

Camp Bonneville

Military Reservation



Public Comment Sought on Draft Cleanup Action Plan for Camp Bonneville Remedial Action Unit 2A

The Washington State Department of Ecology invites you to review and comment on the *Draft Cleanup Action Plan (CAP)* for the Camp Bonneville Military Reservation Site Remedial Action Unit 2A (RAU 2A):

You are encouraged to comment on this document during the public comment period, from October 9 through November 7, 2007. The purpose of this fact sheet is to provide information about the work in RAU 2A, the draft CAP, the overall Camp Bonneville cleanup, and how you can submit your comments.

RAU 2A Background

RAU 2A consists of 17 former small arms firing ranges within the Camp Bonneville site that are polluted with lead. This RAU was initially described as having 21 ranges; however, some of the firing ranges have been combined. Each range had an established firing point and a receiving berm built with compacted soil.

A draft Remedial Investigation and Feasibility Study (RI/FS) has been prepared for RAU 2A. The purpose of the RI/FS is to report the results of investigations conducted to find contamination, evaluate cleanup alternatives, and propose a preferred solution (e.g., "cleanup action"). This document was available for public comment in January – February 2007, and is available on the Department of Ecology's web page:

http://www.ecy.wa.gov/programs/tcp/sites/camp_bonneville/camp_bonneville_hp.htm. All comments pertaining to the draft RI/FS for RAU 2A were considered and used as appropriate in the preparation of the draft CAP.

A total of 1,535 soil samples were collected and analyzed for lead from all 17 firing ranges. Results showed that lead concentrations for all samples at eight of the 17 ranges were less than 50 parts per million (ppm). This cleanup level is lower than the Washington State Model Toxics Control Act (MTCA) unrestricted land use criteria of 250 ppm, and protects human health, plants and animals. No further action is recommended in the CAP for these eight ranges. At the remaining nine ranges, results showed that some lead sample concentrations were greater than 50 ppm. However, approximately 96% of the total soil samples collected had concentrations less than 250 ppm lead.

In addition to the lead samples, 68 samples were collected for explosive chemicals at firing points. Results showed that chemical concentrations for all of these samples were not detectable, or were less than their respective MTCA cleanup levels for unrestricted land use.

October 2007

**Public comment period:
October 9 through
November 7, 2007**

Information Centers:

Department of Ecology
Toxics Cleanup Program
300 Desmond Drive SE
Lacey, WA
By appt: (360) 407-7224

Vancouver Mall Public Library
8700 NE Vancouver Mall Dr.
Suite 285
Vancouver, WA
Attn: Barbara Meisenheimer
(360) 892-8256

Send comments to:

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PO Box 47600
Olympia, WA 98504-7600
(360) 407-7227
bfor461@ecy.wa.gov

Ecology web page:

http://www.ecy.wa.gov/programs/tcp/sites/camp_bonneville/camp_bonneville_hp.htm

If you need this publication in an alternate format, please call the Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.

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Draft Cleanup Action Plan

The purpose of the draft CAP for RAU 2A is to describe the preferred cleanup action identified in the final RI/FS. Five cleanup categories were identified based on the average soil lead concentrations for groups of samples collected from 130-foot x 130-foot sample areas. The categories are as follows:

Category	Individual Soil Lead Sample Concentration	Average Soil Lead Sample Concentration	Number of Soil Sample Areas in this Category
1	Less than 50 ppm	N/A	112
2	Less than 118 ppm	Less than 50 ppm	27
3	Less than 250 ppm	50 ppm - 118 ppm	16
4	N/A	118 ppm - 250 ppm	8
5	N/A	Greater than 250 ppm	4

The CAP recommends three different cleanup treatments based upon these categories. The four sample areas found to have average concentrations greater than 250 ppm (Category 5) will receive the most aggressive cleanup treatment. This treatment involves the excavation, removal, and management of all of the soil within the 130-foot x 130-foot sample area, to a depth of six inches. The newly exposed top layer of soil will be sampled along the floor and perimeter of the sample area to confirm that lead concentrations are below the MTCA level of 118 ppm. The CAP refers to this treatment as “general excavation”.

Category 3 and Category 4 sample areas will be similarly excavated to a depth of six inches; however, the amount of soil removed will be different. A 58-foot x 58-foot area of soil will be removed from each Category 4 sample area, and a 29-foot x 29-foot area of soil will be removed from each Category 3 sample area. Sampling to confirm that the new top layer of soil is below 118 ppm will occur in both categories. The CAP refers to this treatment as “focused hot spot excavation”. No further action is proposed for Category 1 and Category 2, since the average sample lead concentrations in these areas are below 50 ppm.

In addition to the excavation described above, range berms will be removed at all nine ranges.

The CAP proposes “step out” and “step down” procedures for post-excavation confirmational soil sampling along the perimeter and floor of each area. If confirmational samples collected along the perimeters are greater than 118 ppm lead, additional soil will be removed along the side of the excavated area (i.e., a “step out”). This additional amount of soil will be equal to one-half of the initial excavation dimensions, and will occur along the entire side of the excavation to a depth of six inches. If confirmational samples collected along the floors of each area are greater than 118 ppm lead, an additional six inches of soil depth will be excavated (i.e., a “step down”). In both cases after each step out or step down, confirmational sampling and excavation will be repeated until the soil lead concentration is less than 118 ppm. The CAP provides more detail about confirmational sampling.

All excavated soil will be treated and disposed of onsite, or offsite at a licensed facility. Work is anticipated to begin this summer.

SEPA Threshold Determination

Clark County completed the SEPA checklist and mitigated determination of non-significance on August 3, 2007. They determined that the proposed cleanup action in RAU 2A will not have significant adverse environmental impacts. These documents are available for review through Clark County Public Works, contact Jerry Barnett at (360) 397-6118 ex. 4969

Site Progress

In October 2006, the Department of Ecology; the Bonneville Conservation, Restoration, and Renewal Team (BCRRT); and Clark County signed a Prospective Purchaser Consent Decree requiring cleanup actions at Camp Bonneville to protect human health and the environment. These cleanup actions include clearing munitions and explosives of concern (MEC) away from fences, roads, and trails; and preparing plans to complete approved cleanup solutions.

Work is underway for the entire Camp Bonneville property where ammunition (including unexploded) may remain. These areas are collectively called RAU 3, and include over 2,400 acres of proposed future regional park re-use sites, and all existing roads and trails. With the Department of Ecology's oversight, the BCRRT has completed safety actions in RAU 3 along Camp Bonneville's interior Central Impact Target Area (CITA) fence and perimeter fences. Safety actions in these areas include the following:

- Clearing brush and surveying surface MEC along fence areas with a metal detector.
- Removing discovered MEC along fence areas.
- Restoring or replacing damaged fence.
- Adding a fifth strand to the top of the CITA fence to increase the fence height.
- Installing "Danger" and "No Trespassing" signs every 50 feet along the perimeter fence.

As part of the initial safety actions and to collect additional field MEC data, brush and MEC clearance has been initiated along 20-foot buffers on both sides of all roads and trails. This phase of the work is about 80% completed.

Site Background

Camp Bonneville is about 3,840 acres in size, including 800 acres of state-owned land. The camp is located about five miles from the Vancouver City limits in Clark County. It borders both sides of Lacamas Creek and is approximately seven miles north of the Columbia River. Over half of the site is forested.

The Department of Defense owned and operated Camp Bonneville for firing range practice and training from 1910 to 1995. During that time, military ammunitions were stored or used at the site—including artillery ammunition, mortar ammunition, air-launched rockets, shoulder-fired rockets, guided missiles, bombs, land mines practice grenades, fuses, and small arms ammunition.

Camp Bonneville was officially closed in 1995. Since then, investigations have been ongoing to characterize the contamination and develop plans for cleaning up the site. Identified contaminants include unexploded ordnance, explosive compounds, lead, petroleum products, pesticides and volatile organic compounds in the soil, and perchlorate and explosive chemicals in the groundwater.

Ecology Would Like Your Input

The RAU 2A CAP and SEPA Determination can be reviewed on the Ecology web site and at the information centers listed on the first page of this fact sheet. Please forward your comments on these documents by November 7, 2007, to the Department of Ecology's Project Manager, Ben Forson. Contact addresses can also be found on the first page of this fact sheet. Comments may be sent by mail or email.

Definitions

BCRRT- Bonneville Conservation, Restoration, and Renewal Team	ppm – parts per million
CAP – Cleanup Action Plan	RAU – Remedial Action Unit
CITA – Central Impact Target Area	RI/FS - Remedial Investigation and Feasibility Study
MEC - Munitions and explosives of concern	SEPA – State Environmental Policy Act
MTCA – Model Toxics Cleanup Act	

**Camp Bonneville Military Reservation
Cleanup Site,
Clark County, WA**

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Toxics Cleanup Program
P.O. Box 47600
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