States, the authority of South Korea shall have exclusive jurisdiction. *Id.* art. XXII(2)(b). Agreed Minutes to SOFA, however, mentions
> Korea, recognizing the effectiveness in appropriate cases of the administrative and disciplinary sanctions which may be imposed by the United States authorities over members of the United States armed forces may at the request of the military authorities of the United States, waive its right to exercise jurisdiction under paragraph 2. Art. XXII Re Para 2.

123. According to a U.S. official, "our obligations are often self-imposed as a matter of policy rather than as a matter of law. However, far from being inconsequential, noncompliance is potentially damaging to our relations with the host-nation." Phelps, *supra* note 31, at 49. In another evaluation, "the requirements represent a unique synthesis of executive orders, U.S. domestic and host-nation environmental standards, DoD policy and international agreements . . . . The DoD perspective is that environmental compliance requirements for overseas installations grow out of the political relationship of the two sovereigns reflected in their international agreements." Carlson, *supra* note 31, at 70.

There are other critical loopholes. The Environmental Governing Standard contains wide waiver provisions. When compliance may seriously impair operations or require substantial expenditure of funds not currently available for such purposes, military activities and installations may seek a waiver or deviation from the governing standards.[124] The standards do not apply to remediation of past contamination.[125] Even if the environmental incident takes place as a result of noncompliance with the standards, the United States has no responsibility to remedy the environmental consequences unless the incident caused known imminent and substantial endangerment to human health.[126] Without any specific provision denying the South Korean government's jurisdiction over U.S. forces, the South Korean government can exercise its territorial jurisdiction to enforce South Korean law on U.S. bases. However, in reality, unless the visiting force cooperates with the South Korean authority, the host country cannot enforce laws against the foreign sovereign.[127] After 2001, the United States pledged to let local officials check and hold consultations when an environmental event takes place within a U.S. installation.[128] Notification of events between the two governments is required for events that have known, imminent, and substantial endangerment to the public safety, human health, or the natural environment.[129] However, the decision on whether or not any event poses a known imminent and substantial endangerment is conveniently left to the discretion of the U.S. commander.

C. *Gag Rule*

The United States placed gag rules on each of the agreements on environmental consultations.[130] Co-chairpersons of the Environmental Subcommittee of the SOFA Joint Committee have to approve the release of information. Information of public interest will only be released by the subcommittee upon mutual agreement of the South Korean and USFK representatives using a joint statement. These provisions limit the South Korean government's authority to release information to the public. If the USFK official refuses to approve release of information, the South Korean government is bound by that decision. The South Korean government has refused to release any environmental data on the returned bases based on these provisions. According to the South Korean government, each time the U.S. counterpart objected to the release of such information. All the information ultimately was revealed through the National Assembly's investigation at a hearing that took place in 2007 at the Environment and Labor Committee of the National Assembly.

Under Article 21 of the South Korean Constitution and Article 3 of the Government Information Openness Act, the South Korean government must provide on request any information it possesses unless the information meets the criteria for an exception.[131] The environmental information about the returned bases is not related to any of those exceptions. The South Korean government's refusal to release information regarding these matters violates the public's fundamental right to know protected by Article 21 of the South Korean Constitution and the Government Information Openness Act. The South Korean government points the finger at the USFK for not releasing the environmental information that it had not approved. However, this excuse cannot be considered a legitimate exception under the South Korean Information Openness Act.

As their request for environmental information at the sites was denied, two civic groups sued the Ministry of Environment in June 2006. The Chuncheon Peoples' Solidarity civic group, backed by the environmental organization Green Korea United, filed a lawsuit seeking the results of the environmental survey at Camp Page in Chuncheon, who conducted the survey and is paying for the cleanup efforts. The Seoul Administrative Court decided that the results had to be made public.[132] The court ruled that the information is not related to national security and that the South Korean government's refusal had no legal basis in any other exemption criteria. On appeal, the Appellate Court of Seoul upheld the judgment of the lower court in June 2007.[133] The government appealed to the South Korean Supreme Court. However, the Supreme Court upheld the appellate decision.[134]

The gag rules are illegitimate, not only under South Korean law, but also under U.S. law. Under CERCLA, the federal government is required to announce to the public the results of site investigations and the decisions of remedial design to provide an opportunity for feedback.[135] The government then has to consider the citizens' comments before

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124. U.S. Forces Korea, Environmental Governing Standards §1-13(a) (2004).
125. *Id.* §1-2(e).
126. Even though a spill or environmental event takes place while operating installations or leaking from underground storage tanks, the United States is required to respond minimally under EGS. Further action will be governed by DODI 4715.8. *See* U.S. Forces Korea, Environmental Governing Standards §§18-3(g), 19-3(d)(2) (2004).
127. The SOFA does not rule out the issue of sovereign state immunities. For current developments on the issue in the U.N. Committee, see Brownlie, *supra* note 39.
128. SOFA Joint Committee, Joint Environmental Information Exchange and Access Procedures §2 (2002).
129. *Id.* §2(b)(ii).
130. *Id.* §5 reads:
> All information communicated to the media should be jointly approved by the Co-Chairmen of the SOFA Environmental Subcommittee prior to release. When not jointly approved, the USFK or ROK Co-Chairman, as applicable, will make every effort to provide in advance to his counterpart a copy or summary of the information to be communicated to the media.

See also SOFA Joint Committee, 2003 Consultation Agreement §7 (2003): "Any release of information to the media or public on this process or the specific information exchanges and surveys conducted under this process requires approval by the Co-Chairpersons of the Environmental Subcommittee".
131. The Public Authority's Information Openness Act (Law No. 8871) Article 9 provides nine exemptions, among which are: (1) information classified as secret or not to be opened designated by other statutes or rules; (2) information that might substantially harm, if released, substantial national interest related with national security, national defense, unification, or diplomatic relationship; and (3) information that might substantially harm protection of life, safety, and property of the people. (S. Korea) (source in Korean).
132. [Revocation of Government decision not to release information] Seoul Administrative Court Decision, 2006guhap 20979 Decided Nov. 15, 2006.
133. [Revocation of Government decision not to release information] Seoul Court of Appeals Decision, 2006nu29470 Decided June 13, 2007.
134. [Revocation of Government decision not to release information] Supreme Court Decision, 2007du14596 Decided Feb. 26, 2009.
135. 42 U.S.C. §9617(a), (b) (2007).

finalizing the remedial action. This process of citizen participation also applies to military bases stateside.[136] The participation of state and local governments is also guaranteed.[137] The U.S. position to keep the process undisclosed for its bases in South Korea would be illegal if it were conducted in the United States.

D. Taking Advantage of Local Hypersensitivity to Security

Many provisions of the SOFA and relevant agreements are far from clear,[138] especially describing the scope of the immunities of the USFK.[139] Large areas are inevitably left open to interpretation. These uncertainties were intentionally selected by the United States.[140] As previously shown, the contents of many agreements replicated U.S. foreign policy. Interpretation was left to consultation between the two governments. However, higher stakes on national security of the South Korean government made this negotiation process unfair.[141] The United States has dominated the bilateral relationship with South Korea since the Korean War. The South Korean government is very sensitive to maintain the alliance with the United States and to keep U.S. forces in the country. In the Korean Peninsula, the tensions between the North and South still remain. Accordingly, national security concerns quite often prevail over environmental concerns that are not necessarily incompatible with the former. Recently, South Korea was again in the turmoil of national security concerns. The reduction of U.S. troops in South Korea, the South Korean reacquisition of operational command during wartime, and North Korea's nuclear test were all major issues. The South Korean media also covered the security issues in more depth than it covered environmental issues.

The U.S. government has frequently made use of this security priority atmosphere in South Korea to their advantage. The U.S. commander repeatedly emphasized that the environmental damage should be a price to pay for security over the decades.[142] Occasionally, the United States referred to the hostility of North Korea[143] and its potential withdrawal from Korea, in addition to the U.S. contribution during the Korean War. The United States effectively avoided its responsibility for environmental misconduct by using its political dominance and taking advantage of the hypersensitivity to security in South Korean society.

IV. The Aftermath of the 2007 Return

The return of those 23 sites without cleanup by the United States has induced widespread criticism from both environ-

136. *See* U.S. DOD, Environmental Restoration Program, Instruction No. 4715.7 (1996).

> Conduct public participation in a manner consistent with the requirements of [CERCLA], the National Contingency Plan, 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. Establish Technical Review Committees (TRC) or Restoration Advisory Boards (RAB) that include representatives of the community, in accordance with the Deputy Under Secretary of Defense (Environmental Security) Memorandum (reference(s)).

Id. §6.6.

137. 42 U.S.C. §9621(f) (2007).

138. SOFAs, wherever they are, have not clearly described the scope of immunities of sending forces. Dieter Fleck, *Introduction*, *in* Law of Visiting Forces, *supra* note 59, at 3, 3.

139. In comparison, in Europe, the NATO SOFA and supplementary agreements have been restricting the scope of immunity of visiting forces. The U.S. government entered into a 1993 supplementary agreement with Germany, under which the U.S. government obliged itself to bear the costs of assessing, evaluating, and remedying any environmental contamination caused. The NATO SOFA is a multilateral treaty, by which the United States could not dominate in the process of treaty negotiations. The U.S.-South Korean bilateral agreements could not equal the NATO SOFA.

140. *See* Nico Krisch, 16 Eur. J. Int'l L. 369 (2005). Nico Krisch notes:

> Bilateral negotiations are far more likely to be influenced by the superior power of one party than are multilateral negotiations, in which other states can unite and counterbalance the dominant party—*divide et impera*, as reflected in the forms of international law. The bilateral form is also more receptive to exceptional rules for powerful states. In multilateral instruments, especially in *traités-lois*, exceptions for powerful parties are always suspicious and in need of justification, as is manifest in, for example, the Nuclear Non-proliferation Treaty and the failed attempts of the U.S. with respect to the ICC Statute. Bilateral treaties do not pose such problems: because of their more direct reciprocity, they often do not create the same rights and obligations for both parties, and this is generally accepted; the lacking formal equality of the rules makes substantive inequalities less obvious. And through bilateral treaties, it is also easier for states to confer a position on one state that they refuse to confer on others; demands for coherence and equal treatment are much lower. Bilateral treaties are thus a much easier tool to reflect and translate dominance than multilateral ones.

Id. at 390.

141. Among various diplomatic concerns involving the United States, environmental compliance within U.S. military bases was not seriously considered by the government of South Korea. Within the government, the Ministry of Foreign Affairs and Trade (MOFAT) and Ministry of National Defense (MND) preside over decisionmaking and negotiating in the U.S.-South Korea relationship. The Ministry of Environment participates in the negotiation, but it possesses hardly any influence on the other two Ministries. Both MOFAT and MND do not take the value of environment into much account. The concept of environmental security is not within their understanding. Without appreciation of the value of environment, any environmental concern cannot help but yield its seat to national security concerns, as long as the North Korean nuclear crisis and the threat of rising China continue.

142. Then-USFK Commander Gen. B.B. Bell said in an interview with *Stars and Stripes*:

> Conducting military operations in the midst of this place . . . there were certainly some environmental issues with respect to utilization of the land. And whether it's lead bullets in dirt berms on a range or whether it is the unfortunate spillage of petroleum products in motor parks, there is a certain environmental cost of doing business. And it's regrettable but it's been determined over the years as a price that has to be paid to secure the society.

Flack, *supra* note 89. The U.S. officials also argued that "further cleanup efforts beyond what the United States already has done should be handled by the South Korean government as 'the price of peace.'" Erik Slavin, *Korean Environmental Groups Sue for U.S. Base Data: Activists Allege Pollution at Sites Being Returned to South Korea*, Stars & Stripes (Pacific ed.), June 25, 2006, *available at* http://www.stripes.com/article.asp?section=104&article=38169.

143. Then-USFK Commander B.B. Bell said:

> [The North Koreans] are dangerous and they're capable and they are modernizing their offensive strike-missile capability through a fairly aggressive testing program. So as their missile threat improves, it is incumbent on the United States and the Republic of Korea . . . to be able to defend against it. And that's air-defense mechanisms, both in terms of Army air defense, it's airborne air defense in terms of strike aircraft that would destroy missile launch facilities, etc. So it's holistically . . . intelligence, reconnaissance, surveillance to know what they're doing with their missiles, if we can, and to give us a clear picture.

T.D. Flack, *Bell Outlines Plan to Make South Korea a Choice Billet: USFK Leader Applauds Moving Troops to Southern Bases*, Stars & Stripes (Pacific ed.), Apr. 25, 2006, *available at* http://www.stripes.com/article.asp?section=104&article=36702.

mental groups and bipartisan politicians. Thus, in the summer of 2007, the Korean National Assembly held a hearing on the matter undertaking an investigation of the documents and interrogating the Korean government officials who had dealt with this matter. The National Assembly Committee on the Environment and Labor found that the U.S. government had strongly urged the Korean government to accept the U.S. unilateral offer. Such a unilateral approach was not consistent with the procedure agreed upon for environmental surveys and consultations. After the two-day hearing, the committee adopted the recommendation that the Korean government negotiate with its U.S. counterpart in order to revise the SOFA environmental provisions, to revise the procedural agreement regarding environmental surveys and remedial action, and to base cleanup on Korean environmental standards.

Table 2 The Field Survey Period (days)

area / number of possible pollution sources	Below 10,000m²	10,000-100,000m²	100,000-200,000m²	200,000-800,000m²	800,000-160,000m²
Below 20	20	25	30	40	50
20-50	30	35	45	60	80
50-100	40	50	60	80	100
100-300	60	70	80	100	120
300-500	80	90	100	120	150

In 2008, the two governments resumed talks over the procedure for environmental consultations and the return of other bases. In March 2009, the two governments reached a new agreement, the Joint Environmental Assessment Procedure (JEAP).[144] This new procedure will be applied to seven facilities and areas, including Camp Hialeah. The two governments will reconsider whether they continuously apply the JEAP to other facilities and areas to be returned after pilot application on the seven sites. As far as these seven sites are concerned, the JEAP replaced the 2003 Consultation Agreement.

The JEAP will be conducted by the EJWG in accordance with the phases predescribed. Phase I, Initiation and Notification, will be undertaken for 45 days. Phase II, Field Survey and Data Collection, will be followed after Phase I. The time period for Phase II depends on the size of the site and the number of pollution sources. Phase III, Evaluation and Consultation, will follow for 50 days. Phase IV is the Implementation Process.

Phase I starts with the United States providing basic environmental information (BEI).[145] After receipt of a BEI package, the EJWG will normally conduct a joint site visit for 15 days.[146] The EJWG will consult on any questions raised during the BEI review and joint site visit for another 15 days. If necessary, the SOFA Environmental Subcommittee may agree on extending the period for consultation. If the Korean EJWG chairperson desires a joint field survey, he will submit a formal request that includes a proposed field survey plan and schedule for 10 days.[147] The U.S. EJWG chairperson will review the request for access, review the plan and schedule, coordinate with the other party, and provide an accepted plan and schedule for five days.[148] The United States, at its option, may elect to observe the field survey efforts, jointly participate, or take concurrent samples.

During Phase II, the South Korean government may perform onsite sampling, laboratory testing, and analysis. The field survey period will be based on the size of the facility and areas being returned, considering the number of possible pollution sources. The field survey period for each facility and area will be determined based on Table 2 (see above).[149]

The Korean government may prepare a field survey report based on the collected data for 10 days. The report should include location, extent, quantity and concentration of contamination, related analytical results and field notes, and description of environmental conditions that may pose human health risk and require remedy. The Korean government will share any field survey with the U.S. counterpart and submit it to the Environmental Subcommittee. The EJWG may agree to extend the period for completing the field survey by up to 10 days based on unforeseen events that might occur during the field survey period.

Phase III, Evaluation and Consultation, will follow for 50 days. The Korean government may prepare a report, which it will share with the U.S. counterpart, that assesses any potential human health risk that poses a known imminent and substantial endangerment as evidenced by the Phase II field survey results for 20 days.[150] The EJWG Co-chairpersons may convene a meeting with medical and environmental experts from both parties and conduct consultations based on the risk assessment report for 10 days.[151] The EJWG will consult on the need for action and propose remedial options,

144. SOFA Joint Committee, Joint Environmental Assessment Procedure (Mar. 20, 2009) (hereinafter JEAP)

145. BEI is:

> environmental information gathered by the transferring party in accordance with relevant rules and regulations and used in the day-to-day management of the facility and area. The information may include, but is not limited to: maps showing surface features and underground utilities; a list of facilities showing type, size, and use; identification of presence and location of natural and cultural resources; and summaries from field surveys, assessments, and analytical data.

JEAP §3(g).

146. JEAP §5(a)(2). During the joint site visit, visual and basic physical checks of facilities and areas may be accomplished.

147. JEAP §5(a)(4). The survey plan and schedule will include sampling target substances, sampling plan, analysis method, names and numbers of personnel requiring access, and a proposed period for the field survey.

148. JEAP §5(a)(5). The U.S. EJWG chairperson will also coordinate necessary digging permits, site access, and any other field survey requirements.

149. JEAP app. B. The environmental subcommittee may agree to modify the field survey period.

150. JEAP §5(c)(1). The report should include a clear description of the environmental conditions that the Korean government assesses as justifying a remedy, along with an appropriate justification to help the EJWG identify areas for consultation. The assessment methodology will be a specific method or tool for risk assessment in order to assess the human health risk posed by environmental contamination.

151. JEAP §5(c)(2). The BEI and the field survey report may also be considered.

if necessary. Upon the completion of the consultations, the EJWG will report to the Environmental Subcommittee.[152] If the EJWG is unable to agree on the results of the evaluation, each EJWG Co-chairperson will submit an individual report to the Environmental Subcommittee. The Environmental Subcommittee will review the report of the EJWG and, if necessary, consult on remedial options for 10 days. If the Environmental Subcommittee is unable to agree on the need for action or what remedial options should be recommended, it will make a report of the consultations and refer the matter to the Special Joint Committee for further consultation. The Special Joint Committee will consult on any matters referred to it and provide guidance for action in Phase IV or no action to the Environmental Subcommittee for 10 days.

Phase IV, Implementation Process, is as follows. Agreed-upon remedial actions will be planned and executed in accordance with the SOFA and relevant agreements, by the United States at U.S. expense when the United States is returning the facilities and areas. The Korean government may elect to observe the execution of any remedial actions, or perform sampling and analysis, for any reason. The Environmental Subcommittee will forward the final report of its review and consultation to the Facilities and Areas Subcommittee. The report, along with the Facilities and Areas Subcommittee's recommendation regarding the grant or return of facilities, will be forwarded to the Joint Committee. Facilities and areas may be granted or returned based on mutual consent before any agreed recommendations are completed.

The JEAP agreement was a reaction to criticism from the National Assembly. The JEAP adopted a more flexible time schedule for site survey. "Days" as used in the agreement means "working days" and not "calendar days." Previously, under the 2003 Consultation Agreement, the field survey was allowed a maximum 60 calendar days, regardless of the size of the bases and the number of pollution sources. But under the JEAP, the field survey could be extended to a maximum of 150 working days when the site is larger than 800,000m^2 and the possible pollution sources are more than 300. Even if the time extension was a highly desired addition, compared to the size of the bases, the time allowed is still very limited. Particularly, the time given for risk assessment is only 20 days.

Through the JEAP, the Korean government seems to have accepted the KISE as the remedial standard, giving up applying its own minimal concentration standard. By agreeing to have consultation with medical and environmental experts based on the risk assessment conducted by the Korean government, the U.S. government opened up the possibility of resolving the problem through reasoned negotiation. However, the deadline for such a consultation process is within a total of 30 days. Again, like previous returns, this matter could be referred to higher officials and ultimately could be resolved under political influence. Unless DOD changes its own environmental policy for foreign military bases, the USFK commander has very limited discretion to resolve the matter, due to budgetary limitations.

It is also worth mentioning that, unlike the 2003 Consultation Agreement, the JEAP does not contain the gag rule. The Korean government can no longer refuse to release information acquired through this procedure to the media or public for want of the U.S. government's approval.

V. Conclusion

Among the 23 former U.S. military sites returned to South Korea in 2007, 22 were found contaminated above threshold levels under the Soil Environment Preservation Act and the Groundwater Act of South Korea. However, the U.S. government denied its environmental responsibility to clean up any of these sites by insisting that none of the official agreements imposed any legal obligation on the United States. They argued that the contamination at those sites posed no "known imminent and substantial endangerment to human health." However, U.S. denial of responsibility is an abuse of its political dominance in the bilateral relationship between Korea and the United States. The U.S. argument on KISE is against U.S. domestic understanding of ISE. At many of the sites, groundwater was contaminated with various carcinogens. Local citizens living in close proximity to the bases are using groundwater for various uses. Whether any contamination poses a "known imminent and substantial endangerment" should have been based on more sincere and rigorous scientific study of potential risks.

Many criticisms of U.S. unilateralism have led political leaders under the new Administration to show more interest in "smart power." The U.S. approach to foreign military bases would be one possible way to indicate this shift toward smart power. If the U.S. took environmental issues abroad more seriously, the base relocation issue would be smoother. The recent JEAP agreement takes a small step in that direction by including a scientific risk-assessment process for consultation of remedial actions. Even though remedial action based on risk does not coincide with Korea's current domestic environmental law, it could be welcomed in Korea because the two governments could get to the negotiation based on reason and science, instead of unilateral assertion. Extension of time for field survey is also proper. However, without accurate and complete information on site histories and on how lands have previously been used, a proper environmental site inspection cannot be conducted. The BEI package should be more carefully prepared by the USFK.

Besides highlighting the need for more comprehensive environmental surveys and consultation, this Article has emphasized the fact that, in a foreign country, there is less incentive for visiting forces to comply with environmental laws and regulations. There is also a lack of mechanism for enforcement by the host country. In overcoming this problem, one effective solution would be to ensure that visiting forces are held legally responsible for environmental contamination found, even after the sites are closed and returned. Another way would be to inform the public of the visiting

152. JEAP §5(a)(2)(b). If no action is necessary, the EJWG will report the results of their consultations to the Environmental Subcommittee, specifically stating that each party has met its SOFA obligations.

forces' violation of environmental laws and its consequences. Currently, South Korea's SOFA and relevant agreements have not adopted these measures. The standard of the KISE and the shortage of joint environmental surveys and consultations for remedial measures are far from the ex post facto responsibility scheme.

Lastly, the SOFA should be revised. South Korea's SOFA was created in 1966 and adopted many provisions that had been created in Europe during World War II to reflect a favorable status for visiting forces.[153] During times of war, noncompliance with local laws by the visiting forces might have been tolerated. During peacetime, however, the local people harbor resentment toward foreign forces if they have immunity from local laws. Making the USFK comply with South Korean environmental laws and regulations while they maintain and return bases should be a mandatory precondition for their continued operation in South Korea. At the same time, any remaining value added to the installations and areas by the visiting forces should be rewarded. The two governments should also set aside the gag rule and allow the public to know about environmental information related to the operation of military sites.

Author's note: I would like to thank Prof. Julie E. Steiner and Prof. Mary L. Lyndon for their comments during LSA Annual meeting in Denver 2009. I am also indebted to Prof. Lee Soo-Mee for her insight and encouragement. Lorna Geddis provided editorial assistance in the preparation of the manuscript.

153. *See* Peter Rowe, *Historical Developments Influencing the Present Law of Visiting Forces*, *in* Law of Visiting Forces, *supra* note 59, at 11, 11-33.