APPENDIX I

Selected Environmental Considerations Associated With Base Camp Planning, Operation, Cleanup, and Closure

I-1. General. This appendix provides base camp planners, operators, and users with checklists on integrating key environmental considerations in the planning, construction, operation, cleanup, and closure of base camps.

a. Environmental related reports. Key environmental reports associated with base camps include the EBS, the EHSA, and the ECR.

(1) The EBS is conducted during location selection before occupation or as soon as possible after occupation. An EBS and an EHSA are essential in identifying preoccupation environmental conditions for the protection of troop health and safety and for the protection of U.S. interests from spurious claims at closure. An EBS is required as soon as practicable after a base camp location has been approved. The environmental management officer (EMO), an engineer representative, an EnvST, or a contractor managed by the base camp commander conducts the EBS. Ideally, the EBS should be performed as part of the location selection process in order to minimize future challenges. The EMO should confirm the existence of an EBS for all U.S. locations in the area of responsibility. The base camp commander or the EMO should ensure that copies of all EBSs are forwarded to the theater engineer and the appropriate Staff Judge Advocate (SJA) office. Ultimately, the theater engineer should ensure that the EBS is forwarded to USACHPPM. A comprehensive EBS would include consideration of the following potential influences upon the environment:

- Observed spills or soil staining.
- Sewage and sanitary waste disposal.
- Water supply and wastewater discharge.
- Garbage and HW collection and disposal.
- Underground and above ground fuel storage tanks.
- Drums and containers of HM.
- Stored munitions or UXO.
- Any additional features and conditions that are considered significant to existing baseline conditions; for example, the presence of historic, cultural, or religious features, facilities, and customs that would affect, or be effected by, the base camp.

(2) The EHSA is typically conducted in conjunction with or as soon as possible after the EBS as the two documents support each other. The EHSA determines if environmental contaminants from current or prior land use, disease vectors, or other environmental health conditions could pose health risks to personnel at deployment sites; therefore, it should be completed as part of the site selection. It also identifies industrial facility operations and commodities near the site that could, if damaged or destroyed,

release contaminants harmful to personnel. While the EBS is generally more visual and engineer-related, the EHSA is more analytical (including a greater variety and detail of sampling), with a greater focus on health hazards. The assessment is typically accomplished by medical personnel familiar with environmental conditions that could adversely impact operations associated with base camp functions. Like the EBS, copies of the EHSA should be forwarded to the theater engineer and the appropriate SJA office.

(3) The ECR is conducted before property turnover. An ECR is essential in documenting postoccupation environmental conditions to help protect U.S. government liability for pollution or other adverse environmental impacts that occur after departure from the base camp. The EMO or designated representative prepares the ECR in exact comparison with the previously prepared EBS and EHSA. Every topic presented in the EBS and the EHSA is addressed and reported in the ECR. If samples were taken and analyzed in the EBS and the EHSA, samples should be taken from the same locations and analyzed by the same procedures as a part of the ECR process. There may also be additional areas of concern that require sampling and analysis if the U.S. presence has significantly altered the environment. The ECR, the EBS, and the EHSA are maintained by the base camp and are archived by higher headquarters and USACHPPM for use by real estate personnel and/or the SJA. The base camp commander or the EMO should ensure that copies of all ECRs are forwarded to the theater engineer and the SJA Claims Office.

b. Environmental facilities and standards established herein apply to the three durations (based on the expected life span of the base camp) as defined in Chapter 1. The decision matrix shown at Table I-1 summarizes key environmental facilities, practices, procedures, documentation, and standards based on three construction standards.

Table I-1. Concept of operations environmental management matrix

	Initial Standard (0 – 6 months)	**Temporary Standard (6 - 24 months)**	**Semipermanent Standard (>24 months)**
Site Environmental Documentation	EBS, EHSA, ECR, and joint assessment	EBS, EHSA, ECR, and joint assessment	EBS, EHSA, ECR, and joint assessment
Potable Water Sources	Bottled water/water points, wells, and other potable water production and pressurized water distribution systems or Force Provider	Wells/treatment plants/purchase locally with the approval of the theater engineer	Wells/treatment plants/purchase locally with the approval of the theater engineer
Nonpotable Water Use	Dust control and wash racks, irrigation, toilets	Dust control and wash racks, irrigation, toilets, grease trap cleaning	Dust control and wash racks, irrigation, toilets, grease trap cleaning

Table I-1. Concept of operations environmental management matrix

	Initial Standard (0 – 6 months)	**Temporary Standard (6 - 24 months)**	**Semipermanent Standard (>24 months)**
Wastewater	Toilet—organic equipment, burn barrels, facultative lagoons/ Force Provider Gray water—discharge to facultative lagoons, municipal or camp wastewater treatment plant (WWTP)	Toilet—wastewater from ablution (AB) units or latrines to austere treatment facility Gray water—discharge to facultative lagoons, municipal or camp WWTP	Toilet—wastewater to WWTP from latrines/AB units or masonry/prefabricated buildings Gray water—discharge to facultative lagoons, municipal or camp WWTP
Sewage Sludge	N/A	N/A	Contract off-site disposal, land apply and or compost if practical
Grease Traps	N/A	Required for DFAC and gray water—dispose of grease via anaerobic digester, contract disposal, or compost	Required for DFAC and gray water—dispose of grease via anaerobic digester, contract off-site disposal, or compost
Hazardous Waste	Defense Reutilization Marketing Service – International (DRMS-I), petroleum contaminated waste (PCW) treatment, oil blending	DRMS-I, PCW and PCS treatment, oil blending	DRMS-I, PCW and PCS treatment, oil blending
Spill Response Planning	Unit standing operating procedure (SOP); spill prevention, control, and countermeasures (SPCC) plan; spill response plan; and equipment and reporting	Unit SOP, SPCC, spill response plan, and equipment and reporting	Unit SOP, SPCC, spill response plan, and equipment and reporting
Spill Cleanup	POL Sheen Field Test, 2,000 parts per million (ppm) total petroleum hydrocarbons (TPH) for JP-8 turbine fuel, 10 ppm for gasoline	POL Sheen Field Test, 2,000 ppm TPH for JP-8, 10 ppm for gasoline	POL Sheen Field Test, 2,000 ppm TPH for JP-8, 10 ppm for gasoline
Petroleum Contaminated Soil	Clean up using spill cleanup standards above, then use DRMS-I contract for off-site disposal	Clean up using spill cleanup standards above, then DRMS-I, contract off-site disposal—land, farm, or biopile	Clean up using spill cleanup standards above, then DRMS-I, contract off-site disposal—land, farm, or biopile

Table I-1. Concept of operations environmental management matrix

	Initial Standard (0 – 6 months)	**Temporary Standard (6 - 24 months)**	**Semipermanent Standard (>24 months)**
Petroleum Contaminated Water	Sorbant treatment, Defense Logistics Agency (DLA) or contract off-site disposal; limit emulsions	Sorbant treatment, DLA, contract off-site disposal, or oil-water separator (OWS); limit emulsions	Sorbant treatment, DLA, contract off-site disposal, or OWS; limit emulsions
Infectious Waste	Contract off-site disposal, transport back to home station or to a two-stage incinerator	Contract off-site disposal, transport back to home station or to a two-stage incinerator	Contract off-site disposal, transport back to home station or to a two-stage incinerator
Natural Resources and Endangered Species	Obtain lists, survey base camps, limit impacts	Obtain lists, survey base camps, limit impacts	Obtain lists, survey base camps, limit impacts
Archeological, Historic, Cultural, and Religious Features and Facilities	Obtain lists, survey base camps, limit impacts	Obtain lists, survey base camps, limit impacts	Obtain lists, survey base camps, limit impacts
Requests for deviation from this standard would be submitted in writing through the theater engineer to the deputy theater commander for approval.			

I-2. Environmental Checklist. Table I-2 shows an environmental checklist for proposed actions. It is imperative that the proper documentation resulting from actions associated with the checklist be forwarded to the appropriate command and distributed further as necessary.

Table I-2. Environmental checklist for proposed actions

1.	**AIR QUALITY**	
	a.	Does the base camp have existing air pollution emissions?
	b.	Will the proposed action involve air pollution discharges?
	c.	Are there actions and areas for which remediation is not possible?
2.	**WATER RESOURCES**	
	a.	Have waters/wetlands been identified?
	b.	Does the proposed action involve construction/demolition or other work involving—

Table I-2. Environmental checklist for proposed actions

	(1)	Excavation or fill in HN waters?
	(2)	Operations to modify navigable waters?
	(3)	The discharge of dredged or fill materials?
	c.	Has the 100-year floodplain been delineated?
	d.	Does the proposed action involve construction in or otherwise affect the 100-year floodplain?
	e.	Does the proposed action involve—
	(1)	A pollution discharge?
	(2)	Storm water runoff?
3.	**ARCHEOLOGICAL, HISTORIC, CULTURAL, AND RELIGIOUS RESOURCES**	
	a.	Have surveys of archeological and historic resources been conducted?
	b.	Have historic structures and buildings 50 years and older been identified?
	c.	Have known archeological sites and areas of the base camp with high potential been located?
	d.	Will the proposed action affect archeological, historic, cultural, or religious features, facilities, or infrastructure?
4.	**ENDANGERED SPECIES**	
	a.	Are endangered or threatened species present?
	b.	Have endangered species surveys been conducted on the base camp?
	c.	Have endangered species surveys been conducted in the surrounding area?
	d.	Will the proposed action affect endangered or threatened species?
5.	**NATURAL RESOURCES**	
	a.	Will the proposed action affect natural resources?
	b.	Have various natural resource management areas been identified?
6.	**NOISE**	
	a.	Has a base camp Installation Compatibility Use Zone noise study been conducted?
	b.	Have areas where noise levels affect land use been identified?
	c.	Will the proposed action affect noise levels?
7.	**HAZARDOUS MATERIALS/WASTES**	
	a.	Does the proposed action involve the use of HM?
	b.	Will the proposed action generate HW?
	c.	Have arrangements been made with the DRMS-I for the disposal of HM/HW?

Table I-2. Environmental checklist for proposed actions

8.	**ENVIRONMENTAL DOCUMENTATION**	
	a.	Has the EBS and/or the EHSA been conducted?
When it is known that a base camp will close—		
	b.	Has the joint assessment/preliminary environmental assessment been conducted?
	c.	Has the ECS been conducted?
Upon closure of the base camp—		
	d.	Has the ECR been prepared and submitted to the theater engineer and the theater SJA Claims Office as a part of the base camp cleanup and closure archive?