

Buckley AFB Environmental Cleanup Program Quarterly Site Status Report

Only open sites are discussed in this summary and identified in Figures 1 to 3. Further information on any open or previously closed Installation Restoration Program (IRP), Compliance Restoration Program (CRP), and Military Munitions Response Program (MMRP) sites can be found in the Buckley AFB Administrative Record/Information Repository located at the Central Branch of the Aurora Public Library.

Note: The Air Force, as the lead agency for environmental cleanup of Buckley AFB sites, works in conjunction with representatives from the Environmental Protection Agency, Colorado Department of Public Health and Environment (CDPHE), City of Aurora, and Tri-County Health Department. This collaboration is known as the Technical Working Group (TWG). Buckley AFB also coordinates with the Air Force Center for Engineering and the Environment (AFCEE). Public involvement in the site review process is done through a Community Advisory Group (CAG). Updates on site information are provided to the CAG through quarterly Site Status Reports and quarterly meetings. In addition, Draft Final documents are posted to the Buckley AFB website (www.buckley.af.mil; under the Library tab, select Environmental Information) and email notification of their availability for review is sent to the CAG email list.

Site 1: Fire Training Area # 2

This site covers approximately 8,000 square feet and was used from the early 1950s to 1972 for fire training exercises. During the exercises, an unknown quantity of various fuels and solvents were placed in an unlined circu-

lar bermed area, ignited, and subsequently extinguished by the trainees. Investigations completed at Site 1 determined a small amount of the contaminant trichloroethylene reached groundwa-

ter . A Proposed

Plan was completed in 2008 and a Record of Decision has been prepared which recommends long-term monitoring and land use controls as the preferred remedial alternative for groundwater treatment at Site 1.

ACTIVITY LAST QUARTER:

- TWG approved Final Record of Decision and Final Long-Term Monitoring Work Plan in Jul 2010.
- Final Record of Decision signed by Air Force, wells installed, and groundwater sampling completed in Sep 2010.

UPCOMING ACTIVITIES:

- CDPHE will not sign Record of Decision until a title search and Environmental Use Restriction Notice have been completed. Tentative timeframe: Mar 2011

Site 2: Oil Pit

ACTIVITY LAST QUARTER:

- Final Record of Decision for no further action at Site 2 was signed by the Air Force in Jul 2010 and CDPHE in Aug 2010.
- Site 2 is considered closed with TWG concurrence.

UPCOMING ACTIVITIES:

- Site 2 will no longer appear in quarterly site status reports.

This site occupies approximately 100 square feet and consisted of a 10 foot by 10 foot by 15 foot deep concrete walled sump used for the disposal of waste oil from approximately 1950 to 1982. The oil pit was taken out of service, backfilled and buried in 1987. This site was first identified

in 1982 and further investigated in 1987 and 1994, respectively. When sufficient documentation could not be found in 2004 to justify site closure, an effort was conducted to first re-locate the oil pit and then adequately characterize the site. Upon completion of that additional characteriza-

tion showing no contamination problems, the Air Force intended to pursue site closure through a No Further Response Action Planned document. However, the Air Force decided in 2009 that a Proposed Plan and no further action Record of Decision would be completed for Site 2.

Site 3: Former Base Landfill

This site was reported to have received a variety of municipal and industrial waste from 1942 to 1982, and landfill waste was burned periodically between 1947 and 1959. Several site investigations occurred from 1982 to 1994 but no contaminants of

concern were found. A supplemental Remedial Investigation in 2007 determined that the existing soil cover over the refuse was inadequate. A Feasibility Study is currently considering remedial alternatives for the site with the presumptive remedy

being containment (through improvement of the existing soil cap), long-term monitoring, and land use controls. An area containing asbestos material was found adjacent to Site 3. This area is included in the Site 3 Feasibility Study.

ACTIVITY LAST QUARTER:

- Submitted Draft Final Feasibility Study for TWG and CAG review in July 2010.
- Received TWG comments on Draft Final Feasibility Study in Sep 2010. It was later determined that CDPHE had not referenced previously completed Site 3 documents during their review. Therefore, they are re-evaluating their comments.

UPCOMING ACTIVITIES:

- Updated TWG comments on Draft Final Feasibility Study expected in Oct 2010, with submittal of final report soon after.

ACTIVITY LAST QUARTER:

- Final Record of Decision for no further action at Site 4 was signed by the Air Force in Jul 2010 and CDPHE in Aug 2010.
- Site 4 is considered closed with TWG concurrence.

UPCOMING ACTIVITIES:

- Site 4 will no longer appear in quarterly site status reports.

Site 4: Fire Training Area # 3

This site is a circular area approximately 100 feet in diameter and was formerly used for approximately 24 fire training exercises per year from 1972 to 1989. During exercises, the burn area was saturated with water, and up to 150 gallons of jet fuel con-

taminated water was then poured over the saturated water area. The jet fuel was then ignited and extinguished. This site was investigated from 1982 to 1995. An Engineering Evaluation/Cost Analysis was then finalized and contaminated soil was success-

fully removed in 2006. The Air Force intended to pursue site closure through a No Further Response Action Planned document; however, the Air Force decided in 2009 that a Proposed Plan and no further action Record of Decision would be completed for Site 4.

Site 5: Fire Training Area # 1

This site was used from the late 1940s to the early 1950s for fire training exercises. The site has since been filled, graded, and paved. Various investigation activities including groundwater monitoring have taken place at Site 5 from 1982 to 2002. Historically, the primary contaminants

of concern have been volatile organic compounds such as trichloroethylene and tetrachloroethylene in soil gas. A Supplemental Remedial Investigation was conducted in 2009 with results showing that neither groundwater nor soil has been negatively impacted by site activities. The re-

sults of the risk evaluation for soil gas indicate detected volatile organic compounds are at concentrations that do not pose a risk to human health. The TWG concurred with no further action for the site based on this report. The Air Force intends to prepare a no further action Proposed Plan.

ACTIVITY LAST QUARTER:

- No activity; Proposed Plan for no further action at Site 5 has been delayed until FY11 when funding is available.

UPCOMING ACTIVITIES:

- Draft Proposed Plan will be submitted for Air Force review in Dec 2010.

Site 7: Sludge Drying Beds

This site is located on 4.3 acres of land associated with the base wastewater treatment plant, which operated from 1942 to 1978. The sludge drying beds and the trickling filters were lined with permeable tiles that may have collapsed and potentially transmitted contaminants to the soil and groundwater at the site. After completion of several investiga-

tions dating back to 1982, a 2008 Engineering Evaluation/Cost Analysis and 2009 Action Memorandum called for the removal of soil contaminated with chromium, lead, and polynuclear aromatic hydrocarbons. Removal actions were completed in Nov 2009 and Mar 2010, with a total volume of about 1,600 cubic yards of contaminated soil re-

moved. The Final Removal Action Report, which was approved by the TWG in Jun 2010, stated that all confirmation sample concentrations were below removal action cleanup levels and no further action was needed at Site 7. The Air Force intends to propose no further action for this site in a Proposed Plan and Record of Decision.

ACTIVITY LAST QUARTER:

- Incorporated CAG and TWG comments on the Draft Final Proposed Plan in Jul 2010.
- Final Proposed Plan approved by the TWG in Aug 2010.

UPCOMING ACTIVITIES:

- Public comment period on Proposed Plan: 14 Oct 2010–12 Nov 2010.
- Public meeting: 21 Oct 2010

Site 10: Former Warehouse Area

ACTIVITY LAST QUARTER:

- Additional groundwater sampling occurred in Jul 2010 with results included and used in the Feasibility Study.
- Air Force reviewed Draft Feasibility Study in Sep 2010; contractor initiated incorporation of comments.

UPCOMING ACTIVITIES:

- Draft Final Feasibility Study will be submitted for AFCEE review in Nov 2010 and TWG and CAG review in Dec 2010.

This site was added to the restoration program after a 1997 site inspection confirmed that contaminants previously discovered in off-base groundwater originated from an on-base source. Site 10 was used from 1940 to 1996 for multiple purposes to include vehicle maintenance and service, storage of pesticides and herbicides, storage of equipment and supplies delivered by railroad, and storage and transfer of coal for use as fuel in heating systems. The main contaminants of concern found during investigations are chlo-

rinated solvents such as tetrachloroethylene and trichloroethylene. During the Remedial Investigation, which involved quarterly sampling of dozens of wells both on and off base, a plume contaminated primarily with tetrachloroethylene was shown to flow from the base and under property owned by the City of Aurora. However, no direct impact to area residents has been identified. A 2005 interim remedial action substantially reduced groundwater contaminant concentrations in the on-base source area and is lim-

iting continued flow of contaminated groundwater off base. Maintenance of the treatment system is ongoing. Treatability studies have been conducted to evaluate remedial technologies for the off-base portion of the plume. After the Final Supplemental Remedial Investigation Report was completed in Sep 2009, the chlorinated solvent plume has continued to be monitored through additional sampling events in 2009 and 2010. Remedial alternatives for Site 10 are being evaluated in a Feasibility Study.

Site 11: Building 1011 Area

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, tetrachloroethylene, trichloroethylene, and polynuclear aromatic hydrocarbons in soil, and tetrachloroethylene and trichloroethylene in groundwater. A Jul 2009 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 in Dec 2007 and Nov 2008. About 130 cubic yards of contaminated soil was excavated and disposed of at a permitted landfill in Oct 2009. The Final Completion Report for the Soil Removal Action was approved by the TWG in Jun 2010. Phases I and II of the Remedial Investigation for groundwater (completed in April and July 2009) found tetrachloroethylene contamination in groundwater at the base boundary prompting the need for groundwater, surface water, and sediment sampling off-base on City of Aurora property. Phase III off-base sampling conducted in May and Jun 2010 identified a small tetrachloroethylene groundwater plume which extends from on-base and terminates about 750 feet outside (west of) the base boundary to the north of East Toll Gate Creek.

ACTIVITY LAST QUARTER:

- All field activities were completed and contractor began developing Remedial Investigation Report.

UPCOMING ACTIVITIES:

- Draft Final Remedial Investigation Report will be submitted for TWG and CAG review in Nov 2010.
- Draft Feasibility Study Report will be submitted for Air Force review in Dec 2010.

Remaining 2010 Community Advisory Group Meeting (6-8 pm):

October 21

**Location for all CAG Meetings:
Aurora Chamber of Commerce
14305 E. Alameda Ave, Ste 300**

**Tentative 2011 CAG Meeting Dates:
Jan 20, Apr 21, Jul 21, Oct 20
(will be confirmed at last 2010 CAG meeting)**

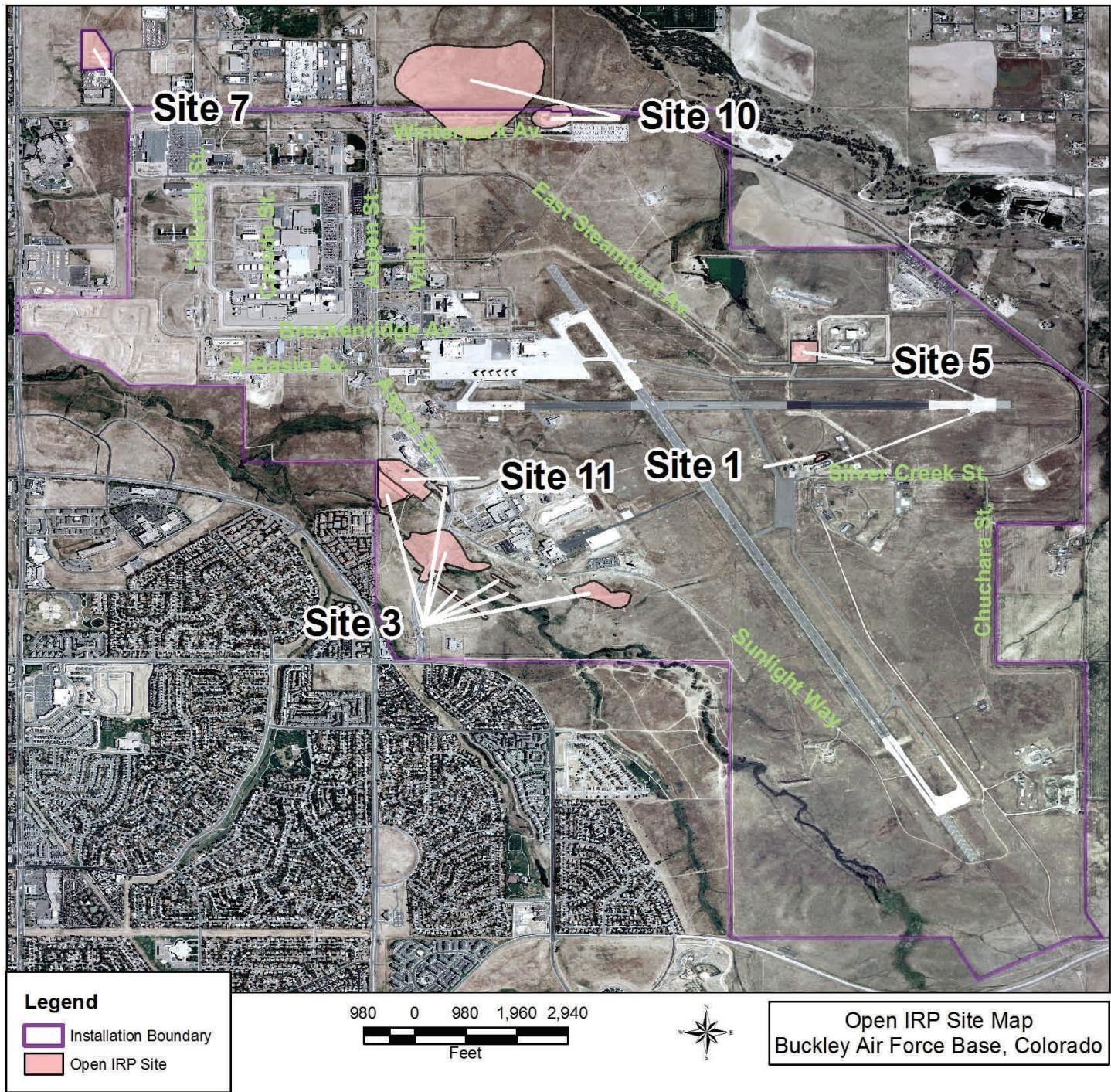


Figure 1: Location of Open IRP Sites

NOTE: Site boundaries for Sites 1, 3, and 10 have been recently updated to reflect boundaries being used for land use controls.

ACTIVITY LAST QUARTER:

- AFCEE expedited the Remedial Investigations for 20 of the 27 CRP sites by funding them in FY10; contract was awarded in Sep 10.

UPCOMING ACTIVITIES:

- Draft Remedial Investigation Work Plan will be submitted for Air Force review in Jan 2011 .

Compliance Restoration Program

A Basewide Site Inspection was completed in Mar 2010 which recommended further investigation at 18 areas of concern. In addition, AFCEE identified 9 other areas of concern at Buckley requiring investigation. These 27 areas fall under a separate AF program called the CRP.

The 27 CRP sites were divided into 1) those with possible contamination to be confirmed through a Site Inspection, and 2) those with confirmed contamination requiring a Remedial Investigation. Buckley requested FY11 funding for Site Inspections at 7 sites and FY11 and FY12

funding for Remedial Investigations at 8 sites in the East Industrial Area and 12 sites in the Central Industrial Area, respectively. AFCEE funded both Remedial Investigation projects in FY10, so fieldwork will be initiated earlier than expected (Spring/Summer 2011).

Military Munitions Response Program

The MMRP addresses issues related to munitions and explosives of concern, chemical warfare material, and munitions constituents associated with munitions response areas, 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 activities, which are comparable to the Preliminary Assessment and Site Inspection phases in the Comprehensive Environmental Response, Compensation and Li-

ability Act of 1980, were performed at Buckley from 2005 – 2008. To date, a total of 17 munitions response areas have been investigated during the Comprehensive Site Evaluation process. Eight of these received a no further action decision at the conclusion of the Comprehensive Site Evaluation Phase I. The nine remaining munitions response areas were evaluated during the Comprehensive Site Evaluation Phase II. At the conclusion of Phase II, these munitions response areas were di-

vided into 15 munitions response sites, all but one of which (TS102) was recommended for further evaluation. An Engineering Evaluation Cost/Analysis for the 14 munitions response sites was finalized in Feb 2009 with up to four alternatives evaluated for each munitions response site. A removal action was initiated in Nov 2009 which included subsurface anomaly investigations, surface clearance, and removal of soil containing lead contamination above residential screening levels.

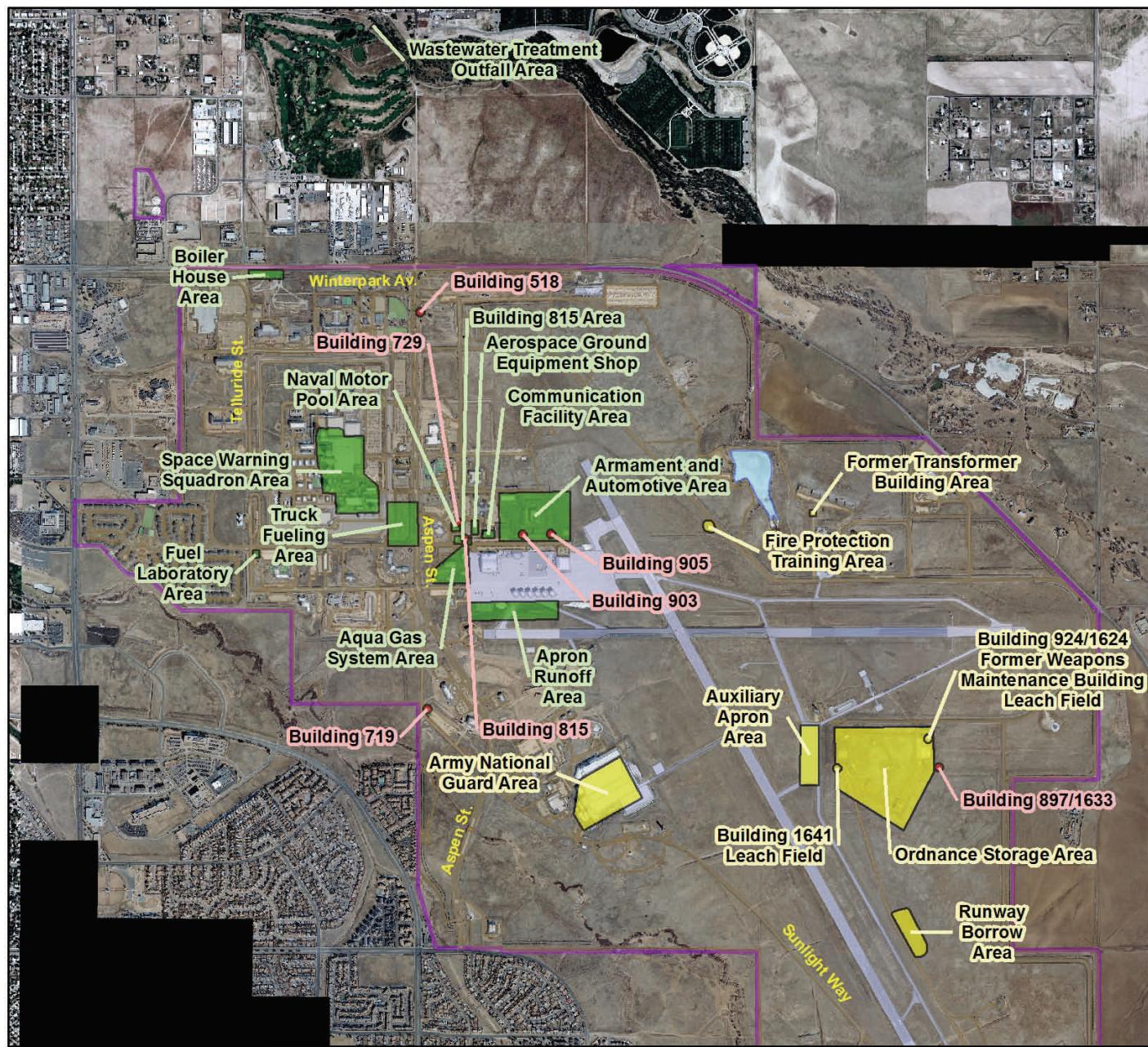
ACTIVITY LAST QUARTER:

- Subsurface anomaly investigation and surface clearance finished at MB103. Completed excavation, stabilization and off-site disposal of initial 3000 cubic yards of soil from berm area. Approximately 2500 additional cubic yards remain.
- Funding received and contract modified in Sep 2010 for 1) removal of additional lead-contaminated soils at SR101a and MB103a, and 2) removal of munitions and explosives of concern at CW104a and CW104b due to Base plans for athletic fields in this location. Contract was also awarded for the remedial investigation for remaining MR sites.

UPCOMING ACTIVITIES:

- All removal action fieldwork, including the tasks requiring additional funding, will be completed in Nov 2010. Draft Remedial Investigation Work Plan will be submitted for Air Force review in Nov 2010
- Draft After-Action Report will be submitted for Air Force review in Jan 2011.

To be added to the Community Advisory Group email list, contact Mr. John Spann, Chief of Public Affairs, at john.spann@buckley.af.mil or 720-847-9431 .



Legend

- Central Industrial Area (Green)
- East Industrial Area (Yellow)
- Site Inspection Required (Red)
- Installation Boundary (Purple)

1,000 0 1,000 2,000 3,000
Feet



CRP Site Map
Buckley Air Force Base, Colorado

Figure 2: Location of Open CRP Sites

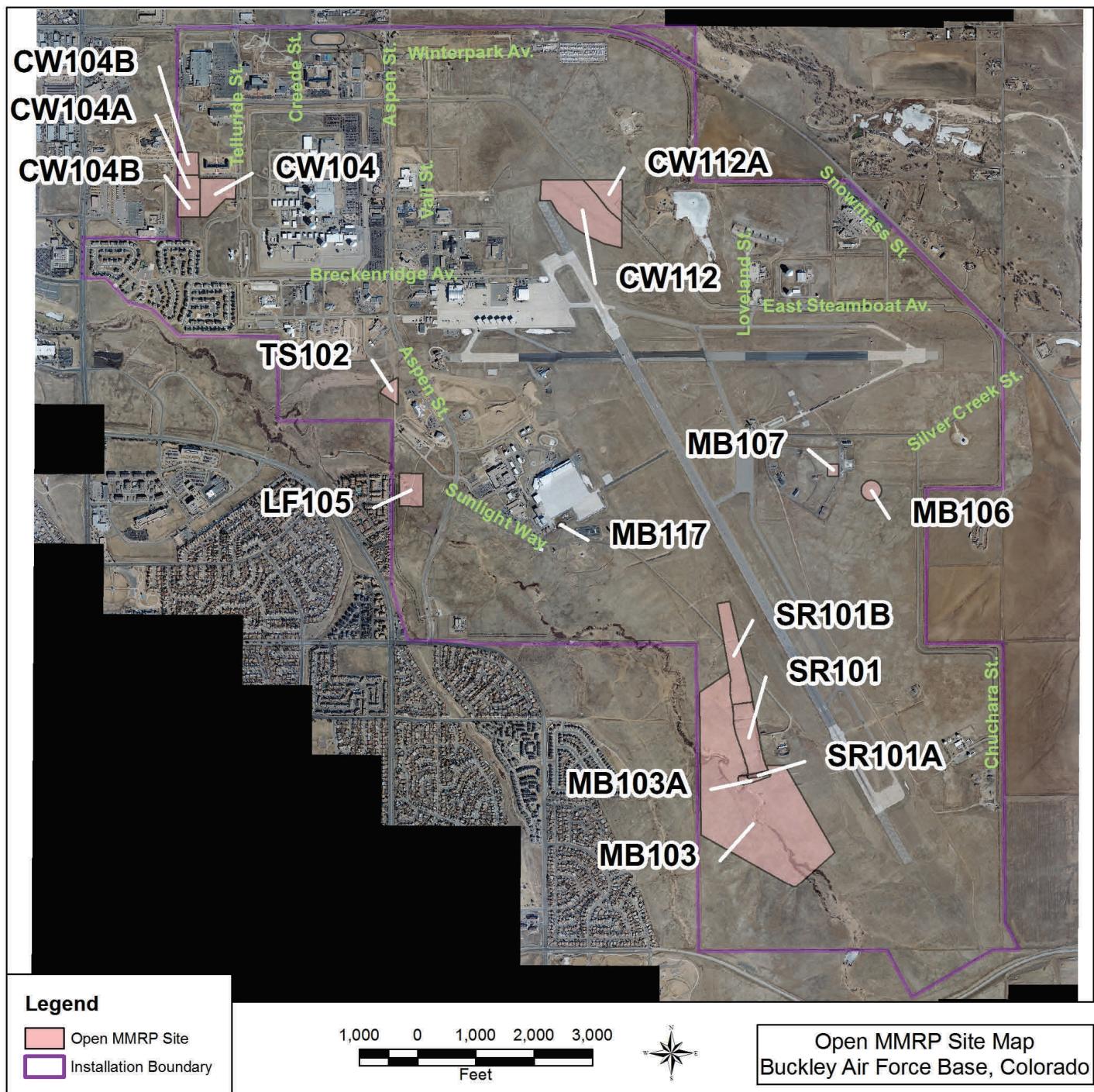


Figure 3: Location of Open MMRP Sites