

Buckley Air Force Base Environmental Restoration Program Annual Report to Stakeholders

January 2012

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Purpose of this Report

This Annual Report to Stakeholders has been prepared to notify the public of activities which occurred in 2011 at Buckley AFB Restoration sites and upcoming activities expected at these sites in 2012. This document is issued by the Air Force (AF), as the lead agency, in conjunction with the Environmental Protection Agency (EPA), Colorado Department of Public Health and Environment (CDPHE), City of Aurora, and Tri-County Health

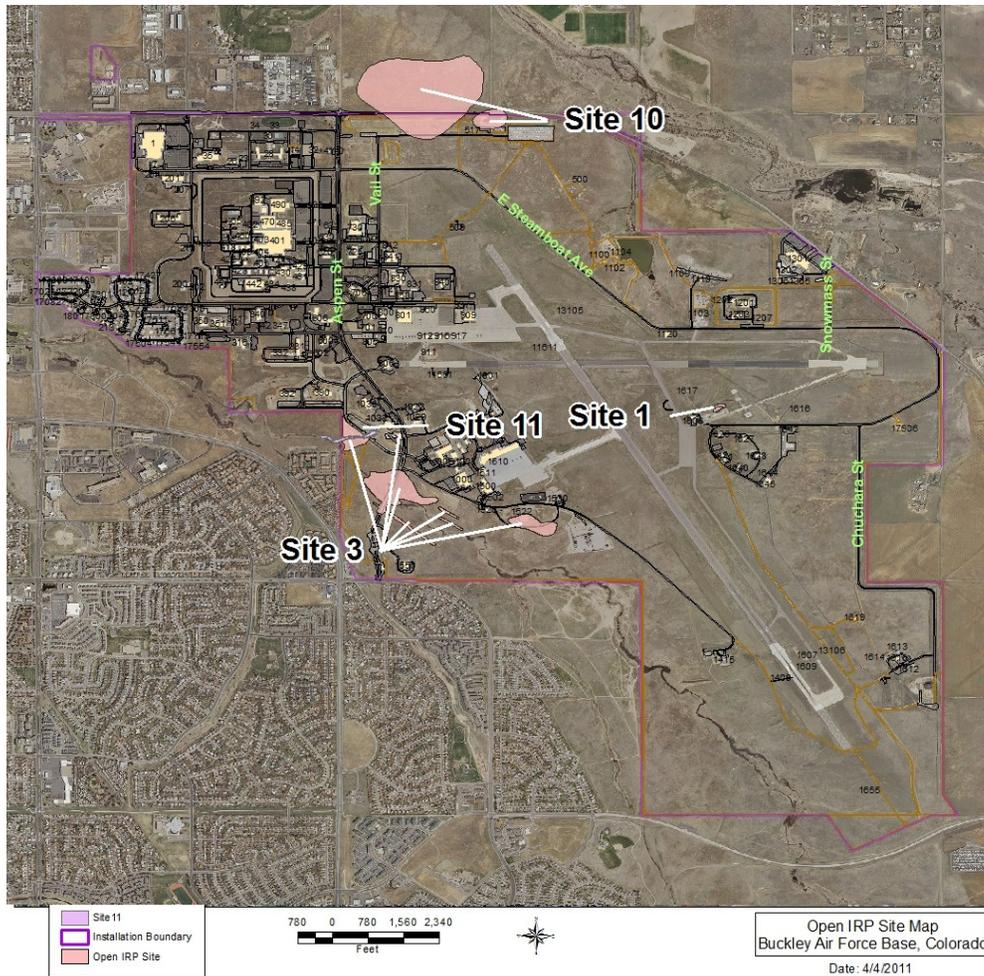
Department. The cleanup effort at Buckley AFB presently includes four open Installation Restoration Program (IRP) sites, 27 open Compliance Restoration Program (CRP) sites, and 15 open Military Munitions Response Program (MMRP) sites. A summary of all these sites is included in the following pages of this report. Additional information on these open sites (and also all closed sites) can be found in the Buckley AFB Information Repository files located at



the Central Branch of the Aurora Public Library. The community can also learn more about the Buckley AFB Restoration program by attending Community Advisory Group (CAG) meetings which are held quarterly (see page 8 for more information).

Inside this Report:

Open IRP Site Map & IRP Site 1 Update	2
IRP Site 3, 5, & 7 Update	3
IRP Site 10 & 11 Update	4
Open CRP Site Map & CRP Site Update	5
Open MMRP Site Map & MMRP Site Update	6
2011 Restoration Fieldwork in Pictures	7
2011 Restoration Program Successes & 2012 CAG Meeting Information	8



Site 1 Update

2011—Record of Decision put on hold due to unexpected groundwater monitoring results

2012—Complete additional investigation to better define the plume boundary

Site 1, also known as Fire Training Area # 2, covers approximately 8,000 square feet and was used from the early 1950s to 1972 for fire training exercises. The primary contaminant of concern identified at Site 1 during investigations is trichloroethylene (TCE) in groundwater. In 2010, a Record of Decision was prepared which identified the selected remedy as

long-term monitoring with land use controls. Prior to signing, CDPHE requested the completion of a title search and Environmental Use Restriction Notice. Meanwhile, two new monitoring wells were installed and a round of groundwater sampling was completed. Results in a 2011 report indicated TCE concentrations had increased and the plume extends beyond the

original site boundary. Therefore, the Record of Decision was put on hold until further investigation could be completed. In 2011, a Performance-Based Remediation (PBR) task order was awarded for future work at Site 1 and in 2012, additional investigation will be completed to better define the plume boundary and identify the appropriate remedy for Site 1.

Site 3 Update

Site 3, also known as the Base Landfill, was reported to have received a variety of municipal and industrial waste from 1942 to 1982. An area impacted by asbestos containing materials was discovered in 2008 near the site and has now been added to Site 3.

In 2007, the adequacy of the existing soil cover over the refuse was determined to be insufficient. In 2011, a Feasibility Study Report evaluated alternatives for the site and a Proposed Plan was drafted with a proposed interim remedy that includes adding soil cover, land use controls, and long-term monitoring. In addition, the AF agreed to do a separate perchlorate site characterization and background study for Site 3. In 2012, the Interim Proposed Plan and Record of Decision will be finalized and the interim remedy implemented.

2011—Feasibility Study Report finalized; AF, CDPHE, and EPA reached a tentative agreement on the interim remedy

2012— Complete Interim Proposed Plan/Record of Decision; implement interim remedy

Site 5 Update

2011—Proposed Plan finalized; public comment period with public meeting held; Record of Decision signed by Base and CDPHE

2012—No further action (site is closed)

Site 5, also known as Fire Training Area # 1, was used from the 1940s to the 1950s for fire training exercises, but the size of the fire training area is unknown. The primary contaminants of concern have been volatile organic compounds in soil gas. In 2009, fieldwork for a Supplemental Remedial Investigation included soil, groundwater, and soil gas sampling. The Supplemental Remedial Investigation Report was finalized in 2010 and indicated no significant risks or threats to public health or environment now exist at Site 5. Therefore, in

2011 a Proposed Plan recommending no further action was presented to the public. No comments were received which changed the plan during the 30-day public comment period. A Record of Decision was then prepared and signed, resulting in closure of Site 5.

Site 7 Update

Site 7, also known as the Sludge Drying Beds, is located on a 4.3 acre parcel of land that served as the base wastewater treatment plant from 1942 to 1978. A 2008 Engineering Evaluation/Cost Analysis called for the removal of soil contaminated with chromi-

um, lead, and five polynuclear aromatic hydrocarbons (PAHs). In 2009 and 2010, approximately 1,600 cubic yards of soil were removed and disposed off-site. The After-Action Report indicated all confirmation samples were below cleanup standards. In 2010, a no further action Proposed Plan was prepared and presented at a public meeting during the 30-day public comment period. No public comments were submitted that changed the plan. In 2011, a Record of Decision was signed, resulting in closure of Site 7.

2011—Record of Decision signed by Base and CDPHE

2012—No further action (site is closed)

Site 10 Update

**2011—
Operations
and
maintenance
and semi-
annual
groundwater
monitoring
conducted**

**2012—
Complete
additional
investigation
to fill data
gaps and
identify
remedy**

Site 10, also known as the Former Warehouse Area, consists of areas used for vehicle maintenance and storage of pesticides and herbicides. The primary contaminant of concern is tetrachloroethylene (PCE) in groundwater. The PCE plume extends off base to City of Aurora property; however, no direct impact to area residents has been identified. A 2005 interim action provided for the removal of approximately 2,200 cubic yards of contaminated soil and the installation of a treatment

system to prevent contaminated groundwater from leaving the base. Operation and maintenance of this system continues today. In 2009, the Supplemental Remedial Investigation Report was finalized and a treatability study was completed. In 2010, a summary Treatability Study Report was finalized and results from this report along with additional groundwater monitoring will be used to evaluate clean-up alternatives in a Feasibility Study. However, the Air

Force determined there are additional data gaps which require further sampling. This data will be used in groundwater modeling and other analyses to predict the future flow of the PCE plume and determine if the plume is stable, expanding, or decreasing. In 2011, a PBR task order was awarded for future work at Site 10 and in 2012, additional investigation will be completed to fill data gaps and identify the appropriate remedy for Site 10.

Site 11 Update

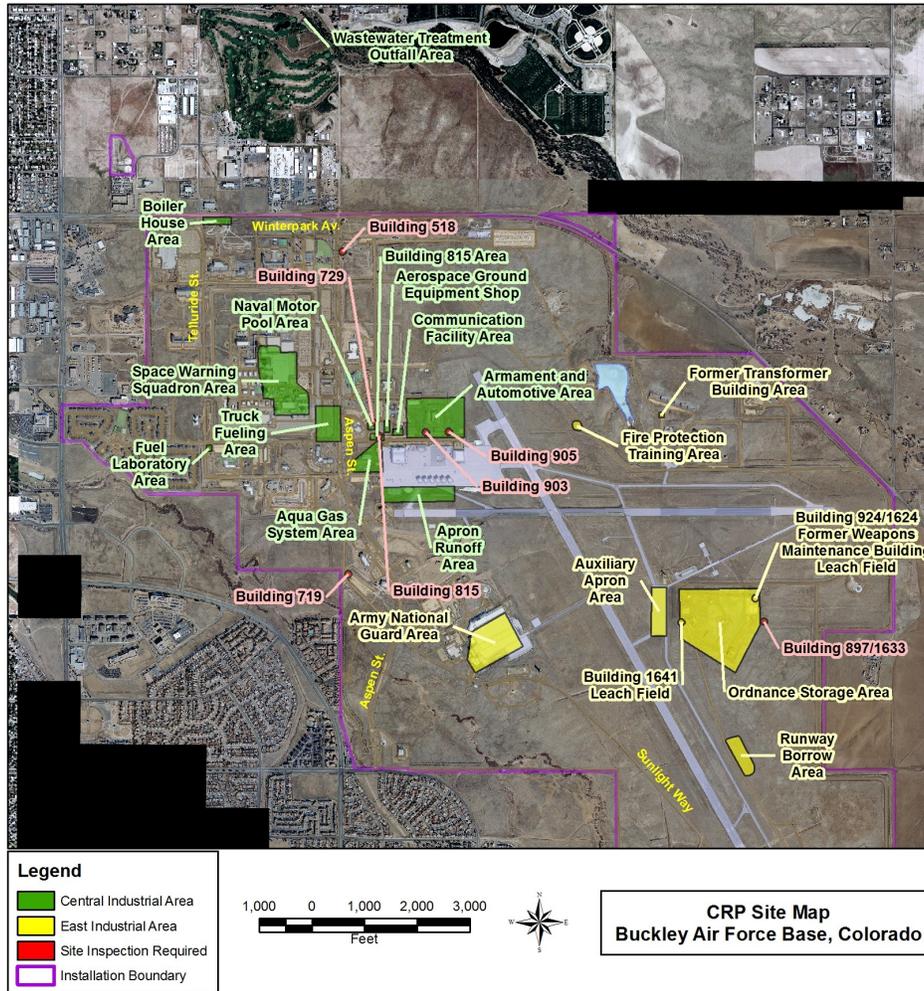
Site 11, also known as the Building 1011 Area, had many previous operations at the site including a synchronization area, a base motor pool, civil engineering shops, and refueling truck maintenance. The primary contaminants of concern identified during investigations included lead, PCE, TCE, and PAHs in soil and PCE and TCE in groundwater. In 2009, an Action Memorandum called for the removal of contaminated soil and floating fuel on the groundwater. Absorbent

socks were placed in wells to address the floating fuel. The sump and sand filter and associated contaminated soil were removed, as well as contaminated soil in the firing tunnel area. In 2009-2010, remedial investigation fieldwork included groundwater sampling on base and, after PCE contamination was found in groundwater at the base boundary, groundwater, surface water, and sediment sampling off base on City of Aurora property. Results from the 2011 Remedial

Investigation Report show two chlorinated solvent plumes with no immediate risk to human health or the environment. One plume is about 240 feet long, located solely on base, and the other is about 1,100 feet long with about 400 feet of the plume extending off base (terminates to the north of East Toll Gate Creek). During initial work on the feasibility study in 2011, data gaps were identified. In 2012, future work at this site will be included in a new PBR task order.

**2011—Remedial
Investigation
Report finalized;
Feasibility
Study put on
hold due to data
gaps**

**2012— Award
contract for
future work at
Site 11 to include
filling data gaps
and completing
Feasibility
Study**



Compliance Restoration Program Site Update

2011—Remedial investigation fieldwork completed at 20 sites; contract awarded to investigate 7 other sites

2012—Finalize Remedial Investigation Reports for 20 sites and complete investigation fieldwork for 7 sites

A Basewide Site Inspection was completed in 2010 which recommended further investigation at 18 areas of concern. In addition, the Air Force identified 9 other areas of concern at Buckley requiring investigation. These 27 areas fall under a separate Air Force program called the CRP. The 27 CRP sites were divided into 1) those with possi-

ble contamination to be confirmed through a site inspection (7 sites), and 2) those with confirmed contamination requiring a remedial investigation (8 sites in the East Industrial Area and 12 sites in the Central Industrial Area). In 2011, a PBR task order was awarded for future work at the 7 CRP sites with possible contamination; investigations are ex-

pected at these 7 sites in 2012. Remedial investigation fieldwork at the other 20 CRP sites was completed in 2011, with reports expected in 2012. Sampling results and risk assessments for some of the 20 sites will likely result in no further action recommendations, while others will require a feasibility study to evaluate remedial alternatives.

Military Munitions Response Program Site Update

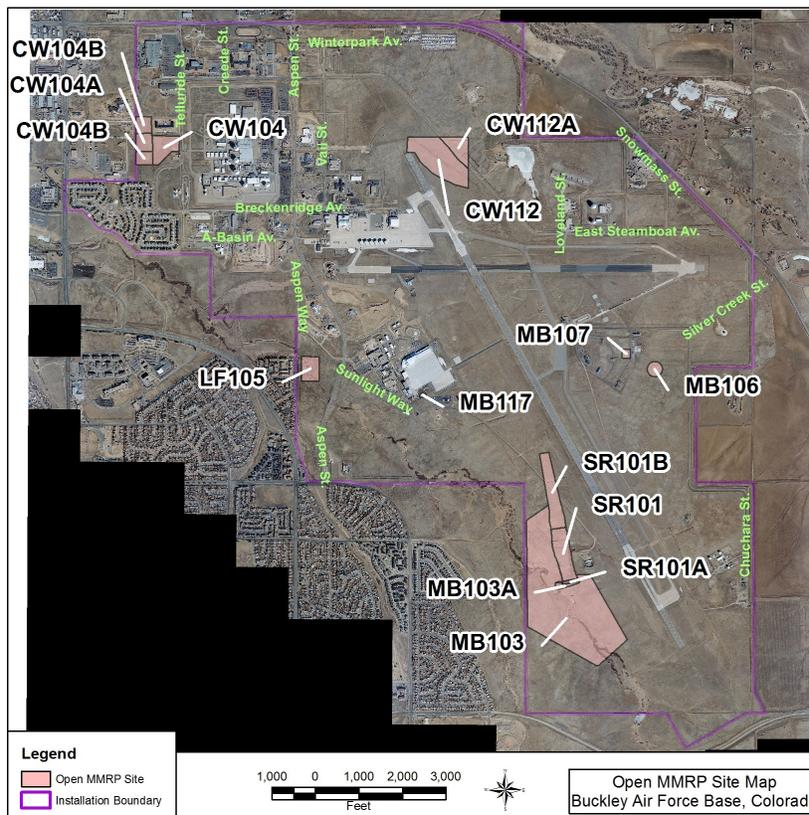
The MMRP addresses issues related to munitions and explosives of concern (MEC), chemical warfare material, and munitions constituents associated with munitions response areas (MRAs), as well as related hazardous substances, pollutants, and potential contaminants of concern on other-than-operational ranges. Phase I and Phase II Comprehensive Site Evaluation (CSE) activities were performed at Buckley AFB from 2005 – 2008. To date, a total of

17 MRAs have been investigated during the CSE process. Eight of these received a no further action decision at the conclusion of the CSE Phase I. The nine remaining MRAs were then evaluated during the CSE Phase II and divided into 15 munitions response sites (MRSs), all but one of which (TS102) was recommended for further evaluation. In 2009, an Engineering Evaluation/Cost Analysis for the 14 MRSs was finalized and fieldwork was initiated upon signing of the Ac-

tion Memorandum. In 2011, the completed fieldwork included MEC surface clearance, sub-surface MEC evaluation, and excavation and off-site disposal of lead-contaminated soil. The After-Action Report recommended a remedial investigation for 6 MRSs and no further action at 8 MRSs. In 2012, a public comment period will be held for a no further action Proposed Plan for 9 MRSs (including TS102) and a remedial investigation will be completed for the other 6 MRSs.

2011— Removal action field-work and After-Action Report completed; Proposed Plan for 9 MRSs prepared

2012—Complete public comment period and Record of Decision for 9 MRSs; conduct remedial investigation for 6 MRSs





IRP Site 3, left and right: Soil was stockpiled and wetlands were delineated in preparation for implementation of the interim remedy.



CRP Remedial Investigation, below (top to bottom): 1) Drilling the borehole for a Former Transformer Building Area well; 2) Soil core from a Truck Fueling Area well showing stained and odorous soil encountered above the water table; 3) Drilling and preparing to install a monitoring well in the Naval Motor Pool Area. Hollow-stem augers were used to drill the boreholes and install the wells.



MRSs SR101a/MB103a, above: In late 2010, approximately 5,500 cubic yards of contaminated soil was excavated from these berms to depths up to 7 feet. Bottom picture shows the end result after seeding was completed in 2011.

Summary of Restoration Program Successes in 2011

- ◆ Closed two IRP sites with no further action required (Sites 5 and 7).
- ◆ Conducted remedial investigation fieldwork at 20 CRP sites that included installation of 36 borings and 76 monitoring wells and collection of 92 groundwater and 241 soil samples.
- ◆ Completed a MMRP removal action that resulted in 6 MRSs proceeding to a remedial investigation and 9 MRSs receiving no further action concurrence from CDPHE and EPA.
- ◆ Held two public meetings seeking public comment and four CAG meetings, to include a base tour of restoration sites.
- ◆ Distributed four quarterly site status reports to the public as well as an Annual Report to Stakeholders (January 2011) in response to community input cited in the 2009 Community Involvement Plan.



Left: CAG Co-Chairs, Mr. Russell Clayshulte and Col. Daniel Dant, sign an updated CAG Charter in Oct 2011. The Buckley CAG marked its 10th anniversary in 2011.

2012 CAG Meeting Information

The mission of the Buckley AFB CAG is to promote community awareness, serve as an information source, and obtain timely constructive community review and comments on proposed restoration activities. CAG membership consists of any members of the local com-

munity who are interested in learning more about the Buckley AFB Restoration program, as well as representatives from Buckley AFB, state and federal agencies, and local government. Meetings are held from 6—8 pm at the Aurora Chamber of Commerce, 14305 E.

Alameda Avenue, Suite 300. At least part of the July 19th meeting will be held on base to tour the sites. **To be added to the CAG email list, contact Mr. John Spann, Chief of Public Affairs, at john.spann@us.af.mil or 720-847-9431.**

**2012 CAG Meeting Dates:
January 19, April 19, July 19, and October 18**