

# **Amendment to the Annual Report on the Status of Land Use Controls on Restoration Sites in 2014**

Travis Air Force Base has published this amendment to the *Annual Report on the Status of Land Use Controls on Restoration Sites in 2014* to provide information that was inadvertently omitted from the original report. Specifically, the complete discussion for Site LF008 was left out, and specific details concerning Sites SS016 (the restrictions applied to Building 18) and SD037 (the application of land use controls to protect the installed injection and monitoring wells) were not provided. This amendment corrects these deficiencies and gives the reader a more complete understanding of the status of environmental land use controls on Travis AFB.

The new section on Site LF008 is provided in its entirety, and the additional text in the sections for Sites SS016 and SD037 are shown in red font. As with the annual Land Use Control report, this amendment will be added to the Travis AFB Administrative Record and will be placed on the Travis AFB environmental public website. This information as well as other minor text recommendations will be incorporated into future annual land use control reports.

## **7.0.1 Landfill 3 (LF008)**

LF008 was an inactive historical landfill consisting of a series of small, unlined trenches used to dispose of old pesticide containers. This disposal resulted in groundwater contamination with organochlorine pesticides, primarily alpha-chlordane.

### **7.1.1 Environmental Conditions**

The maximum concentration of alpha-chlordane in groundwater has declined to about 0.43 ppb. The federal and State of California drinking water standard for alpha-chlordane is 0.1 ppb. The interim remedial action for Site LF008 (GET) had limited effectiveness at removing the residual organochlorine pesticide contamination. Concentrations were stable and not migrating.

The Travis AFB Groundwater ROD selected Alternative 2 (Monitored Natural Attenuation) to address the residual pesticide contamination. The primary mechanism for attenuation at Site LF008 is likely sorption of the pesticides to the soil. The site sediments have a high clay content, which increases sorption and also reduces permeability. Comparisons of filtered and non-filtered groundwater samples indicated that no detectable concentrations were in the filtered samples. This result indicates that the contamination is not dissolved in groundwater, but rather sorbed to the fine soil particles suspended in the groundwater (CH2M HILL, 2012). The GET system is shut down, and the pesticide concentrations are decreasing in the absence of active pumping. The progress that MNA has made in reducing COC mass and concentrations is reported in annual GRISRs.

Travis AFB excavated the pesticide containers and pesticide-contaminated soil at Site LF008 in 2003, achieving residential cleanup standards for all soil chemicals of concern (Shaw E & I, 2004).

### **7.2.1 Status of LF008 Groundwater Land Use Controls**

Section 2.12.2.8 of the Travis AFB Groundwater ROD states that LUCs are required to ensure that groundwater is not used for potable purposes until it is remediated to MCLs that allow for unlimited use and unrestricted exposure. The groundwater contamination at LF008 does not pose an indoor air vapor intrusion risk to industrial workers or future residents.

The 2014 inspection of the groundwater LUCs at LF008 found that administrative controls are adequate to enforce the environmental restrictions. There is no evidence of any activities that could expose base personnel to contaminated groundwater, and no new construction has taken place at the site. Photograph 7a shows the controlled area at LF008.

LF008 is located inside a separately fenced field that lies within the explosive safety clear zone of a nearby conventional weapons storage facility. Special permission is required to enter the explosive safety clear zone for any activities, including inspections and sample collection. For this reason, additional administrative controls are not required to enforce the environmental land use restrictions.



Photograph 7a: Western View of LF008 Fenced Area

## **9.0 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 wash rack, oil-water separator, and four 250-gallon above-ground storage tanks. Facility 20 is the aircraft control tower. The activities at these facilities contaminated the groundwater with chlorinated solvents, mainly TCE.

### **9.1 Environmental Conditions**

Surface soil in a grassy field west of facility 18 contains polycyclic aromatic hydrocarbon (PAH) residue. A small portion of PAH-contaminated soil is covered by concrete and a brick walkway. The maximum concentration of TCE in groundwater is 319,000 ppb. The federal and State of California drinking water standard for TCE is 5 ppb. 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.

The maximum TCE concentration in the groundwater at SS016 is 29.000 ppb. The federal and State of California drinking water standard for TCE is 5 ppb. The Travis AFB Groundwater ROD selected Alternative 4 (Bioreactor and GET) to address the residual dissolved solvent contamination. The progress that the bioreactor and GET have made in reducing COC mass and concentrations is reported in annual GRISRs.

### **9.2 Status of SS016 Soil 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 unrestricted use and unlimited exposure. The Air Force is to restrict residential development and unauthorized disturbance and relocation of soil at this site.

The Travis AFB General Plan describes the presence of PAH in the surface soil and the associated land use restrictions, particularly on the unauthorized disturbance and use of soil at this site.

The 2014 inspection of the soil 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. A warning sign has been posted on a tree in the middle of the site to notify base workers of the presence of the controlled area. Photograph 9 in Appendix A of this report shows the controlled area at SS016.

The controlled area at SS016 is located three blocks from the AFCEC IST office, and an AFCEC restoration project manager drives by the controlled area during visits to the Central Groundwater Treatment Plant. As a result, at least one AFCEC restoration project manager drives by the controlled area on a monthly basis.

### **9.3 Status of SS016 Groundwater Land Use Controls**

Section 2.12.2.8 of the Travis AFB Groundwater ROD states that LUCs are required to ensure that groundwater is not used for potable purposes until it is remediated to MCLs that allow for unlimited use and unrestricted exposure. The groundwater contamination at SS016 also poses a significant indoor air vapor intrusion risk to industrial workers. Building 18 (located just north of the SS016 Bioreactor) is the only existing office facility on Travis AFB that is restricted in its use (for storage purposes only), based on the potential vapor intrusion risk that is posed by solvent COCs associated with Site SS016. So, the LUCs also restrict residential and industrial land uses until concentrations of solvents in groundwater are reduced to the point where they no longer pose an unacceptable risk to human health.

The 2014 inspection of the groundwater LUCs at SS016 found that administrative controls are adequate to enforce the groundwater and vapor intrusion restrictions. Most of the solvent plume is located beneath the aircraft flight line, which receives a high level of security. **Building 18 continues to be used for storage purposes, and the inspection team observed no office activity within the building during the inspection.** There is no evidence of any activities that could expose base personnel to contaminated groundwater or vapor, and no new construction has taken place at the site.

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

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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 Street. 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.

Past industrial activities associated with wastewater management, aircraft maintenance, heavy equipment maintenance, air cargo handling, vehicle washing, fuel transport, and waste accumulation have contaminated the local groundwater with chlorinated VOCs, SVOCs, and petroleum hydrocarbons. TCE is the most prevalent COC at this site.

The West Industrial Operable Unit RI divided SD037 into the following six (6) areas:

Area 1 – Designated by a surface soil sample collected for the sanitary sewer investigation.

Areas 2 and 3 – Locations between the sanitary sewer system and the jet fuel pipeline.

Area 4 – Facility 919 along with an OWS and hazardous waste accumulation point.

Area 5 – Facility 981 along with an OWS and hazardous waste accumulation point.

Area 6 – Facility 977.

### **18.1 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 and deliver palletized cargo from loading vehicles. The maximum concentration of TCE in groundwater is 2,070 ppb. The federal and State of California drinking water standard for TCE is 5 ppb. 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. The Travis AFB Groundwater ROD selected Alternative 5 (EVO and EA) to address the residual dissolved solvent contamination. The progress that EVO and EA have made in reducing COC mass and concentrations is reported in annual GRISRs.

### **18.2 Status of SD037 Soil 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 Area 6; because PAH, lead, and TPH concentrations in the soil exceed levels that allow for unrestricted use and unlimited exposure. The Air Force is to restrict

residential development and unauthorized disturbance and relocation of soil at this site. Alternative 16 (No Action) is the selected remedy for Areas 1 through 5.

The Travis AFB General Plan describes the presence of PAH, lead, and TPH in the surface soil and the land use restriction, particularly on the unauthorized disturbance and use of soil at this site.

The 2014 inspection of the soil LUCs at SD037 found that administrative controls are adequate to enforce the restriction, so physical barriers (i.e., fences) are not needed. Although the contaminated soil cannot be seen (since it is covered with asphalt), the asphalt work area surrounding Building 977 is in excellent condition and has not required maintenance in the past year. So, there is no evidence that the PAH-, lead-, and TPH-impacted soil has been disturbed.

SD037 is located south of Ragsdale Street, which is a main thoroughfare on the west side of the base. However, because of a major road construction project that diverted traffic away from an ammunition loading parking ramp, access to SD037 requires a more time-consuming, indirect route. On an average, an environmental restoration project manager views the controlled area about three times annually.

Due to the nature of operations at the air freight terminal, it is not practical or safe to post warning signs to notify base personnel of the presence of contaminated soil beneath the asphalt. Specifically, vehicles that are designed to transport large cargo pallets to and from both military and commercial aircraft require an open area free of physical hazards. The two small controlled areas lie in the middle of these open work areas, and there are no existing posts or structures that could be used to post signs that point out their location. Because of the high tempo of mission-critical operations associated with the air freight terminal, any obstructions would pose significant risk to both personnel and equipment. Photographs 19 and 20 in Appendix A of this report show the controlled areas within the open work areas at SD037.

### **18.3 Status of SD037 Groundwater Land Use Controls**

Section 2.12.2.8 of the Travis AFB Groundwater ROD states that LUCs are required to ensure that groundwater is not used for potable purposes until it is remediated to MCLs that allow for unlimited use and unrestricted exposure. The groundwater contamination at SD037 also poses an indoor air vapor intrusion risk to industrial workers, based on the potential vapor intrusion risk that is posed by solvent COCs associated with Site SD037. So, the LUCs also restrict residential and industrial land uses until concentrations of solvents in groundwater are reduced to the point where they no longer pose an unacceptable risk to human health. **In addition, the LUCs protect the remediation infrastructure (injection and monitoring wells) that is in place to carry out and monitor the remediation.**

The 2014 inspection of the groundwater LUCs at SD037 found that administrative controls are adequate to enforce the groundwater and vapor intrusion restrictions. There is no evidence of any activities that could expose base personnel to contaminated groundwater or vapor, and no new construction has taken place at the site. **In addition, the inspection team observed no**

damage to the injection and monitoring wells at Site SD037. Photograph 21 in Appendix A of this report shows the groundwater controlled area at SD037.



## References

CH2M HILL. 2012. *2012 Groundwater Sampling and Analysis Program Technical Memorandum*. Travis Air Force Base (AFB), California. Final. December.

Shaw Environmental & Infrastructure, Inc. 2004. *Remedial Action Report for West/Annexes/Basewide Operable Unit, Soil Remedial Action at Site LF008*. Travis AFB, CA. Final. May.