

Conducting an Environmental Baseline Survey in Contingency Operations

By Lieutenant Colonel David M. Wilkins

If you have ever had the opportunity to conduct an environmental baseline survey (EBS) using strict Environmental Protection Agency (EPA) guidelines, then you know it is a costly, time-consuming, and lengthy process to meet this federal requirement. A typical EBS at a base realignment and closure (BRAC) facility may take 12 to 18 months and cost \$500,000 or more. In the private sector, when conducting real estate transactions, this activity is called a Phase 1 environmental assessment (EA), performed by a registered environmental assessor (REA). In either case, whether an EBS or EA, it is often a complex and contentious issue since thousands—or more likely millions—of dollars are at stake. In addition, the urgency to gain control of the property under survey further complicates the issue.

The focus of this article is to provide a streamlined approach and a sample checklist for conducting an EBS during contingency operations.

Definition

An EBS is a technical assessment of several environmental compliance programs, combined with a survey of air, soil, surface water, and groundwater conditions. It includes a records search, personnel interviews, a photographic record, and if time and money permit, laboratory sampling and analysis of suspicious findings. The EBS often is the determining factor as to whether a full-blown remedial investigation process is required and where to focus that investigation.

Purpose

In short, an EBS is conducted because the law says we have to. The baseline survey, required before the change of tenants at federal facilities, establishes the environmental condition of the property and the nature and extent of contamination, if any, on or before the date of vacancy or occupancy. The survey must answer questions about potential environmental liability associated with the previous use of the property, potential significant adverse impacts on the community or the environment, and hazards or contamination associated with the property. Once the environmental condition is established, then accountability and liability can be clearly applied to the offending party. Even if the law did



This illegal dump was cited, but no enforcement action was taken against the violator.

not require it, it makes sense to conduct an EBS to protect oneself from environmental liability, which can be costly and punitive.

Application

During a contingency operation, you will face unique obstacles in trying to complete the EBS for your facility. For example, it is hard to conduct interviews if you do not speak the host nation language. It is difficult to do a records search when records do not exist, were destroyed by war, or are in some language you cannot read. You may not have access to satellite imagery or the ability to obtain aerial photographs. You likely do not have the resources to conduct laboratory sampling, and you certainly do not have the time to complete an EBS at the detail that is required by EPA guidelines. These are the challenges we face as engineers in performing our mission. So if you are an engineer working in a contingency operation such as Afghanistan, Iraq, Djibouti, Jordan, or Kuwait, this streamlined, four-step approach for conducting an EBS will be helpful.

Report Documentation Page

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Four-Step Approach to Conducting an EBS

Step 1. Perform a Site Inspection

During the first step, the following should be performed:

- A grounds inspection to determine the incidence of distressed vegetation, staining of soil, or other indications of potential contamination.
- A visual inspection of signs of dumping on the site and a determination of what may have been dumped there.
- A visual inspection for drums, vats, tanks, or other containers, that may contain illegally disposed hazardous materials and wastes.
- A visual inspection for transformers, substations, and power lines.
- A visual inspection for vent pipes, fill pipes, or other indicators of underground storage tanks.
- A visual inspection for the presence of species of threatened or endangered plants or animals.
- A visual inspection to determine if the area is a wetland or wildlife habitat.
- A visual inspection for indications of cultural or historical sites.

Step 2. Conduct Interviews

During this step, conduct interviews (with or without an interpreter), as appropriate, with personnel who may have firsthand knowledge of former or current on-site activities that may have had an environmental impact.

Step 3. Conduct Agency or Records Checks

During this step, conduct agency or records checks (with or without an interpreter), as appropriate, with personnel who may have firsthand knowledge of former or current on-site activities that may have had an environmental impact. Some good places to check include—

- State, province, territory, or municipal historical records offices or other agencies for records of land use, previous incidence of contamination, or other environmental events on adjacent properties that may have had an environmental impact.
- State, province, territory, or municipal EPA (or similar organization's) records for incidence of previous or current contamination of the site or properties immediately adjacent.


Step 4. Document the Survey

While the conduct of the survey will primarily entail a records search and an actual on-site inspection of the grounds, it may be necessary to document the discovery of any significant findings with photographs. Any photographs submitted in the report can be in black and white; however, clear, full-color photographs of good quality are most appropriate. In addition to the photographic record, provide a written report of the findings. The checklist of key areas (see page 26) is a simple and effective way to catalogue any findings made during the EBS process. It is less time-consuming than the full requirements of the EPA guidelines, yet gives the commander the power of the information he needs to protect his resources and assets. Most of the survey areas are self-explanatory, but explanations are provided when needed for clarity on selected topics.



This hazardous materials storage unit should be disposed of. It is unserviceable due to excessive corrosion and weathering.

Summary

There is no exemption from conducting an EBS just because your facility is on some distant battlefield. Remember that this survey, once completed, offers the commander a comprehensive and thorough examination of the environmental condition of the property under his control. This is critically important to assess risks to human health and the environment, environmental risks to military and civilian personnel, and the ability to effectively negotiate with the host nation on costs and requirements for using its land. The goal is to avoid liability, while at the same time to set the benchmark for our own accountability. Our government and its military commanders need bargaining power when it comes to land use. A comprehensive, scientific evaluation of the property condition will give them that power. This streamlined approach and checklist will help the base engineer and empower leaders in a contingency operation. 

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References

Army Regulation 200-2, *Environmental Effects of Army Actions*, 23 December 1988.

Section 102(2) of the National Environmental Policy Act (NEPA) of Sections 4321 to 4370, Title 42, United States Code.

Checklist of Key Areas

| | | |
|--|--|---|
| 1. Document Title: Environmental Baseline Survey of _____ | | |
| 2. Survey Administrative Data | | |
| a. Date of site survey: | | b. Assessment performed by: |
| c. Personnel contacted on site: | | |
| Name/Grade | Duty Position | Telephone Number/Email |
| 3. Document Date: | | |
| 4. Site Survey Data: | | |
| a. Description of the site: | | |
| Installation(s) | | |
| (1) Installation name: | (3) Facility identification: | |
| (2) Installation number: | (4) Street address: | |
| (5) City/town: | (6) State/province: | (7) Zip code: |
| (8) Command jurisdiction: | | |
| Facility Type | | |
| United States Army Reserve Center (USARC): | Armed Forces Reserve Center (AFRC): | Organizational maintenance shop (OMS): |
| Flight: | Direct support (DS)/general support (GS): | Medical: |
| Wet: | Flight: | Equipment concentration site (ECS): |
| Combined task force (CTF): | Other: | |
| (9) Description and condition of the property: | | |
| (10) Description of the training area(s): | | |
| (11) Description of the adjacent land usage: | | |
| b. Description of the proposed site usage: | | |
| c. Current environmental conditions: | | |
| Summary of the Site Conditions | | |
| Air quality: | Drinking water: | Waste water: |
| Hazardous materials: | Hazardous waste: | Solid waste: |
| Medical waste: | Petroleum distribution points: | Noise: |
| Pesticides: | Historic and cultural resources: | Natural resources and endangered species: |
| Polychlorinated biphenyls (PCB): | Asbestos: | Radon: |
| 5. Soil Type and Land Cover: | | |
| 6. Topographic, Hydrologic, and Geologic Features: | | |
| 7. Unexploded Ordnance: | | |
| 8. Sanitary Waste Disposal: | | |
| 9. Heating and Ventilation Systems: | | |
| 10. Electrical Associated Hazards: | | |
| 11. Fire Protection Systems: | | |
| 12. Radiological Hazards: | | |
| 13. Site Survey Maps: | | |
| 14. Photographs: | | |
| 15. Samples: | | |
| 16. Related Documents: | | |
| 17. Outside Agency Assisting on Document: | | |
| 18. References Used: | | |
| a. Army Regulation (AR) 200-2: | b. Section 102(2) of the National Environmental Policy Act (NEPA): | c. Air Force Instruction (AFI) 32-7066 Environmental Baseline Surveys in Real Estate Transactions, 25 April 1994: |
| d. American Society for Testing and Materials (ASTM) Designation E-1527-93, Standard Practice for Environmental Site Assessments, Phase I Environmental Site Assessment Process: | | e. 2003 Environmental Compliance Assessment: |
| 19. Satellite Imagery or Aerial Photographs: | | |
| 20. Incidence of Distressed Vegetation, Staining of Soil, or Other Indications of Potential Contamination: | | |
| 21. Signs of Damages On-Site and Determination of What May Have Been Dumped There: | | |
| 22. Inspection for Drums, Vats, Tanks, or Other Containers Which May Contain Illegally Disposed Hazardous Materials or Wastes: | | |
| 23. Inspection for Transformers, Substations, and Power Lines: | | |
| 24. Inspection for Vent Pipes, Fill Pipes, or Other Indicators of Underground Storage Tanks: | | |
| 25. Presence of Species of Threatened or Endangered Plants or Animals: | | |
| 26. Wetland or Wildlife Habitat: | | |

Sample checklist for cataloging findings during the EBS process