INSTALLATION BACKGROUND INFORMATION

Carswell AFB/NAS Fort Worth JRB

Carswell AFB was originally known as Tarrant Field Airdrome which was established as a military installation in 1942 for flight training and heavy bomber operations. In 1946, the Strategic Air Command (SAC) assumed control of the installation, and the base became headquarters for the 8th Air Force. The base was renamed Carswell Air Force Base (AFB) in 1948 in honor of a Fort Worth native, Major Horace S. Carswell. Headquarters, 19th Air Division, was located at Carswell AFB from 1951 to 1988.

In the late 1950s, base renovations included the extension of a runway and the addition of an off-site weapons storage area, office space, warehouses, and a fuel hydrant system. Construction through the 1970s created new dormitories, engine test cells, base exchange services, and other amenities. In the 1980s, a hospital, maintenance facilities, offices, and a munitions assembly shop were added.

Other properties that supported the base consisted of the off-site weapons storage area (WSA) and Kings Branch, the residential parcel. Kings Branch is located off base just outside the base perimeter to the southeast of the main gate and consists of 44 acres. The 247-acre off-site WSA is located off White Settlement Road, 5 miles to the west of the base. A neighbor to the west of the base is Air Force Plant 4 (AFP 4), a government-owned/contractor-operated facility where combat aircraft are designed and manufactured.

Carswell AFB was selected for closure under the Defense Base Closure and Realignment Act of 1990 during Round II Base Closure Commission deliberations. First-stage closure activities were initiated in 1992; all aircraft were relocated to Barksdale AFB by January 1993. The base ceased operations on September 30, 1993, and was transferred to the Air Force Base Conversion Agency (AFBCA) for property distribution and reuse. The base was realigned and renamed the Naval Air Station Fort Worth Joint Reserve Base, Carswell Field (NAS Fort Worth JRB) on October 1, 1994, when the U.S. Navy assumed control of the property.

Air Force Plant 4

AFP 4 became operational in 1942 when Consolidated Aircraft began manufacturing the B-24 bomber for national defense during World War II. In 1953, General Dynamics took over operation of the manufacturing facility. Since 1953, AFP 4 has produced B-36, B-58, and F-111 aircraft, and currently produces F-16 aircraft. In addition to F-16 aircraft, AFP 4 produces spare parts, radar units, and missile components. On March 1, 1993, Lockheed, Fort Worth Company, took over operations of AFP 4 from General Dynamics.

Manufacturing operations at AFP 4 have resulted in the generation of various hazardous wastes that include waste oils, fuels, spent solvents, paint residues, and spent process chemicals. Throughout most of the plant's history, waste oil, solvents, and fuels were disposed of at on-site landfills or were burned during fire training exercises.

ENVIRONMENTAL RESPONSIBILITY

As a result of past waste and resource management practices, portions of the former Carswell AFB were contaminated by various hazardous substances. In response, the U.S. Air Force (Air Force) instituted an environmental restoration program in 1984.

The Air Force maintains responsibility for the environmental cleanup of the base and associated property in cooperation with the Navy. NAS Fort Worth JRB property is being investigated and cleaned up with Defense Environmental Restoration Account (DERA) funds through the Air Force Center for Environmental Excellence (AFCEE). Specifically, the Air Force, under its Installation Restoration Program (IRP), is responsible for the cleanup of contamination that resulted from operations conducted prior to the October 1, 1994, transfer date. The contiguous and noncontiguous portions of the former Carswell AFB being transferred to the public by the Department of Defense (DoD) are being investigated and remediated with Base Realignment and Closure (BRAC) funds through the AFBCA. The AFBCA determines the conditions for transfer of property in conjunction with the Westworth Redevelopment Authority. The AFBCA works closely with the Westworth Redevelopment Authority to redevelop land for the economic benefit of the community. The AFBCA is investigating and remediating all jointly managed sites and must have all remedies in place on these sites by September 30, 1998. As of October 1, 1998, all AFBCA sites will be transferred to AFCEE for completion of remediation and long-term monitoring.

The Navy has responsibility for remediating any contamination that has resulted after the October 1, 1994, transfer date, and is also managing environmental compliance activities associated with petroleum products, storage tanks, oil/water separators, pesticides, medical waste, asbestos, polychlorinated biphenyls (PCBs), radon, lead-based paint, and other hazardous materials. The Air Force and the Navy have signed several memorandums of understanding that outline the general terms under which the Air Force and Navy will conduct the environmental management of NAS Fort Worth JRB. The Air Force has also entered into a partnering relationship with the U.S. Environmental Protection Agency (USEPA), Region VI, the Texas Natural Resource Conservation Commission (TNRCC), and other state agencies to ensure that obligations for quality cleanup efforts and environmental compliance are met.

Installation Restoration Program and Environmental Regulations

The objective of the Air Force IRP is to assess past hazardous waste disposal and spill sites at Air Force installations and to develop remedial actions consistent with the National Contingency Plan (NCP) for sites that pose a threat to human health and welfare or the environment. This section presents information on the program origins, objectives, and organization.

The 1976 Resource Conservation and Recovery Act (RCRA) is one of the primary Federal laws governing the disposal of hazardous wastes. Sections 6001 and 6003 of RCRA require Federal agencies to comply with local and state environmental regulations and provide

information to the USEPA concerning past disposal practices at Federal sites. Section 3012 of RCRA requires state agencies to inventory past hazardous waste disposal sites and provide information to the USEPA concerning those sites.

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (i.e., Superfund). CERCLA outlines the responsibility for identifying and remediating contaminated sites in the United States and its possessions. The CERCLA legislation identifies the USEPA as the primary policy and enforcement agency regarding contaminated sites.

The 1986 Superfund Amendments and Reauthorization Act (SARA) extends the requirements of CERCLA and modifies CERCLA with respect to goals for remediation and the steps that lead to the selection of a remedial process. Under SARA, technologies that provide permanent removal or destruction of a contaminant are preferable to actions that only contain or isolate a contaminant. SARA also provides for greater interaction with public and state agencies and extends the USEPA's role in evaluating health risks associated with contamination. Under SARA, early determination of Applicable or Relevant and Appropriate Requirements (ARARs) is required, and the consideration of potential remediation alternatives is recommended at the initiation of an environmental investigation. SARA is the primary legislation governing remedial actions at past hazardous waste disposal sites.

Executive Order 12580, adopted in 1987, gives various Federal agencies, including the DoD, the responsibility to act as lead agencies for conducting investigations and implementing remediation efforts when they are the sole or co-contributor to contamination on or off their properties.

To ensure compliance with CERCLA, its regulations, and Executive Order 12580, the DoD developed the IRP, under the Defense Environmental Restoration Program, to identify potentially contaminated sites, investigate these sites, and evaluate and select remedial actions for potentially contaminated facilities. The DoD issued the Defense Environmental Quality Program Policy Memorandum (DEQPPM) 80-6 regarding the IRP program in June 1980, and implemented the policies outlined in this memorandum in December 1980. The NCP was issued by USEPA in 1980 to provide guidance on a process by which (1) contaminant releases could be reported, (2) contaminants could be identified and quantified, and (3) remedial actions could be selected. The NCP describes the responsibility of Federal and state governments and those responsible for contaminant releases.

The DoD formally revised and expanded the existing IRP directives and amplified all previous directives and memoranda concerning the IRP through DEQPPM 81-5, dated 11 December 1981. The memorandum was implemented by a U.S. Air Force message dated 21 January 1982.

The IRP is the DoD's primary mechanism for response actions on U.S. Air Force installations affected by the provisions of SARA. In November 1986, in response to SARA and other USEPA interim guidance, the U.S. Air Force modified the IRP to provide for a Remedial

Investigation/Feasibility Study (RI/FS) program. The IRP was modified so that RI/FS studies could be conducted as parallel rather than serial activities. The program now includes ARAR determinations, identification and screening of technologies, and development of alternatives. The IRP may include multiple field activities and pilot studies prior to a detailed final analysis of alternatives. Over the years, requirements of the IRP have been developed and modified to ensure that DoD compliance with Federal laws, such as RCRA, NCP, CERCLA, and SARA, can be met.

Since the beginning of industrial operations at Carswell AFB in 1942, wastes have been generated and disposed of at the base. The locations of past hazardous substance activities are now managed as Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). Sources of the hazardous substances associated with the various SWMUs and AOCs are listed in the table below.

Air Force Plant 4

AFP 4 is responsible for cleaning up groundwater contamination originating from AFP 4 which has migrated to NAS Fort Worth JRB. AFP 4 plays an important role in coordinating cleanup remedies at NAS Fort Worth JRB.

Source Information for SWMUs and AOCs

SWMU	Name	Source
1	Pathological Waste Incinerator	N/A
2	Pathological Waste Storage Shed	N/A
3	Metal Cans	N/A
4	Facility Dumpsters	N/A
5	Bldg. 1628 Waste Accumulation Area	AGE maintenance shop corrosion control
6	Bldg. 1628 Wash Rack and Drain	N/A
7	Bldg. 1628 OWS	N/A
8	Bldg. 1628 Sludge Collection Tank	N/A
9	Bldg. 1628 Work Station Waste Accumulation Area	N/A
10	Bldg. 1617 Work Station Waste Accumulation Area	N/A
11	Bldg. 1617 Waste Accumulation Area	Production of printed circuit boards
12	Bldg. 1619 Waste Accumulation Area	Jet engine repair
13	Bldg. 1710 Waste Accumulation Area	Photographic film developing and developer
14	Bldg. 1060 Bead Blaster Collection Tray	N/A
15	Bldg. 1060 Paint Booth Vault	N/A
16	Bldg. 1060 Waste Accumulation Area	Corrosion control shop
17	Landfill 7	Landfill reportedly filled with clean construction rubble and fill dirt
18	Fire Training Area 1	Waste oils and fuel were burned
19	Fire Training Area 2	Waste oils and solvents were burned; used JP-4 was observed
20	Waste Fuel Storage Tank	Waste oils and solvents were burned; used JP-4 was observed
21	Waste Oil Tank	Waste oils and solvents were burned; used JP-4 was observed
22	Landfill 4	The unit contains paints, thinners, strippers, cadmium batteries, waste solvents, burned waste
23	Landfill 5	Unit contains all types of flightline waste and refuse
24	Waste Burial Area	Unit contains burned drums containing cleaning solvents and lead sludge from flightline
25	Landfill 8	Unit managed wood, metals, construction rubble, asphalt, concrete and trees
26	Landfill 3	Landfill used as a disposal point for waste, primarily construction rubble
27	Landfill 10	Unit managed concrete rubble and tree limbs
28	Landfill 1	Original landfill, no record available

29	Landfill 2	Unit managed rubble, construction materials, and moderate quantities of hazardous waste
30	Landfill 9	Unit managed clean construction rubble and trees
31	Bldg. 1050 Waste Accumulation Area	Pneudraulic shop
32	Bldg. 1410 Waste Accumulation Area	Repair jet engines, assembly/disassembly, cleaning wheels and tires, service batteries
33	Bldg. 1420 Waste Accumulation Area	Maintenance and inspection of munitions trailers
34	Bldg. 1194 Waste Accumulation Area	Maintenance of refueling and water servicing vehicles
35	Bldg. 1194 Vehicle Refueling Shop OWS System	OWS, low level of metals
36	Bldg. 1191 Waste Accumulation Area	Vehicle bodywork and painting; maintenance of government vehicle and heavy equipment
37	Bldg. 1191 Vehicle Maintenance Shop OWS	OWS, low level of metals
38	Bldg. 1269 PCB Transformer Building	N/A
39	Bldg. 1643 Waste Accumulation Area	Aircraft maintenance operations
40	Bldg. 1643 OWS	N/A
41	Bldg. 1414 OWS System Field Maintenance Squadron Aerospace Ground Equipment	OWS, low levels of metals
42	Bldg. 1414 Waste Accumulation Area	Maintenance and inspection of AGE
43	Bldg. 1414 Non-Destructive Inspection (NDI) Waste Accumulation Area	N/A
44	Bldg. 1027 OWS at the Aircraft Washing Hangar	OWS, low levels of metals
45	Bldg. 1027 Waste Oil Tank Vault at the Aircraft Washing Hangar	Part of OWS
46	Bldg. 1027 Waste Accumulation Area	N/A
47	Bldg. 1015 Jet Engine Test Cell OWS System	OWS, low levels of metals
48	D1048 Fuel System Floor Drains	N/A
49	Aircraft Washing Area 1	Carries runoff from runway to SWMU 53
50	Aircraft Washing Area 2	Carries runoff from runway to SWMU 53
51	Bldg. 1190 Central Waste Holding	Three wasteholdings area
52	Bldg. 1190 OWS System	OWS, low levels of metals
53	Storm Water Drainage System	Unit received stormwater runoff from areas throughout the base
54	Storm Water Interceptors	Unit consists of stormwater runoff
55	East Gate OWS	N/A
56	Bldg. 1405 Waste Accumulation Area	N/A
57	Bldg. 1432/1434 Waste Accumulation Area	N/A
58	Pesticide Rinse Area	Rinse water from pesticide spray equipment
59	Bldg. 8503 WSA Waste Accumulation Area	Radium, waste cleaner, solvents and thinners, TCE in WSA

60	Bldg. 8503 Radioactive Waste Burial Site	Radium, waste cleaner, solvents and thinners, TCE in WSA
61	Bldg. 1320 Power Production Maintenance Facility Waste Accumulation Area	Maintenance of portable gasoline and diesel generators
62	Landfill 6	Landfill used for base construction activities (hydraulic fluid, construction rubble, miscellaneous trash)
63	Entomology Dry Well	Pesticides and herbicide contaminated rinse water
64	French Underdrain System	Hydrocarbons in unnamed stream
65	WSA Disposal Site	Radium, waste cleaner, solvents and thinners, TCE in WSA
66	Sanitary Sewer System	Unit manages sanitary waste from throughout the base and industrial wastewater from various activities
67	Bldg. 1340 OWS	Hydrocarbons in unnamed stream
68	POL Tank Farm	JP-4
AOC 1	Bldg. 1518 Service Station	Hydrocarbons in Base Service Station
AOC 2	Airfield Groundwater Plume	JP-4 in airfield groundwater
AOC 3	Waste Oil Dump	Oil solvents, unknown in waste oil dump
AOC 4	Fuel Hydrant System	Hydrocarbons in groundwater
AOC 5	Grounds Maintenance Yard	N/A
AOC 6	RV Storage Area	Area previously use for motor pool vehicles
AOC 7	Former Base Refueling Area	Hydrocarbon from abandoned gas station
AOC 8	SW Aerospace Museum	N/A
AOC 9	Golf Course Maintenance Yard	N/A
AOC 10	Bldg. 1064 OWS	OWS, low levels of metals
AOC 11	Bldg. 1060 OWS	OWS, low levels of metals
AOC 12	Bldg. 4210 OWS	OWS, low levels of metals
AOC 13	Bldg. 1145 OWS	OWS, low levels of metals
AOC 14	Unnamed Stream	Hydrocarbons in unnamed stream
AOC 15	Bldg. 1190 Storage Shed	Storage shed

Notes:
N/A: Information Not Available
OWS: Oil/Water Separator
TCE: Trichloroethylene
Source: "New Compliance Plan Application," March 1996, pp. II-22BII-24.