



## Introduction

The *Badlands Bombing Range Report* is a publication produced regularly by the U.S. Army Corps of Engineers, Omaha District, to present current information about the environmental cleanup programs underway at the Former Badlands Bombing Range (BBR). This edition presents a look at the current activities underway to address environmental concerns at the Former BBR. Many state, federal, and tribal agencies are involved in the project including the Oglala Sioux Tribe and its BBR Project Office, the U.S. Army Corps of Engineers, the U.S. Air Force, and the National Park Service.

The Corps of Engineers is required by federal and state laws to conduct environmental investigations at former Department of Defense facilities to evaluate the potential release of contaminants to the environment. Such contaminants include ordnance and explosives (OE) and hazardous and toxic wastes (HTW). One requirement is to conduct an Engineering Evaluation and Cost Analysis (EE/CA) to evaluate the cost and feasibility of environmental investigations and the resulting cleanup for sites at which contamination has been identified. Preparation to conduct an EE/CA at the Former BBR, which will address sites with contamination from OE, is underway. Upon completion of the OE investigation and cleanup process, the sites will be further evaluated for potential HTW.

Also included in this issue of the *BBR Report* are updates on the OE and HTW environmental cleanup processes, information on the next RAB meeting, acronym definitions, and the project point of contact ■

## Engineering Evaluation and Cost Analysis Work Plan

The BBR Project Office recently published its draft *Archives Search Report* in which areas of the Former BBR with potential contamination from OE were identified. Based on the report, an EE/CA will be performed to determine what type of cleanup is done and how to manage the residual risk. It will also help to determine the potential cost for any future OE actions.

To conduct the EE/CA, as required by federal guidance, an EE/CA work plan was developed. The work plan provides the following:

- ♦ procedures for managing and executing the ordnance investigation work,
- ♦ locations where the sampling will take place, and
- ♦ health and safety plan to protect the workers.

The EE/CA will provide for dividing the Former BBR into 28 sectors in order to help manage the site and provide definable areas of work. The sectors were selected based upon known historical ordnance use, terrain and present use. High-risk OE areas will be characterized first to best plan for future clearance activities.

Due to the large size of the Former BBR and the many sectors to be evaluated, the *Badlands Bombing Range Site Prioritization and Site Management Plan* was developed to manage the current OE project. The plan was needed to guide how to approach the site. The prioritization was determined by the BBR Project Office based upon current and future use and Tribal priorities. The plan is also a tool that can be used for a smooth transition if any of the key decision makers leave the project and is replaced by another entity.

EE/CA field activities should be completed in April 2005. To speed up the EE/CA process, the BBR Project Office is pursuing all necessary right-of-entry permits to avoid delays in the cleanup process. The Corps of Engineers is also pursuing an innovative technology (using helicopters) to speed up the process.

The EE/CA fieldwork is scheduled to begin in April 2000. As is customary, the Corps of Engineers will provide information on the status of this and other projects at upcoming RAB meetings and in future newsletters.

## Strategic Project Implementation Plan for the BBR

The BBR Project Office has developed long-term plans for developmental use of lands belonging to the Oglala Sioux Tribe that were previously used by the Department of Defense. These plans are detailed in the *Strategic Project Implementation Plan for the Badlands Bombing Range*. The plan prioritizes the mitigation of the land and its return to less restrictive use of the land based on tribal needs and the results of the EE/CA.

An integrated funding approach for this project will be used to maximize cleanup efforts efficiently. This approach allows for the use of funding from many sources as it becomes available. The integrated funding approach is expected to lead to timely completion of the clearance of Former BBR land in support of less restrictive uses. Further information about future land development can be found at the BBR Project Office.

## Project Innovation - Aerial Geophysical Technologies

The cost of identifying and mapping UXO through traditional surface-based technologies is very expensive. Considerable cost savings can be generated by reducing the footprint of areas of concern to only those areas where UXO or buried waste sites actually exist. It is becoming evident that airborne geophysical technologies are a cost-effective way to reduce these footprints. To demonstrate and validate this technology, the Corps of Engineers (Huntsville, Alabama) and the U.S. Department of Energy's Oak Ridge National Laboratory (ORNL) conducted an airborne geophysical survey at the Former BBR in June 1997. The objectives of the survey were to validate detection and characterization of OE-related debris using airborne geophysical systems in areas previously surveyed using surface-based technologies. This technology included an airborne magnetometer system carried on a helicopter platform.

In addition to the previously surveyed sites, another area suspected to be a former bombing target/impact area was also evaluated. The six areas evaluated were located on the Cuny and Stronghold tables. These areas of the Badlands have relatively flat topography. Known OE sites include aerial gunnery targets, aerial bombardment targets, and waste burial pits.

### ACRONYMS

BBR	- Badlands Bombing Range
EE/CA	- Engineering Evaluation and Cost Analysis
FY	- Fiscal Year
HTW	- Hazardous and Toxic Waste
NALEMP	- Native American Land Environmental Mitigation Program
OE	- Ordnance and Explosives
OSPRA	- Oglala Sioux Parks and Recreation Authority
OSRWSS	- Oglala Sioux Rural Water Supply System
RAB	- Restoration Advisory Board

## Park Plans - Lakota Cultural and Visitor Center

The Badlands National Park and the Oglala Sioux Parks and Recreation Authority (OSPRA) have begun the process of evaluating and narrowing the alternatives presented in a 1994 Heritage Location Reconnaissance Study prepared by the National Park Service. The Heritage and Visitor Center will replace Badlands National Park's existing White River Visitor Center and provide a location for the Oglala Sioux Tribe to exhibit and interpret Lakota history and culture. The OSPRA Board has endorsed, by Resolution, a preferred alternative location on the north end of Stirk Table, approximately two miles north of the White River and a mile west of Bureau of Indian Affairs Highway 27. The site will be evaluated for the presence of OE as part of the EE/CA this summer.

In this year's Phase I effort, a planning team representing the National Park Service, the Oglala Sioux Tribe, and the Bureau of Indian Affairs will prepare a comprehensive assessment of the preferred and alternative site locations.

Issues such as development objectives, environmental and cultural impacts, and economic benefits of the Cultural and Visitor Center will be taken into consideration.

Following the assessment and final site selection, Phase II of the project will award a contract for the comprehensive design and specifications for the access road, Heritage Center, and support facilities. Phase III will see the construction of the Center, which will provide space for a Museum of Lakota Heritage, a cultural demonstration area, a craft and gift sales area, visitor orientation and information services, and administrative offices for tribal and National Park Service personnel. Future development may include related facilities such as an auto service station, a campground, a picnic area, employee housing, and a maintenance compound. More information will be made available in future newsletters and at RAB meetings as the planning process continues.

## Rights of Entry Still Required

The Oglala Sioux Rural Water Supply System (OSRWSS) is compiling the necessary right-of-entry permits for the majority of the lands impacted by the construction of the new waterline system. Once this task is completed, the Corps of Engineers will be able to provide construction support and OE removal action to the OSRWSS as necessary prior to the construction of the new waterline.

## Fiscal Year 2000 Cooperative Agreement

The Army Corps of Engineers and the BBR Project Office are finalizing the fiscal year 2000 (FY00) Cooperative Agreement. This is the fourth agreement since 1997 that has funded project office efforts at the Former BBR. One of the main goals of the FY00 agreement is to begin the transition of the BBR Project Office into a business-like office and to become more self-sufficient. This would allow the BBR Project Office to produce products for other agencies and become less reliant on Department of Defense Native American Land Environmental Mitigation Program (NALEMP) financing.

Several members of the BBR Project Office staff who have been trained in OE identification are working for an environmental contractor out of Denver, Colorado, and their consultants. Ten personnel will also be gaining OE identification experience by working at the Yuma Training Grounds in Arizona this spring and fall. The training and experience gained by this opportunity will be brought back and applied at the Badlands project. As the ability and expertise of the BBR Project Office develops, it will be able to attract other funding sources in addition to being able to market itself for additional work.

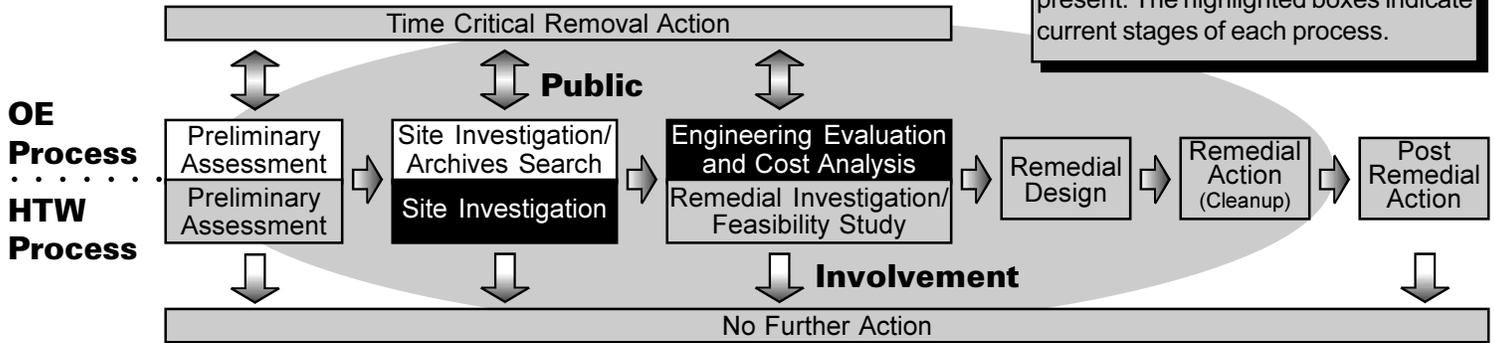
# Environmental Cleanup Process

## Where We Are in the Process

### OE Program Update

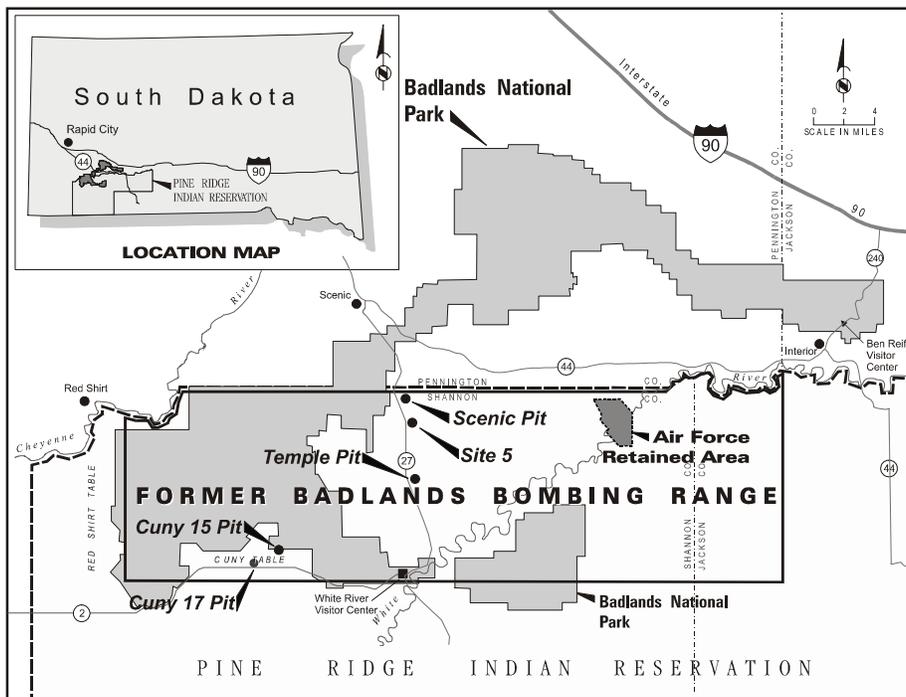
The draft *Archives Search Report* was completed and made available for public review at the September 1999 RAB meeting. The BBR Project Office has received comments and is currently incorporating them into the final report. The next step of the process, the EE/CA, is scheduled to take place this summer at several sectors on the Former BBR.

The Environmental Cleanup Process underway at the Former BBR follows two paths. The goal of both paths is to reach no further action. No further action signifies that the site has either been cleaned up of contamination or that no contamination requiring cleanup was present. The highlighted boxes indicate current stages of each process.



### HTW Program Update

To date, no harmful contaminants (those above normally occurring, or "background," levels) have been identified at the Former BBR. The project team is currently analyzing groundwater data collected at the Site 5 Demolition Area and is consulting with the BBR Project Office and U.S. Environmental Protection Agency on the results from this sampling. Soil and groundwater at site-specific target areas will be analyzed after the funding becomes available. The need for further HTW activities will be evaluated and scheduled as needed after the OE sectors have been evaluated.



## Corps Contact

The *Badlands Bombing Range Report* is researched, written, compiled, and distributed by members of the Corps of Engineers, Omaha District BBR Project team. Articles relating to the environmental restoration of the Former BBR may be submitted for publication by members of the RAB; the Oglala Sioux Tribe; federal, state, or local agencies; and the general public. Mr. Thomas O'Hara has been designated as the official point of contact for all public inquiries concerning the Corps of Engineers' efforts at the Former BBR. All calls and letters directed to other Corps representatives will be re-routed through the Public Affairs Office. To avoid delays, please contact Mr. O'Hara directly at the address below.

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## RAB NOTES

**T**he BBR Restoration Advisory Board (RAB) changed its format to a workshop to better meet the needs of the public. This format is less formal and allows tribal and public members to freely interact one-on-one with BBR Project personnel, agency members, and others involved with the project.

The next BBR RAB meeting will be held on **March 30, 2000**, in the Piya Wiconi Auditorium at the Oglala Lakota College near Kyle, South Dakota. An open forum for public browsing will begin at 10:00 a.m. At noon, the meeting will break for lunch and at 1:00 p.m., the co-chairs will hold a short, formal discussion. Members of the public are encouraged to stop and visit with the project team and share their experiences at the former bombing range and any information that will assist in the cleanup efforts. The open forum will reconvene at 3:00 p.m.

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