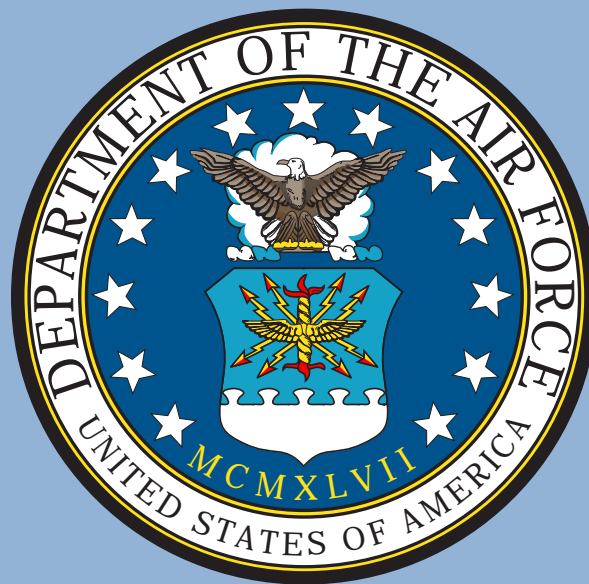


TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM

ANNUAL REPORT
ON THE STATUS OF
LAND USE CONTROLS
ON RESTORATION SITES
IN 2006

FINAL



60TH CIVIL ENGINEER SQUADRON
Travis Air Force Base, California

JANUARY 2007



DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

MEMORANDUM FOR DISTRIBUTION

30 January 2007

FROM: 60 CES/CEV
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SUBJECT: Annual Report on the Status of Land Use Controls on Restoration Sites in 2006

1. The attached report documents the status of Land Use Controls (LUCs) at eleven restoration sites on Travis AFB. Travis AFB established these controlled areas to comply with the requirements of the West/Annexes/Basewide Operable Unit Soil Record of Decision (ROD) and the North/East/West Industrial Operable Unit Soil, Sediment, and Surface Water ROD. The report states the findings made by Travis AFB personnel during the 2006 annual inspection of all eleven sites. Both the inspection and report meet the LUC requirements as presented in the RODs.
2. If you have any questions concerning this report, please contact Mr. Mark Smith at (707) 424-3062.

A handwritten signature in black ink, appearing to read "Wayne M. Williams", is positioned above the printed name.

WAYNE M. WILLIAMS, GS-13, DAF
Chief, Environmental Flight

Attachments:

1. Distribution List
2. Annual Report on the Status of Land Use Controls on Restoration Sites in 2006

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**TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM**

**ANNUAL REPORT
ON THE STATUS OF
LAND USE CONTROLS
ON RESTORATION SITES
IN 2006**

Final

Submitted by:

**60th Air Mobility Wing
Travis Air Force Base, California**

Prepared by

**60 Civil Engineer Environmental Flight
411 Airmen Drive, Building 570
Travis AFB CA, 94535-2001**

January 2007

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List of Acronyms and Abbreviations

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
CAMU	Corrective Action Management Unit
COC	Chemical of Concern
COEC	Chemical of Ecological Concern
ECC	Environmental Chemical Corporation
EPA	U. S. Environmental Protection Agency
ERP	Environmental Restoration Program
GMU	Grazing Management Unit
GP	Travis Air Force Base General Plan
LUC	Land Use Control
NEWIOU	North/East/West Industrial Operable Unit
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PPE	personal protective equipment
RA	Remedial Action
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
WABOU	West/Annexes/Basewide Operable Unit

1.0 Introduction

The *Soil Record of Decision (ROD) for the West/Annexes/Basewide Operable Unit (WABOU)* (Travis AFB, 2002) and the *North/East/West Industrial Operable Unit (NEWIOU) Soil, Sediment and Surface Water (SSSW) ROD* (URS, 2006) are the legal documents that describe the selected remedies for 27 Environmental Restoration Program (ERP) sites on Travis Air Force Base (AFB). Alternative S2 (Land Use and Access Restrictions) is the selected remedial alternative for nine WABOU sites. Alternative 17 (Land Use Controls) is the selected remedial or contingent remedial alternative for 10 of the 18 NEWIOU sites. Both remedial alternatives provide the administrative and physical measures needed to restrict future land use and unauthorized soil disturbance and removal activities and ensure the effectiveness of the remedies at all 19 sites.

The remedial action objective of Alternative S2 and Alternative 17 is to restrict residential development and unauthorized disturbance and relocation of soil. While the descriptions of Alternatives S2 and 17 may vary in the respective RODs, their objectives are identical.

For four WABOU sites (DP039, SD043, LF044, and SS046), Alternative S2 is the only selected remedy. For the remaining five WABOU sites (LF008, RW013, SS041, SD042, and SD045), the WABOU ROD selected an active remedy and Alternative S2. The reason for this is the active remedy is required to reduce contaminant concentrations to industrial cleanup levels so that the sites are safe for base workers. Alternative S2 serves to restrict activity at those sites. Section 5.4 (Land Use Controls) of the WABOU ROD describes these requirements in more detail.

Similarly, for four NEWIOU sites (SS015, SS016, ST032, and SD037), Alternative 17 is the only selected remedy. For five of the remaining six NEWIOU sites (SD001, FT003, FT004, FT005, and LF007), the NEWIOU ROD selected an active remedy and Alternative 17 as a contingency remedy. Because the active remedy is required to reduce contaminant concentrations to industrial cleanup levels, Alternative 17 will serve to restrict activity at those sites to industrial uses only. Site SD033 has separate remedies for soil (Alternative 17) and sediment (Alternative 17 and 18), so the restrictions described in this report currently applies to the soil portion of the site. Section 5.4 (Land Use Controls [LUC]) of the NEWIOU ROD describes these requirements in more detail.

If the active remedy reduces contaminant levels to those that allow for unlimited use and unrestricted exposure, there would be no need for LUCs. Each ROD states that the requirements pursuant to the LUC alternative will be deleted for a site in the event that the soil excavation achieves levels for all chemicals of concern that allow for unlimited use and unrestricted exposure at the site. In 2002 and 2003, Travis AFB conducted soil excavations at LF008, RW013, SS041, and SD042; and all four excavations achieved these levels. As a result, no LUCs are in place at these four sites.

The cleanup actions at six NEWIOU sites are scheduled for the summer of 2007. After these actions are complete, Travis AFB and regulatory agency representatives will evaluate the need to apply LUCs as described in section 5.4 of the NEWIOU ROD. Because the soil excavation at

SD045 has been delayed until 2007, land use controls are in place at this site. After the SD045 soil action is complete, Travis AFB and regulatory agency representatives will evaluate the need to continue the presence of LUCs as described in section 5.4 of the WABOU ROD.

One of the active remedies (Alternative S6 for WABOU soil sites and Alternative 18 for NEWIOU soil sites) consists of excavation and placement of contaminated soil in a Corrective Action Management Unit (CAMU), or to an off-base landfill under Alternative 18. A CAMU is a designated on-base area that is designed to receive and consolidate contaminated soil. The location of the Travis AFB CAMU is within the boundaries of Site LF007, a closed municipal landfill within the North/East/West Industrial Operable Unit (NEWIOU).

On 19 January 2007, Mr. Glenn Anderson and Mr. Lonnie Duke from the 60th Civil Engineer Environmental Flight conducted a formal inspection of the LUCs at eleven ERP sites on Travis AFB. The eleven sites are designated as SS015, SS016, ST032, SD033, SD037, DP039, SD043, LF044, SD045, SS046, and LF007. This report serves as the official record of the results of this inspection.

The following list provides a brief summary of the organization and content of the 2006 LUC Status Report:

- Section 1.0 – Introduction. Provides descriptions of the purpose, regulatory background and content of this annual report.
- Section 2.0 – Performance Measures. Describes the performance measures for LUCs. Subsections describe how these measures have been met.
- Section 3.0 – Solvent Spill Area (SS015). Describes the environmental conditions at the Solvent Spill Area and Facilities 550 and 552 and the status of LUCs at that site.
- Section 4.0 – Oil Spill Area (SS016). Describes the environmental conditions at the Oil Spill Area, Facilities 11, 13, 14, 20, 42, 1941, 139, and 144 and sections of the Storm Sewer Right-of-Way and the status of LUCs at that site.
- Section 5.0 – Monitoring wells 107 and 246 (ST032). Describes the environmental conditions at the area surrounding Monitoring Wells 107 and 246 and the status of LUCs at that site.
- Section 6.0 – Storm Sewer System B, Facilities 810 and 1917, and South Gate Area (SD033). Describes the environmental conditions at the soil portion of this site and the status of LUCs.
- Section 7.0 – Sanitary Sewer System (SD037). Describes the environmental conditions at the Sanitary Sewer System; Facilities 837, 838, 919, 977, and 981; Area G Ramp; and the Ragsdale/V Area and the status of LUCs at that site.

- Section 8.0 – Building 755 (DP039). Describes the environmental conditions at Building 755 and the status of LUCs at that site.
- Section 9.0 – Building 916 (SD043). Describes the environmental conditions at Building 916 and the status of LUCs at that site.
- Section 10.0 – Landfill X (LF044). Describes the environmental conditions at Landfill X and the status of LUCs at that site.
- Section 11.0 – Former Small Arms Range (SD045). Describes the environmental conditions at the Former Small Arms Range and the status of LUCs at that site.
- Section 12.0 – Railhead Munitions Staging Area (SS046). Describes the environmental conditions at the Railhead Munitions Staging Area and the status of LUCs at that site.
- Section 13.0 – Landfill 2 (LF007). Describes the environmental conditions at this site and the status of its LUCs.
- Section 14.0 – Conclusion and Summary of Findings. Summarizes the fourth year of managing LUCs in the WABOU and the first year of managing LUCs in the NEWIOU.
- Section 15.0 – Works Cited. Lists the documents used in the development of this annual report.

Appendices

- Appendix A – Base General Plan Screen Shots. Shows various views of the web-based General Plan.
- Appendix B – Photographs. Shows photographs of sites with LUCs.

2.0 Performance Measures

Section 5.4 (Land Use Controls) of both the WABOU Soil ROD and the NEWIOU SSSW ROD addresses the Air Force requirements and responsibilities for implementing, monitoring, maintaining, and enforcing identified LUCs. To assist the Air Force in meeting these responsibilities, each ROD describes performance measures for all LUC sites. The following subsections explain how these performance measures have been met.

2.1 Base General Plan Revisions

The first performance measure pertains to the Base General Plan (GP). The GP is a long-range planning document that provides a framework for selecting the locations of future facilities needed to carry out the base mission. Section 5.4 of each ROD required Travis AFB to incorporate within its GP all specific LUCs at each site, the reasons for the controls, and site-specific details to adequately describe them to base personnel. Once a soil remedial action is complete, the base will update the GP to include the site-specific restrictions, if needed.

As stated in the 2003 Annual Land Use Control Report, the GP revisions as described in the WABOU Soil ROD were completed in November 2003 and consisted of two parts. The first part updated the existing text to incorporate the LUC concept and how it impacts future property development. The second part consisted of a new Appendix E (Land Use Controls) for the GP. Appendix E discussed LUCs in depth and provided a detailed description of the specific controls required at each site. It also listed the responsibilities of base personnel and organizations in maintaining LUCs. An individual attachment for each site contained site-specific LUC maintenance instructions. Each attachment contained a site map and a recent photograph of the controlled area.

In 2006, Travis AFB completed a significant upgrade of the GP. The new GP is now entirely web-based and is located on the Travis AFB Intranet, so it is only accessible to personnel with authorization to use the Travis AFB local area network. HB&A, Inc. is the contractor that created the new web interface. They worked with various base offices, including the Environmental Flight, to update the existing database and use improved data presentation methods. The web-based GP is a major advancement in base planning and an improved tool for LUC management. Along with the goal of bringing the GP into compliance with recent Air Force policy directives, the web-based version is much easier to update, increases emphasis on planning rather than its previous reference-book appearance, and provides a central information repository of base planning information and base development references. By eliminating static maps and relying heavily on computer mapping products for maps and figures, the new GP allows users to identify and show LUC restrictions in planning documents for future construction activities with greater ease and accuracy. Even though this project was not a part of the Environmental Restoration Program, it serves to enhance Travis' ability to track and enforce its LUC restrictions. Appendix A presents screen shots of the new web-based GP.

In the NEWIOU ROD, the Air Force agreed to provide the regulatory agencies with electronic access to view the GP during regulatory visits to Travis AFB. The Environmental Flight plans to present the GP during one of the upcoming RPM meetings to give all parties the opportunity to ask questions and offer suggestions for improvement.

2.2 Regulatory Agency Notification

The second performance measure involves the notification of the regulatory agencies of any base proposals for a major land use change at a site inconsistent with land use control objectives or the selected remedy, any anticipated action that may disrupt the effectiveness of the LUCs, any action that might alter or negate the need for LUCs, or any anticipated transfer of the property subject to the LUCs.

For the eleven sites that are addressed in this report, there were no land use change proposals or activities in 2006 that were inconsistent with, disruptive of or negated the need for LUCs. Also, no property transfers took place in the vicinity of the eleven sites.

The NEWIOU ROD specifies timeframes for regulatory agency notification of LUC changes or breaches as described above. Since Travis AFB made no notifications during 2006, there was no reason for the LUC inspection to evaluate notification timeliness.

2.3 Existing Administrative Control Maintenance

The third performance measure requires the maintenance of existing administrative controls (e.g., through the review of excavation permits) while LUCs are in place. Overall, Travis AFB has not made any significant changes to its existing system of administrative procedures for tracking land use on-base.

The basic procedures to maintain administrative controls start with the AF Form 332 that must be approved before the start of any building project. The reviewers of this form compare the proposed building site with the constraints in the GP before approval. The base also uses an excavation permit for similar comparisons. However, beginning in January 2003, the Environmental Flight began to require the completion of an AF Form 813 (Request for Environmental Impact Analysis) for most AF Form 332s and prior to the submission of any excavation permit (60 AMW Form 55). These required procedures provide further assurance that projects are subjected to an appropriate level of environmental analysis. This procedural change was minor in nature, because base personnel were already required to submit an AF Form 813 to the Environmental Flight in the early stages of a construction project. However, by requiring the attachment of a copy of the completed AF Form 813 to the excavation permit during the review process, the Environmental Flight is able to verify that environmental issues pertaining to the proposed project are properly considered and addressed.

During the 2006 LUC inspection, the reviewers noted that all LUCs at the eleven sites that are addressed in this report were intact. There were no indications of improper land use or soil disturbance in any of the controlled areas. Based on the site inspections and periodic attendance

in project coordination meetings throughout 2006, the reviewers concluded that the existing administrative measures are properly maintaining the LUCs.

2.4 Periodic Monitoring

Periodic monitoring is the final performance measure in both RODs. Officially, Travis AFB is required to conduct annual inspections of its controlled areas and to take prompt action to restore, repair, or correct any LUC deficiencies or failures identified. Also, the RODs provide the flexibility to select a different monitoring schedule as long as all parties agree with it and if the change reasonably reflects the potential risk presented by the site.

The 60th Civil Engineer Environmental Flight has an environmental field manager who checks on the status of various environmental and construction projects on a frequent basis. Also, the Environmental Flight project managers conduct site visits routinely to support a variety of environmental activities. As a result, site visits take place on at least a quarterly and often more frequent basis. Any potential LUC deficiencies are investigated promptly. During this reporting period, there were no major occurrences of LUC deficiency restoration, repair or correction.

2.5 Other Monitoring Requirements

In addition to the LUC requirements described above for all sites, the RODs require the following measures at some sites:

2.5.1 Signs

Specific sites will have appropriate signs on display to warn site visitors of potential hazards associated with surface soil contamination, conforming to ANSI Z 53.1 and AFP 88-40.

In 2003, Travis AFB placed signs at all WABOU sites with LUCs. In 2006, the base placed signs at SS016 and SD033. Sites SS015, ST032, and SD037 did not receive signage because of safety restrictions. Appendix B (Photographs) presents photographs taken during the 2006 inspection that show the signs that have been posted at LUC sites.

The NEWIOU ROD specified that signs for NEWIOU sites where there would be no soil removal activities needed to be installed within 30 days of signing the NEWIOU ROD. Although not specifically evaluated during the LUC inspection, the base met this requirement.

2.5.2 Use of Clean Soil

At the seven sites where the selected remedy involves soil excavation, Travis AFB is required to backfill the excavation voids with clean soil. This removes the potential for exposure to surface soil contaminants. If there is any residual contamination at depth, the digging permit process is used to ensure that future industrial activities or construction projects either do not disturb the contaminated subsurface soil or that the base takes other appropriate safety measures. The NEWIOU ROD does not require backfilling or other mitigation at sites SD001 and SD033 which are sediment sites.

In 2002 and 2003, Travis AFB conducted soil cleanup actions at four of the five ERP sites that are addressed in the WABOU ROD. They are LF008, RW013, SS041, and SD042. All four actions achieved cleanup levels allowing for unlimited use and unrestricted exposure, so there is no residual contamination at depth that requires the implementation of LUCs. The LF008 soil remedial action is described in detail in the *Remedial Action Report for Soil Remedial Action at Site LF008* (Shaw Environmental and Infrastructure [E&I], 2004). The RW013 soil remedial action is described in detail in the *Remedial Action Report for Soil Remedial Actions at Site RW013* (Environmental Chemical Corporation [ECC], 2003). The SS041 soil remedial action is described in detail in the *Remedial Action Report for Soil Remedial Actions at Site SS041* (ECC, 2003). The SD042 soil remedial action is described in detail in the *Remedial Action Report for Soil Remedial Action at Site SD042* (Shaw E&I, 2003).

2.5.3 Landfill X

The WABOU Soil ROD requires Travis AFB to install a fence around the Landfill X area and the adjacent equipment training area, build protective berms to prevent the transport of soil contamination via surface water flow during rain events into nearby vernal pools, and comply with applicable OSHA regulations, including relevant worker notification, training, and protective measures.

In 2003, Travis AFB completed the installation of a fence and berm at Landfill X. The details of this soil action are found in the *Remedial Action Report for the Soil Remedial Actions at Site LF044* (ECC, 2003).

Starting in November 2006, Travis AFB began to use the Landfill X area for heavy equipment training as provided for in the WABOU ROD. Although available for the temporary staging of construction debris, it is unlikely that Landfill X will be consistently used for this purpose because of its location within an explosives safety control zone. Before training takes place on this property, base personnel verify that all OSHA regulations are followed.

2.5.4 Report Submittal

In accordance with both RODs, Travis AFB is required to submit in a timely manner to the U.S. EPA, California Department of Toxic Substances Control, and the San Francisco Regional Water Quality Control Board an annual monitoring report on the status of LUCs and/or other remedial actions, including the operation and maintenance, and monitoring thereof, and how any LUC deficiencies or inconsistent uses have been addressed.

Travis AFB delayed the annual LUC inspection until early 2007. The base did not receive a lot of rainfall in late 2006, and the intention was to see if several forecasted storms in early January 2007 would provide sufficient rainfall to evaluate the performance of the LF044 berm. Once it became clear that this was not going to happen, the base completed the inspection. The base has met this requirement through the submission of this report.

A hard copy of this report has been placed in the Travis AFB Information Repository at the Vacaville Public Library, and an electronic copy of this report will be accessible through the Travis AFB Environmental Web Site. Although this report is not subject to approval and/or revision by EPA and the State of California, Travis AFB will voluntarily consider any suggestions from the regulatory agencies and the public to improve the format and/or content of future reports.

3.0 Solvent Spill Area and Facilities 550 and 552 (SS015)

SS015 is in the central part of the NEWIOU and consists of the Solvent Spill Area (SSA) and Facilities 550 and 552. The SSA covers approximately 1.4 acres east of Facility 550, in an area previously used for stripping paint from aircraft and where solvent spills were reported to have occurred. The site was an open grassy plot adjacent to an asphalt driveway and Facility 552.

Facility 552 consisted of a fenced, bermed, concrete pad constructed in 1964 that was used as a temporary hazardous waste collection point. Stored wastes included paint, chromic acid, and solvents generated during aircraft maintenance operations at Facility 550. Facility 550 contained a corrosion control facility that treated and painted aircraft parts and support equipment. A metals-processing shop in Facility 550 used cadmium-based plating solutions.

In 2004, Facilities 550 and 552 were demolished to construct a POL (petroleum, oil, and lubricants) MILCON (military construction) project that consists of an office building, a fuel truck maintenance facility, and a large, concrete truck-parking area.

3.1 Environmental Conditions

Surface soil in the vicinity of the former metals-plating shop in Facility 550 contains cadmium residue. Appendix H of the *Summary of Remedial Investigation Data and Risk Management Decisions for Human Health at NEWIOU Sites* (URS, 2004) presents a more detailed description of the human health risk assessment for this site.

Currently, the cadmium-contaminated soil is covered by concrete as part of a truck-parking area. A fence surrounds the new POL facility. Because of the nature of the operations at the site, it is impractical to place warning signs in the vicinity of the contaminated soil.

3.2 Status of SS015 Land Use Controls

Section 5.3.8 of the NEWIOU SSSW ROD states that Alternative 17 (Land Use Controls) is the selected remedial action for this site, because cadmium concentrations in the soil exceed levels that allow for unlimited use and unrestricted exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of cadmium in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of the soil at this site. The LUCs for SS015 are described in detail in the Base General Plan intranet web site.

The 2006 inspection of the LUCs at SS015 found that administrative controls are adequate to enforce the restriction, so additional physical barriers (i.e., fences) are not needed. There is no

evidence that the cadmium-impacted soil has been disturbed. Photograph 1 in Appendix B of this report shows the controlled area at SS015.

4.0 Oil Spill Area, Facilities 11, 13/14, 20, 42/1941, 139/144, and Selected Sections of the Storm Sewer Right-of-Way (SS016)

SS016 is in the central part of the NEWIOU and consists of the Oil Spill Area (OSA); Facilities 11, 13/14, 20, 42/1941, and 139/144; and portions of the Storm Sewer Right-of-Way. The OSA covers approximately 7 acres north of Facility 16. The facilities within the site support flight line service equipment repair, aircraft engine repair, fuel storage, aircraft wash racks, and vehicle maintenance.

The OSA originally encompassed an area where waste oil from cleaning and degreasing operations at Facility 18 had reportedly been spilled or disposed of on a grassy field. The area is now entirely paved and covered with buildings. Facility 139 is a vehicle maintenance shop, and facility 144 is a vehicle body shop. Facilities 13 and 14 were used for paint stripping and parts cleaning, using TCE and a dilute phosphoric acid solution; the facilities were demolished in 1988. Facility 11 is a vehicle maintenance shop, and facilities 42/1941 include a hazardous waste storage area, a wash rack, and oil-water separator, and four 250-gallon above-ground storage tanks. Facility 20 is the aircraft control tower.

4.1 Environmental Conditions

Surface soil in a grassy field west of facility 18 contains polycyclic aromatic hydrocarbon (PAH) residue. Appendix I of the *Summary of Remedial Investigation Data and Risk Management Decisions for Human Health at NEWIOU Sites* (URS, 2004) presents a more detailed description of the human health risk assessment for this site.

A small portion of PAH-contaminated soil is covered by concrete and a brick walkway.

4.2 Status of SS016 Land Use Controls

Section 5.3.9 of the NEWIOU SSSW ROD states that Alternative 17 (Land Use Controls) is the selected remedial action for this site, because PAH concentrations in the soil exceed levels that allow for unlimited use and unrestricted exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of PAH in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of soil at this site. The LUCs for SS016 are described in detail in the Base General Plan intranet web site.

The 2006 inspection of the LUCs at SS016 found that administrative controls are adequate to enforce the restriction, so physical barriers (i.e., fences) are not needed. There is no evidence that the PAH-impacted soil has been disturbed either with or without proper authorization. A warning sign has been posted on a tree in the middle of the site to notify base worker of the

presence of the controlled area. Photograph 2 in Appendix B of this report shows the controlled area at SS016.

5.0 MW107x32 and MW246x32 Areas (ST032)

ST032 is in the central part of the NEWIOU and consists of grassy, open areas between a runway and an abandoned taxiway. Land use and personnel access is severely restricted because of the proximity of the runway. This site is in a restricted area and a designated clear zone (an area in which there are no vertical obstructions to aircraft). MW107x32 and MW246x32 are in the Storm Sewer Right-of-Way area.

5.1 Environmental Conditions

Surface soil in a grassy field adjacent to a runway contains benzene residue. Appendix M of the *Summary of Remedial Investigation Data and Risk Management Decisions for Human Health at NEWIOU Sites* (URS, 2004) presents a more detailed description of the human health risk assessment for this site.

5.2 Status of ST032 Land Use Controls

Section 5.3.13 of the NEWIOU SSSW ROD states that Alternative 17 (Land Use Controls) is the selected remedial action for this site, because benzene concentrations in the soil exceed levels that allow for unlimited use and unrestricted exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of benzene in the surface soil and enforce the land use restriction, particularly on the use of the unauthorized disturbance and use of soil at this site. The LUCs for ST032 are described in detail in the Base General Plan intranet web site.

Because of the aircraft operations that were taking place at the time and the high level of security associated with it, the inspectors were not able to physically view the controlled area at ST032 during the inspection. Since the Base Operations office controls aircraft activities, it is virtually impossible for ST032 to be used for residential purposes and highly unlikely that soil in the controlled area would be disturbed without proper authorization. Due to this high level of security along the Travis AFB flight line, physical barriers (i.e., fences) and signage are not needed to maintain environmental land use restrictions.

6.0 Storm Sewer System B (West Branch of Union Creek), Facilities 810 and 1917, and South Gate Area (SD033)

SD033 is in the western part of the NEWIOU and consists of the West Branch of Union Creek, parts of Storm Sewer System B, Facilities 810 and 1917, the area around the South Gate, and Outfall II. Storm Sewer System B collects runoff from within the west side of the aircraft industrial area. This runoff enters Union Creek at Outfall II. Facility 810 is used to refurbish aircraft, and facility 1917 had sumps and an oil/water separator that are no longer in use.

6.1 Environmental Conditions

Surface soil on the east and west side of facility 810 contains cadmium and benzo(a)pyrene residue. Most of this soil is covered by asphalt. Appendix N of the *Summary of Remedial Investigation Data and Risk Management Decisions for Human Health at NEWIOU Sites* (URS, 2004) presents a more detailed description of the human health risk assessment for this site.

6.2 Status of SD033 Land Use Controls

Section 5.3.14 of the NEWIOU SSSW ROD states that Alternative 17 (Land Use Controls) is the selected remedial action for this site, because cadmium and benzo(a)pyrene concentrations in the soil exceed levels that allow for unlimited use and unrestricted exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of cadmium and benzo(a)pyrene in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of soil at this site. The LUCs for SD033 are described in detail in the Base General Plan intranet web site.

The 2006 inspection of the LUCs at SD033 found that administrative controls are adequate to enforce the restriction, so physical barriers (i.e., fences) are not needed. There is no evidence that the cadmium- and benzo(a)pyrene-impacted soil has been disturbed. Warning signs have been posted on both sides of Facility 810 to notify base worker of the presence of the controlled area. Photographs 3 and 4 in Appendix B of this report show the controlled areas at SD033.

7.0 Sanitary Sewer System; Facilities 837/838, 919, 977, and 981; Area G Ramp; and Ragsdale/V Area (SD037)

SD037 is in the western part of the NEWIOU and consists of Facilities 837, 838, 919, 977, and 981; the Area G Ramp; and the Ragsdale/V Area. It also includes approximately 22,000 feet of sanitary sewer piping, an oil/water separator, sumps, wash racks, and a fuel-hydrant system. The sanitary sewer system conveys domestic and industrial wastewater from facilities within the NEWIOU to the Fairfield-Suisun publicly owned treatment works. Facility 919 is used to maintain heavy equipment, facility 977 is an air freight terminal, and facility 981 has a hazardous waste satellite accumulation point.

7.1 Environmental Conditions

Surface soil to the southwest and southeast of facility 977 contains polycyclic aromatic hydrocarbon (PAH), lead and total petroleum hydrocarbon (TPH) residue. Both controlled areas are covered in asphalt and lie in busy areas where aircraft receive cargo. Appendix R of the *Summary of Remedial Investigation Data and Risk Management Decisions for Human Health at NEWIOU Sites* (URS, 2004) presents a more detailed description of the human health risk assessment for this site.

7.2 Status of SD037 Land Use Controls

Section 5.3.18 of the NEWIOU SSSW ROD states that Alternative 17 (Land Use Controls) is the selected remedial action for this site, because PAH, lead and TPH concentrations in the soil exceed levels that allow for unlimited use and unrestricted exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of PAH, lead, and TPH in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of soil at this site. The LUCs for SD037 are described in detail in the Base General Plan intranet web site.

The 2006 inspection of the LUCs at SD037 found that administrative controls are adequate to enforce the restriction, so physical barriers (i.e., fences) are not needed. There is no evidence that the PAH-, lead-, and TPH-impacted soil has been disturbed. Due to the nature of operations at the air freight terminal, it is not practical or safe to post warning signs to warn base personnel of the presence of the controlled areas. Photographs 5 and 6 in Appendix B of this report show the controlled areas at SD037.

8.0 Building 755 (DP039)

Building 755 is the Travis AFB Battery and Electric Shop. The site consists of Building 755 and a former battery neutralization sump. Past operations have included the recharging and dismantling of lead-acid and nickel-cadmium batteries. Before 1978, lead acid solutions were discharged into a sink inside Building 755. The pipeline from the sink led to a rock-filled sump approximately 65 feet northwest of the building. This practice was discontinued in 1978 when the pipeline was dismantled and reconnected to the sanitary sewer system. The sump was removed in 1993.

8.1 Environmental Conditions

Surface soil around the edges of the former sump area contains lead residue. Since the lead-acid solution entered the former sump through a subsurface pipe, the presence of lead in the surface soil is attributed to the deposition of small amounts of lead-contaminated subsurface soil during the 1993 sump removal action. The Human Health and Ecological risk assessments for Building 755 concluded that the lead residue does not pose an unacceptable risk to local workers or ecological receptors. Sections 4.1.7 and 4.1.8 of the *WABOU Remedial Investigation Report* (CH2M HILL, 1997) present more detailed descriptions of the risk assessments for Building 755.

8.2 Status of DP039 Land Use Controls

Section 5.3.1 of the WABOU Soil ROD states that Alternative S2 (Land Use and Access Restrictions) is the selected remedial action for this site. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of lead in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of soil at this site. The LUCs for DP039 are described in detail in the Base General Plan intranet web site. Appendix A of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) contains a paper version of the original LUC descriptions.

The 2006 inspection of the LUCs at DP039 found that administrative controls are adequate to enforce the restriction, so physical barriers (i.e., fences) are not needed. There is no evidence that the lead-impacted soil has been disturbed. Photograph 7 in Appendix B of this report shows the controlled area at DP039. The warning sign in the vicinity of the LUC area that ensures that visitors and occupants of Building 755 are aware of the presence of LUCs can be seen in the background.

9.0 Building 916 (SD043)

Building 916 is an emergency electrical power facility. The diesel-powered generators inside the building sit above a cellar, or sump area, that also houses sump pumps. Prior to 1991, spilled diesel fuel from the generators and wash water were pumped out of the building through one of four pipes. The pipes discharged onto small concrete spillways constructed for erosion control on the side slope of the trapezoidal drainage channel that lies east of the building. From the spillways, wastewater flowed down the side-slope and into the drainage channel. This method of sump water disposal was discontinued in 1991.

There had been a fenced and graveled electrical transformer area on the southwest corner of the building. This area contained three liquid-filled transformers on top of a concrete pad. In 1992, one of the transformers developed a leak onto the concrete pad and ground surface. The base removed the transformers and pad in 1993.

9.1 Environmental Conditions

Polychlorinated Biphenyl (PCB)-1254 was detected in soil at concentrations that do not pose an unacceptable risk to local workers or ecological receptors. Sections 4.3.7 and 4.3.8 of the *WABOU Remedial Investigation Report* (CH2M HILL, 1997) present detailed descriptions of the human health and ecological risk assessments for Building 916, respectively.

PCB-1254 was detected in a groundwater sample immediately below the transformer area, and there was a possibility that PCB-1254 in subsurface soil is a source of ongoing groundwater contamination. Additional groundwater sampling in June 1999 demonstrated that there is no PCB-contaminated groundwater migrating from the site. The *Reevaluation of Soil and Groundwater Contamination at Building 916 (SD043)* Technical Memorandum (CH2M HILL, 2000) presents a detailed discussion on the groundwater sampling effort.

9.2 Status of SD043 Land Use Controls

Section 5.3.3 of the WABOU Soil ROD states that Alternative S2 (Land Use and Access Restrictions) is the selected remedial action for this site. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site. As long as administrative controls are adequate to enforce the restriction, physical barriers (i.e., fences) will not be needed.

The Travis AFB General Plan has been revised to document the presence of PCB-1254 in the soil and enforce the land use restriction. The LUCs for SD043 are described in detail in the Base General Plan intranet web site. Appendix A of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) contains a paper version of the original LUC descriptions.

Section 4 of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) describes the construction of a concrete pad within the boundaries of the controlled

area at SD043. A standby emergency generator had been placed on the pad; the purpose of the generator was to provide additional utility support to the air freight terminal, located in Building 977.

As a result of this construction activity within the controlled area, the Environmental Flight enlarged the footprint of the controlled area to incorporate the concrete pad beneath the generator and all utilities. The new footprint also includes the soil within 10 feet to the east, south and west of the concrete pad. The Flight also posted two warning signs on Building 916 to notify site workers and visitors of the presence of land use controls at SD043.

Since no soil samples were collected and analyzed as part of the generator installation project; any future projects on site, including any to expand, alter, or remove the infrastructure associated with the generator will include analysis of the soil to be impacted by project activities prior to project approval. Decisions on soil disturbance activities and the disposition of any excavated soil will be made based on the results of sample analysis. The expanded LUC footprint has been incorporated into the GP, and the Environmental Flight will ensure that the new footprint becomes a part of the GP upgrade, as described in section 2.1.

The 2006 inspection of the LUCs at SD043 found that administrative controls are adequately enforcing the restriction, so physical barriers (i.e., fences) are not needed. There is no evidence that any soil disturbances in the vicinity of the concrete pad and generator took place in 2006. Photograph 8 in Appendix B shows the east side of the generator and pad south of Building 916, and photograph 9 shows the warning signs in relation to the west side of the controlled area at SD043.

10.0 Landfill X (LF044)

Landfill X is not a landfill at all. It received this name because the past activities at this site had not been completely identified at the start of the WABOU Remedial Investigation. It comprises approximately 25 acres of undeveloped land located within Grazing Management Unit (GMU)-2, a 126-acre parcel of land that had been used to graze horses. The site is located within a field that meets important worker safety training and construction needs on Travis AFB. The soil contaminants are attributed to the asphalt and other construction debris that are stockpiled onsite.

10.1 Environmental Conditions

Chemicals of Concern (COCs) detected in surface soils include benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene. These contaminants are also COECs together with benzo(k)fluoranthene, fluoranthene, and pyrene. COCs detected in subsurface soils include benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene, benzo(k)fluoranthene. These contaminants are also subsurface COECs together with anthracene, acenaphthene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene, bis(2-ethylhexyl)phthalate, cadmium, lead, and silver. Sections 4.8.7 and 4.8.8 of the WABOU RI report present a detailed description of the human health and ecological risk assessments for Landfill X, respectively.

10.2 Status of LF044 Land Use Controls

Section 5.3.6 of the WABOU Soil ROD states that Alternative S2 (Land Use and Access Restrictions) is the selected remedial action for this site. The selected remedy requires the installation of a fence around the contaminated area and the training/stockpile area and the construction of a protective berm within the fenced area. The purpose of the berm is to provide environmental protection by preventing soil contaminants from flowing during rain events into nearby vernal pools. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site. The objective of this remedial action is to document the location of the contaminants and apply land use controls to prevent the site from being used for residential purposes.

The Travis AFB General Plan has been revised to document the presence of the soil contaminants and enforce these LUCs. The LF044 LUCs are described in detail in the Base General Plan intranet website. Appendix A of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) contains a paper version of the original LUC descriptions.

The *Remedial Action Report for Soil Remedial Actions at Site LF044* (ECC, 2003) provides a detailed description of the construction of the physical controls at LF044. This report is the source of some of the information provided in the following subsections.

10.2.1 Fence and Gate Installation

Environmental Chemical Corporation (ECC) and a fencing subcontractor installed the fence according to RD Specification #02831 of the *LF044 Soil Remedial Design Package* (URS, 2002). ECC accommodated a request by TAFB to install an additional gate on the southeastern side of LF044 site along with the northern gate that accesses Hangar Avenue. Warning signs were posted at the gates and every 200 feet along the fence as required.

The 2006 inspection of the LUCs at LF044 found the fence and signs to be in excellent physical condition. There is no evidence to suggest that the property is being used for other than industrial purposes. Both gates were locked, and the Environmental Flight keeps a copy of the keys. Photograph 10 of Appendix A shows the warning sign at the north access gate, and photograph 11 shows the warning signs on the fence and behind the south access gate. The gates are in excellent physical condition, and warning signs at each gate are clearly visible.

10.2.2 Berm Construction

The berm was constructed with aggregate, type ABII. A total of 647.54 tons of ABII aggregate was imported for the berm construction. The material originated from a local quarry owned by Syar Industries. The material met the physical and chemical characteristics required by RD specification #02210 of the *LF044 Soil Remedial Design Package* (URS, 2002). The aggregate was placed along the surveyed and staked perimeter line. Following precision spreading, the berm was shaped and compressed using 6-inch maximum horizontal lifts. ABII aggregate has a good mixture of fines and course material, which made it easy to compact to the required 85% of laboratory maximum dry density.

In December 2002, exceptionally heavy rains caused a low section of the berm to erode and fail. Pooled water on the northwest side of the berm began to flow over the top of the compacted soil, creating a small breach. To prevent a similar event from occurring again, ECC fortified the low section of the berm with cement. In future winter months that receive a substantial amount of rainfall, the base expects pooled water to gently flow over the low sections of the berm, allowing sediment to settle within the controlled area.

The 2006 inspection of the LUCs at LF044 found the berm to be in excellent physical condition. Native grass, weeds and small shrubs have grown over portions of the berm, which serves to increase its cohesiveness. The base has not received sufficient rainfall to demonstrate that the berm is performing as designed, but there was no evidence of damage to the berm from base activities. No accumulation of surface runoff was observed along the berm, and the adjacent wetlands are dry. Photograph 12 of Appendix B was taken during the inspection of the LF044 berm.

11.0 Former Small Arms Range (SD045)

The Former Small Arms Range comprises 2.8 acres of flat, grassy terrain in the southwest corner of the base. No traces of previous firing range activities are visible, and the presence of the site was identified from an inspection of historical photographs. The range was used for small arms training until the mid-1970's, when it was decommissioned to support the construction of an ammunition loading pad.

Currently, the former range is part of a Grazing Management Unit (GMU) which is leased to private cattle owners to graze their stock. The GMU is surrounded by animal fences, and access is controlled through a gate. Periodically the site is disked to create fire breaks.

11.1 Environmental Conditions

Lead is the main contaminant at this site, both in surface and subsurface soil. Other chemicals of ecological concern in surface soil are antimony and copper. Sections 4.10.7 and 4.10.8 of the WABOU RI report present a detailed description of the human health and ecological risk assessments for the Former Small Arms Range, respectively.

11.2 Status of SD045 Land Use Controls

Section 5.3.7 of the WABOU Soil ROD states that Alternative S6 (Excavation/On-base Consolidation) is the selected remedial action for this site. Alternative S5 (Excavation/Off-base Disposal) is the selected contingency remedy for soil that exceeds the CAMU acceptance criteria.

Alternative S2 (Land Use and Access Restrictions) is also a selected remedial action for the site. However, it will not be permanently implemented if Alternative S6 achieves the residential cleanup values as presented in the ROD. The purpose of Alternative S2 is to restrict the use of the site to industrial activities only.

The soil cleanup of SD045 had been scheduled for the summer of 2003 along with several other remedial actions in the WABOU. However, the remedial action contractor for SD045 ran out of time to schedule the transport of all excavated soil from SD045 to the CAMU as well as funds to complete all tasks associated with this project. So, this soil action has been rescheduled for 2007. This is the last official construction season in which the CAMU will be open to accept contaminated soil from NEWIOU soil sites.

During the period leading up to the next scheduled construction season for soil cleanup actions, Travis AFB has maintained the current level of controls at SD045, since the property is not currently available for residential or many industrial uses. Once the SD045 soil cleanup action is complete, Travis AFB will update its GP to document the presence of metals in the soil and enforce restriction on residential land use, including day care center activities and for playground and other play activities, if needed.

In February 2006, SD045 was the source of lead-contaminated soil for two risk assessment studies that were sponsored by the Environmental Science Technology Certification Program (ESTCP). Environmental scientists from the Oak Ridge National Laboratory and from the Air Force Center for Environmental Excellence removed lead- and copper-contaminated soil in 5-gallon containers to support an amphibian risk assessment and a bioavailability study. Regulatory representatives were briefed on this field work at monthly Remedial Program Manager meetings.

The 2006 inspection of the LUCs at SD045 found that the existing controls are adequate to prevent unauthorized use of the property. Other than the soil excavation areas that were the result of the ESTCP field work, there is no evidence that the metals-impacted soil has been disturbed. A sign at the entrance to the GMU notifies visitors and base workers of the presence of ecologically sensitive areas in the vicinity of SD045. However, the LUC sign was not present. It had been taken down in the May-June 2006 timeframe so that it could be used as a template to create additional signs for the NEWIOU sites, and it had not been reinstalled on the GMU gate. Once this discrepancy was identified, base environmental personnel attached an extra warning sign to the gate. Photograph 13 of Appendix B of this report shows the access gate that leads to SD045 as seen during the inspection.

12.0 Railhead Munitions Staging Area (SS046)

The Railhead Munitions Staging Area site consists of a railroad track and concrete pad that formerly served as a railhead at the south terminus of a spur off the Northern Sacramento Railroad. This site served as a weapons-handling facility from 1953 to 1962.

12.1 Environmental Conditions

Chemicals of Concern (COCs) detected in surface soil include benzo(a)pyrene, benzo(b)fluoranthene, benzo(a)anthracene, and benzo(k)fluoranthene. COCs detected in subsurface soil include cadmium, lead, benzo(a)pyrene, benzo(k)fluoranthene, fluoranthene, phenanthrene, pyrene, and pentachlorophenol. All of the COCs were detected in the vicinity of the railroad tracks. Section 4.12.7 of the WABOU RI report presents a detailed description of the human health risk assessment for this site.

Chemicals of Ecological Concern (COECs) were detected in isolated areas surrounding the concrete pad. The COECs include benzo(a)pyrene, benzo(k)fluoranthene, fluoranthene, pentachlorophenol, phenanthrene, pyrene, cadmium, and lead. Section 4.12.8 of the WABOU RI report presents a detailed description of the ecological risk assessment for this site.

12.2 Status of SS046 Land Use Controls

Section 5.3.8 of the WABOU Soil ROD states that Alternative S2 (Land Use and Access Restrictions) is the selected remedial action for this site. The objective of this remedial action is to document the location of the contaminants and apply land use controls to prevent the site from being used for residential purposes. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan has been revised to document the presence of contaminants in the surface soil and enforce the land use restriction, particularly on the unauthorized disturbance and use of soil at this site. The SS046 LUCs are described in detail in the Base General Plan intranet website. Appendix A of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) contains a paper version of the original LUC descriptions.

The 2006 inspection of the LUCs at SS046 found that administrative controls are adequate to enforce the restriction, so additional physical barriers (i.e., fences not associated with the Grazing Management Unit) are not needed. There is no evidence that the contaminated soil has been disturbed. Photograph 14 of Appendix B of this report shows the east side of the controlled area at SS046, and photograph 15 shows the west side of the controlled area.

13.0 Landfill 2 (LF007)

LF007 is a closed municipal landfill that was active from the 1950s to 1974. It is a restoration site within the North/East/West Industrial Operable Unit (NEWIOU). It was selected for the construction of the Corrective Action Management Unit (CAMU) in the WABOU ROD. There are also active operations at LF007 conducted at Buildings 1360, 1365, 1370. Alternative 17 is the selected remedial action in the NEWIOU ROD for sample location E19, the CAMU cover, CAMU associated features, and the Landfill cover and associated buried wastes. Alternative 17 is the contingency remedy for PCB contaminated soils in Area E. There is also a potential that E19 may be excavated in accordance with the NEWIOU ROD and that site will be evaluated after excavation for release of the LUCs covering that area.

The CAMU is being built in phases. Phase 1 involved landfill maintenance and consisted of the placement of large quantities of clean soil into subsidence trenches that formed in the existing soil cap. The soil also serves as a foundation for the CAMU. Phase 2 involved the placement of contaminated soil from WABOU soil sites into the CAMU and the construction of an evapotranspiration cap over the consolidated soil. Travis AFB completed the field work for Phase 2 in November 2003. Phase 3 involves the placement of contaminated soil from NEWIOU and one remaining WABOU sites into the CAMU and the completion of the CAMU cap. Based on the current schedule, field work for Phase 3 should begin by June 2007.

13.1 Environmental Conditions

The *Remedial Investigation Report for the North Operable Unit* (Radian, 1995) contains a detailed description of the LF007 environmental conditions. The *Design Report and Post-Construction Maintenance Plan for the LF007 Soil Remedial Action* (CH2M HILL, 2002) contains a detailed description of the CAMU design. The *Project Summary Report for the LF007 Soil Remedial Action Phase 1, Landfill Cap, Corrective Action Management Unit Subgrade, Wetlands Mitigation* (Shaw E&I, 2003) contains the description of the field work that supports the closure of Landfill 2. The *Project Summary Report for the Site LF007 Phase 2 Soil Remedial Action* (Shaw E&I, 2004) describes the placement of contaminated soil from WABOU soil sites and the construction of the CAMU protective cap as well as other designed features. The NEWIOU Human Health and Eco Tech Memos also describe environmental conditions at LF007.

13.2 Status of CAMU Land Use Controls

Section 4.2 of the WABOU Soil ROD describes the CAMU and its part of the selected remedies for WABOU Soil sites. Section 5.3.6 of the NEWIOU ROD states that Alternative 17 is the selected remedial action for portions of LF007 and a contingency remedy for other portions, as described above.

The Travis AFB General Plan has been revised to document the presence of the CAMU cover, CAMU associated features, Landfill 2 and associated buried wastes and sample location E19, and enforce the land use controls. Travis AFB has also restricted unauthorized soil disturbance

and relocation activities at LF007 and periodically inspects and actively monitors the CAMU operations to ensure that the integrity and function of the CAMU remains intact.

The 2006 inspection of the LUCs at LF007 found that the current administrative and physical controls are adequate to enforce the restrictions. There is no evidence that the contaminated soil at LF007 has been disturbed. Photograph 16 in Appendix B of this report shows the warning sign that has been placed at the entrance to the CAMU, which controls access to the CAMU, the Landfill 2 cover, and the locking chain that controls access. Photograph 17 shows the warning sign along the path toward the CAMU, and photograph 18 shows one of the four No Trespassing signs that mark the four corners of the CAMU. There is also no evidence that the active operations at Buildings 1360, 1365 and 1370 are compromising the land use controls in place on the portions of LF007 discussed above.

14.0 Conclusion and Summary of Findings

On 19 January 2007, base representatives from the 60th Civil Engineer Environmental Flight conducted a formal inspection of the LUCs at eleven ERP sites on Travis AFB. The eleven sites are designated as SS015, SS016, ST032, SD033, SD037, DP039, SD043, LF044, SD045, SS046, and portions of LF007. This inspection complies with section 5.4 (Land Use Controls) of the WABOU Soil ROD and section 5.4 (Land Use Controls [LUC]) of the NEWIOU Soil, Sediment and Surface Water ROD.

In 2006, Travis AFB implemented LUCs at five sites (SS015, SS016, ST032, SD033, and SD037) in the NEWIOU, after the NEWIOU Soil, Sediment and Surface Water ROD was finalized in May 2006. The base is meeting all LUC requirements that are presented in the NEWIOU ROD.

The inspection team found the controls at the eleven sites to be in place and effective at restricting land use to industrial purposes only. Also, corrective measures at site SD043 in response to a 2003 construction project within its LUC area are in place and working as designed. One warning sign at site SD045 was missing, but this discrepancy was corrected promptly.

As described in section 2.1, the GP received a major upgrade in which it was converted from a paper document into a web-based planning tool and database. This Geographical Information System-based format improves the project manager's access and understanding of LUC data and the base's enforcement of LUC restrictions.

The 2006 inspection of the LUCs at the eleven ERP sites found that administrative controls are adequately enforcing the restrictions, so additional physical barriers are not needed. There is no evidence that any unauthorized land uses or unauthorized soil disturbances in the controlled areas took place in 2006.

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Appendix A

Base General Plan Screen Shots

1. Base General Plan

The Base General Plan (GP) is now a web site on the Travis AFB Intranet. The main component of the GP is the Comprehensive Planning Information Center (CPIC), which provides key base decision-makers with the primary source for development information at Travis Air Force Base (AFB). The CPIC is a tool containing intra-CPIC hypertext links, interactive maps, photographs and graphics, and links to supporting source documentation, database files, and Travis and non-Travis websites. It summarizes information from a variety of sources to provide decision-makers with an understanding of the character, structure, and development potential of the installation.

Because of security concerns and its importance to the base mission, only personnel on the Travis AFB Intranet are authorized to access the CPIC.



2. Composite Constraints and Opportunities

All data on land use restrictions on Travis AFB that are due to the presence of soil contaminants in concentrations above residential cleanup levels can be accessed via the Composite Constraints and Opportunities section of the CPIC. By scrolling down the page, the reviewer can identify three categories of constraints: Natural & Cultural, Environmental, and Operational (not shown). An Installation Restoration Program (IRP) Sites link takes the reviewer to the sites section.

The Composite Constraints and Opportunities section describes the IRP Sites link as the only Environmental Constraint that prohibits certain development in affected area of Travis AFB.



3. Table 4A-3 ERP Sites

The IRP Sites link takes the reviewer to Section 4A.3.4 (Environmental Restoration Program [ERP]). This section provides a summary of the ERP, its history, and a table with links to all ERP sites. Table 4A-3 also provides a brief description of the land use control status at each site.

The screenshot shows a Microsoft Internet Explorer browser window displaying the Travis AFB Electronic Planning Information Center (GPIC) website. The address bar shows the URL: <https://w3.travis.af.mil/60ces/cec/plans/gp/>. The website header includes the Travis AFB logo, the GPIC title, and a navigation menu with links: HOME, SEARCH, MAPS, DEVELOPMENT PLANS, LIBRARY/RESOURCES, FEEDBACK, HELP, and PRINT. A sidebar on the left contains a list of links, with 'Constraints & Opportunities' highlighted. The main content area displays 'Travis AFB ERP sites.' and a table titled 'Table 4A-3: ERP Sites' with the subtitle 'Click on Site # below to view site status info'. The table has four columns: ERP Site #, Site Name, Acres, and Land Use Controls. It lists five sites: SD001 (Union Creek Storm Sewer System, 21.6 acres), FT002 (Fire Training Area 1, 6.9 acres), FT003 (Fire Training Area 2, 10.6 acres), FT004 (Fire Training Area 3, 62.8 acres), and FT005 (Fire Training Area 4, 61.4 acres). Each site entry includes a brief description of the land use controls. The browser's taskbar at the bottom shows several open applications, including 'Miscellaneous - Micro...', 'Remedial Designs', 'Land Use Control Rep...', and 'Travis AFB Electronic ...'. The system clock indicates the time is 12:05 PM on Wednesday, January 10, 2007.

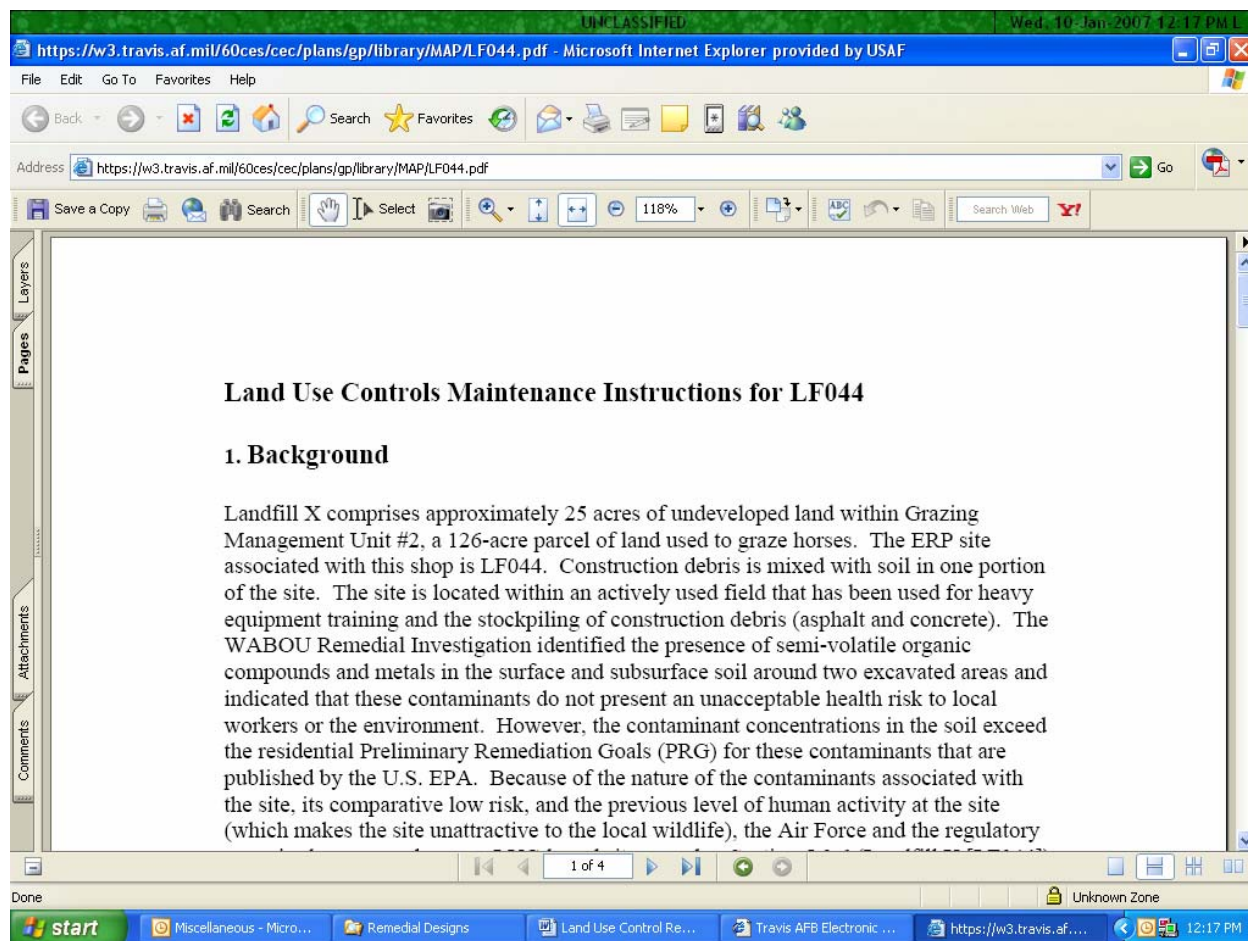
ERP Site #	Site Name	Acres	Land Use Controls
SD001	Union Creek Storm Sewer System	21.6	Site is the creek and associated surface waters. No constraints on soil or surface water. Contaminated sediment will be excavated in 2007. After excavation, the need for LUCs to prevent disturbance and relocation of sediment will be evaluated.
FT002	Fire Training Area 1	6.9	No constraints on soil disturbance.
FT003	Fire Training Area 2	10.6	Site is within airfield clearance zone. Contaminated soil will be excavated in 2007. After excavation, the need for LUCs to prevent disturbance and relocation of soil will be evaluated.
FT004	Fire Training Area 3	62.8	Site is within airfield clearance zone. Contaminated soil will be excavated in 2007. After excavation, the need for LUCs to prevent disturbance and relocation of soil will be evaluated.
FT005	Fire Training Area 4	61.4	Contaminated soil will be excavated in 2007. After excavation, the need for LUCs to prevent disturbance and relocation of soil will be evaluated.

4. Site LUC Maintenance Instructions

A click on a site link in Table 4A-3 opens up a PDF file of the LUC Maintenance Instructions for that site. This file presents background information, site description, explanation of the physical or administrative controls at the site, restricted activities, authorized activities, inspection requirements, and reporting requirements. This file also provides a map and a photograph of the controlled area.

Appendix A of the *Annual Report on the Status of Land Use Controls on Restoration Sites* (Travis AFB, 2004) contains a copy of the original Appendix E of the Base General Plan that presented LUC data for WABOU sites. Reviewers without access to the Travis AFB Intranet can still review examples of the information provided in the maintenance instructions.

The files of sites that will undergo cleanup actions during the summer of 2007 contain programming data from the Air Force Restoration Information Management System. The files of sites that have been cleaned up contain brief site descriptions as well as a description of the cleanup action that achieved residential cleanup levels.



Appendix B

Photographs



Photograph 1: Controlled Area at SS015.



Photograph 2: Controlled Area at SS016.



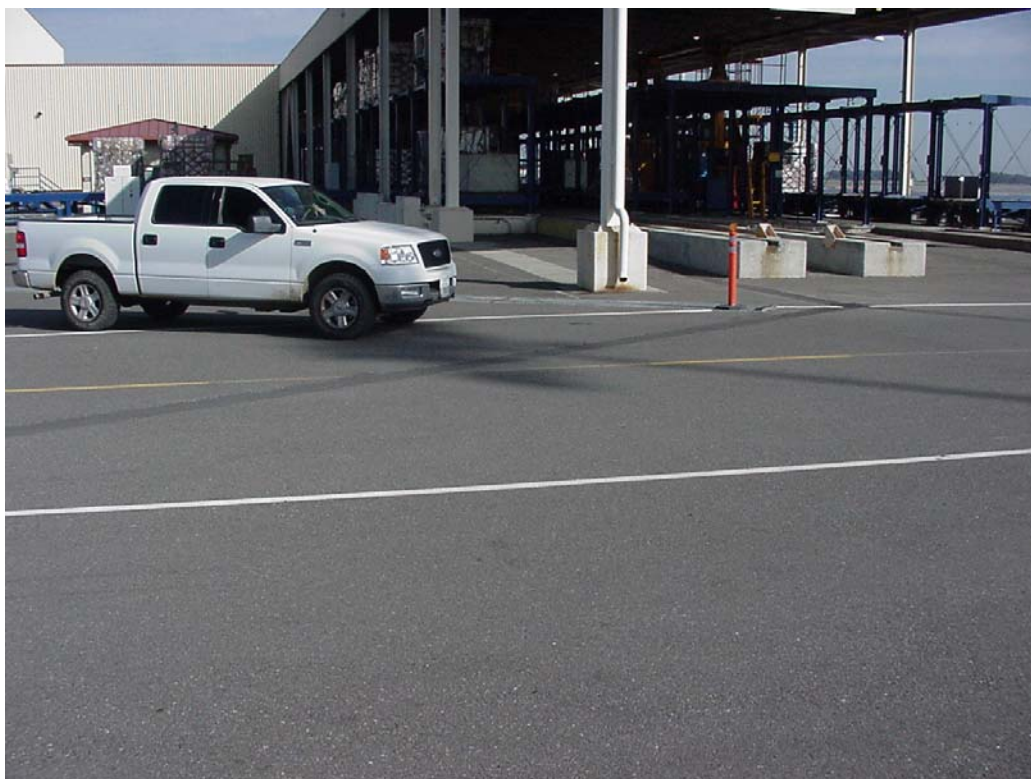
Photograph 3: Warning Sign at Controlled Area on East Side of SD033.



Photograph 4: Warning Sign at Controlled Area on West Side of SD033.



Photograph 5: Controlled Area on Southeast Side of SD037



Photograph 6: Controlled Area on Southwest Side of SD037



Photograph 7: Controlled Area at DP039



Photograph 8: Southeast Corner of Installed Generator at SD043



Photograph 9: Generator Pad and Warning Signs at SD043. Stanchion of Former Pad with Leaking Transformers is visible in the foreground.



Photograph 10: Warning Signs at Entrance and on fence near the North Access Gate.



Photograph 11: Warning Signs on Fence and behind the South Access Gate.



Photograph 12: Fencing and Berm on East Side of LF044.



Photograph 13: Fence Access to SD045. Warning sign is not posted on gate entry.



Photograph 14: Warning Sign at East Side of SS046.



Photograph 15: Warning Sign at West Side of SS046.



Photograph 16: Entrance to Travis AFB CAMU.



Photograph 17: Warning Sign at CAMU.



Photograph 18: No Trespassing Sign at CAMU.