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Site Description

SUPERFUND SITE ID:	0902737	SITE NAME:	GEORGE AIR FORCE BASE

Description Text

OU1 includes ground water beneath the northeastern portion of GAFB (Northeast Disposal Area [NEDA] and adjacent off-base areas, the Industrial/Storm Drain (site SD-25[S-20]), and the Sewage Treatment Plant (STP) Percolation Ponds (site WP-26[S-21]). The contaminant of concern in the groundwater is TCE. The source of the TCE is currently unknown. Several waste disposal sites within NEDA were identified as a potential sources. The Industrial/Storm Drainsite has had contaminated sediments removed from the site. The soils beneath this area are not considered hazardous. In 1986, the California Lahontan Regional Water Qualtiy Control Board (RWQCB) adopted the Cleanup and Abatement Order (CAO). The CAO required the USAF to define the extent of TCE contamination in the groundwater beneath the NEDA, submit a plan for remediation, and begin cleanup of the groundwater. GAFB was placed on the NPL in 1990. The 5,347 acre George Air Force Base (GAFB) site is located in the western Mojave Desert in the areas of Victorville, California adjacent to the City of Adelanto, California. Victorville is located on Interstate 15, approximately 35 miles north of San Bernardino and 31 miles south of Barstow. The Mojave River flows along the east side of GAFB. Communities within the Victor Valley area include the town of Adelanto, the City of Victorville, and Silver Lakes, Apple Valley, and Hewsperia. The aquifers at the site are a shallow Upper Aquifer and a deeper Regional Aquifer separated by a Middle Clay/Silt Aquitard. The land use for the adjacent properties consist of residential, industrial, and commercial. The site includes the Northeast Disposal Area (NEDA) and areas north of the base, the STP Percolation Ponds, and the Industrial/Storm Drain. These sites consist of burial sites, landfill disposal sites, and spill liquid disposal sites. The STP Percolation Ponds, Site WP-26 (S-21), consists of five wastewater treatment plant percolation ponds that were used from the early 1950s to 1980. The site consisted of the three large main ponds and two smaller ponds that may not have been used. The percolation ponds were used primarily for discharge of treated sanitary wastes, but also may have received waste oils and solvents from industrial shops that discharged to the sanitary system. The Industrial/Storm Drain, Site SD-25 (S-20), is located within the central and northeastern portions of GAFB. The Industrial/Storm Drain has been in operation since the early 1940s. The industrial/Storm Drain consists of the storm drain southeast of the operation apron (East Storm Drain) and the storm drain between the operation apron and the Crosswind (Secondary)runway (West Storm Drain), as well as the outfall ditch downgradient from the storm drains. In February 1990, the USEPA added George AFB to the National Priorities List (NPL), making it a Superfund site. The Fede ral Facility Agreement (FFA) was signed in Oct. 1990, with the Environmental Protection Agency, the State, the Lahon tan Regional Water Quality Control Board. The three OUs were created with the signing of the FFA. OU 1 consists of site SD-25, Site WP-26, and the dissolved trichloroethylene plume detected in the groundwater beneath the northeast portion of the base and adjacent off-base areas. A Record of Decision (ROD) was completed for OU1 in March 1994. OU 2 consists of six sites: (1) Site SS-30, a free-phase JP-4 jet fuel plume identified beneath the Operational Apron; (2) Site ST-54, a pipeline leak near Building 708; (3) Site ST-57, Fuel Pit No. 1; (4) Site SS-58, the underground storage tank (UST) complex at Building 690; and (5) Site ST-67, the entire Liquid Fuel Distribution System, including five aboveground tanks, two major pipelines (8-inch and 10-inch), and all hydrants (Fuel Pits 1 through 7) and associated piping, and (6) FT-20 (groundwater), trichloroethene (TCE) detected in the groundwater in the vicinity of the old sewage treatment plant percolation ponds. OU 3 consists of the 60 remaining Installation Restoration Program (IRP) sites located throughout George Air Force Base (GAFB). The OU 3 sites consist of a variety of potential contaminant source areas including landfills, other waste disposal and storage sites, fire training areas, spill sites, and leachfields. These sites are distributed throughout the base and range in size from a few hundred square feet to over 90 acres. These sites have been designated as disposal pit (DP), fire training area (FT), landfill (LF), radiological waste (RW), spill site (SS), waste pit (WP), or "other" (OT). The remedial investigations and site characterizations for the OU 3 sites are detailed in the OU 3 Remedial Investigation (RI) Report. This ROD presents the final decision

for closure of all OU 3 IRP sites. Site OT-51 is in the western portion of the George AFB, southwest of the aircraft r unways. Five jet engine test cells were located near the site, where jet fuel spills reportedly occurred. Site OT-51 is located in the area of former jet engine test cells 799 and 807. USAF's contractor conducted initial investigations related to Site OT-51 in 1982. James M. Montgomery (JMM) conducted investigation of site OT-51 in 1992. In 1994, another company investigated Site OT-51, by advancing 21 soil borings and installing one groundwater monitoring well. This company also removed an underground storage tank (UST) and septic system. Subsequent investigations included collection of subsurface soil samples, monitoring well installation, and groundwater sampling. The elevated total petroleum hydrocarbons (TPH) (extractable as Jet Propellant Number 4 [JP-4]) and benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations were detected primarily in soil samples from an area around groundwater monitoring well WZ-04. TPH as gasoline (TPH-G), TPH as diesel (TPH-D), and BTEX compounds were detected present in soil samples from some surrounding borings, with the highest detected concentrations occurring in samples from depths of approximately 100 feet below ground surface (bgs). Site LF-35 is located in the south-central portion of George AFB, and is directly south of Runway 17/35 (North/South Runway) in Subparcels A-21, A-22, D-18 and D-19. LF-35 is classified in the Record of Decision (ROD) as a landfill because an unknown quantity of waste was disposed to the ground surface only (no waste burial occurred) over an unknown period. At the time the site was initially identified, the extent of waste burial was unknown. The landfill reportedly was used for disposal of wood and other debris, which contained asbestos and fiberglass from barracks demolition. Air Force's contractor conducted initial investigations related to Site LF-35 in 1982. The OU3 Remedial Investigation (RI) was performed in 1992, and OU 3 Feasibility Study (FS) was completed in February 1 997. The OU3 ROD was signed in November 1998 by the USEPA, Air Force and the state of California represented by the RWQCB, Lahontan Region and DTSC. A Phase I Record Search of the site was conducted, but the location was ambiguous and not easily located. Because the wastes reportedly placed at the site were not considered hazardous, remedial investigation activities were not conducted to specifically address potential contamination. Therefore, during the OU3 RI, no analytical soil samples were collected because there was no threat to human health or to environment. Asbestos and fiberglass waste material at the site is insoluble in water and not mobile in soil. Therefore, unless mobilized via excavation activities, any asbestos and fiberglass present at the site should not pose a threat to human health or the environment. The OU3 FS presented Site LF-35 as a no further action (NFA) site with the recommendation of Land Use Control and Institutional Control instructions for no surface disturbance that would expose pathways for asbestos or fiberglass fibers. The OU3 ROD states that by placing land use and deed restrictions on the site forbidding disturbance of material, the potential exposure pathways for asbestos or fiberglass will not be completed and protection of human health would be assured. A ROD that addressed OU3 was completed in October, 1998. The pesticide dieldrin has been detected in monitoring wells in the eastern portion of the base in the vicinity of the former residential housing area (i.e., monitoring wells NZ-63, NZ-64, and NZ-66). These detections are not currently associated with OU 3 and will be addressed as part of another OU; therefore, they are not addressed as part of this OU 3 ROD. The manner in which these detections are addressed is to be determined based on discussions between the Remedial Project Managers (RPMs) for the USEPA, the California Department of Toxic Substances Control (DTSC) (formerly the California Department of Health Services [DHS]), the Lahontan Regional Water Quality Control Board (RWQCB), and the United States Air Force (USAF). Based on the OU 3 remedial investigations, the "landfill sites" and the 'total petroleum hydrocarbon/volatile organic compound (TPH/VOC) sites" were assessed for remedial actions as detailed in the OU 3 FS Report; the remaining sites were recommended for No Further Action (NFA). The discussions that follow regarding OU 3 sites refer to the sites that require some form of remedial action (i.e., the landfill sites and TPH/VOC sites). The 60 OU 3 IRP sites are located throughout GAFB. The area immediately surrounding the base is the Victor Valley portion of the Upper Mojave River Basin. The regional geomorphology, surface water hydrology, geology, hydrogeology, regional planning, and ecology of GAFB and the surrounding area are discussed in detail in the OU 3 Remedial Investigation (RI) Report. GAFB is located in the Mojave Desert physiographic province of California. Locally, the base lies within a wedge-shaped tectonic block in the south-central portion of the Mojave Desert, flanked by the Sierra Nevada Mountains to the northwest, the Radman and Cady Mountains to the northeast, the San Gabriel Mountains to the southwest, and the San Bernardino Mountains to the southeast. The local region is comprised predominantly of northward sloping alluvial fan deposits derived from the surrounding mountains, and recent deposits associated with the Mojave River. Regional elevations reach as high as 8,500 feet (near Crestline), where annual precipitation typically is more than 40 inches. In contrast, the terminus of the Mojave River at Soda Dry Lake (elevation 923 feet) south of Baker receives 3 inches of precipitation annually. Elevations in the vicinity of GAFB range from 2,650 feet at the northeast corner of the study area, to 2,920 feet at the southwest corner of the base, south of Air Base Road. The average elevation at GAFB is approximately 2,750 feet, with average slopes of approximately 2 to 4 percent to the northeast. The base is relatively flat except at the eastern edge, where the surface elevation drops approximately 200 feet to the Mojave River. The average elevation of the Mojave River flood plain immediately east of the base is approximately 2,580 feet. The Mojave River flows along the east side of GAFB in a northwesterly direction. Communities within the Victor Valley area include the city of Adelanto, directly west and adjacent to GAFB, the city of Victorville directly southeast, and Oro Grande, Silver Lakes, Apple Valley, and Hesperia. The Victor Valley Wastewater Reclamation Authority (VVWRA) treatment plant is located approximately one-half mile north of the northern border of GAFB. The climate in the GAFB area is typical of the high desert region of California and Nevada. The summers are hot and dry, with maximum daily temperatures often exceeding 100 degrees-F in July and August. Winters are cool and dry and nighttime temperatures often fall below freezing in December and January. The annual average temperature is 62 degrees F. Based on Air Force records from 1942 to 1992, annual precipitation at GAFB ranges from 0.77 inch to 11.22 inches, with an average annual precipitation of 5.72 inches. Monthly precipitation typically ranges from 0.25 inch to 4.47 inches, with the period from January through March being the wettest. During storm events, daily precipitation may reach as much as 2.93 inches. Snowfall is infrequent, but may total a few inches per year and was recorded to be as high as 17 inches in 1974. The average annual potential evapotranspiration (ET) rate is about 83 inches, far exceeding average annual precipitation. Prevailing winds in the area of GAFB are from the south; however, the strongest gusts are typically from the west. Westerly gusts of 50 miles per hour (mph) or more usually occur in the spring. In the summer, strong southerlies blow over the San Bernardino Mountains (Cajon Pass) in the evenings. Northerly winds occur more frequently in the fall and winter months. GAFB is located within Census Tract 91.02, and Regional Statistical Area (RSA) 32B of San Bernardino County (US Census Bureau). RSA 32B also includes the cities of Adelanto, Hesperia, and Victorville and the unincorporated communities of Phelan, Apple Valley, and Lucerne Valley. According to the closure documents for GAFB, the estimated combined GAFB military and civilian work force on base in mid-1992 was 3,725. However, because the base closure in December 1992, there no longer are permanent residents on base. The Victor Valley area has experienced significant population growth in the past two decades. Between 1970 and 1980, the number of residents in RSA 32B increased approximately 70 percent. Population growth in the area is projected to be approximately 5 percent annually until 2010. The projected annual growth figures may be greater than 5 percent depending on the ultimate reuse of GAFB. The major land use activities of the Victor Valley area include residential development, government and commercial services, cement manufacturing, railroad and highway transportation, localized agricultural activities along the Mojave River, and industrial mining in the outlying areas. The California Aqueduct carries water across the high desert approximately 5 miles south of the base and may impact long-term land use planning. A major fuels distribution pipeline parallels Air Base Road for half the length of the base, and a high-voltage transmission utility corridor crosses the southeast corner of the base. GAFB was established during World War II and provided the foundation for a steady economic base for the Victorville, Adelanto, and Apple Valley areas. Until 1992, GAFB was the largest employer in the Victorville area. Residential and commercial development and growth of community services was, in large part, due to the presence of the base. Despite the recent base c losure, the climate and recreational attractions

within the region continue to contribute to the development of vacation and/or second homes as well as the expansion of retirement communities. Growth in the Victor Valley also has been impacted as increasing numbers of people move to the area seeking to avoid the congestion and high cost of living in the Los Angeles Basin. The proposed action for reuse of GAFB is development of an international airport and a commercial, industrial, and business park development. The Local Reuse Agency (LRA) and the Victor Valley Economic Development Agency (WEDA) has designated the airport as the Southern California International Airport (SCIA). There are currently light industry and commercial companies using the facilities. There are no current plans for residential development on former base property. The above reuse was considered during the development of risk assessments and remedy selection. As a result, the selected remedies are compatible with reuse. The selected remedy for the affected specific parcel will be reviewed with the local reuse agency, prior to a transfer, to ensure that it remains compatible with reuse. GAFB is a 5,347-acre facility constructed between 1941 and 1943. GAFB was commissioned as a flight training school. With flight training as primary activity at GAFB throughout its history, bombardier and glider, single- and twin-engine, and jet flight training schools were all accommodated on the base at various times. Over the years, a wide variety of aircraft has been stationed at GAFB. To effectively carry out the primary mission of pilot training, GAFB engaged in a variety of support operations such as aircraft maintenance and fire fighting training that required the handling, use, and disposal of hazardous and non-hazardous materials. Since 1980, the USAF has had an active environmental cleanup program which is currently known as the IRP. The purpose of the IRP at GAFB is to protect human health and the environment by identifying and cleaning up environmental contamination resulting from past disposal practices. The cleanup at GAFB is being conducted under the requirements of CERCLA. Section 120 of CERCLA states that the facilities must investigate and remediate, if necessary, past releases of hazardous waste. In December 1988, GAFB was informed that it would be decommissioned as an Air Force base in December 1992. In February 1990, the USEPA added GAFB to the Superfund National Priorities List (NPL). In October 1990, GAFB signed a Federal Facilities Agreement (FFA) with USEPA Region DC, the DTSC, and the Lahontan RWQCB. The three OUs were created with the signing of the Federal Facilities Agreement (FFA). The base was formally closed on December 15, 1992. A Record of Decision for Operable Unit 03 of the George Air Force Base Site was completed in October 1998. An Explanation of Significant Differences (ESD) addressing OU3 (Site OT-51) was completed in July 2002. An ESD addressing OU3 (Site LF-35) was completed in November 2003.