



## CARSWELL/PLANT 4 RESTORATION ADVISORY BOARD

Fact Sheet #12  
May 10, 2001

### NAS FORT WORTH JOINT RESERVE BASE INSTALLATION RESTORATION PROGRAM

This is the twelfth in a series of fact sheets focusing on the Installation Restoration Program (IRP) at the Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth JRB). The NAS Fort Worth JRB, formerly Carswell Air Force Base (AFB), is in the process of planning and conducting activities for the identification, remediation, and closure of contaminated sites at the base.

The IRP is the Department of Defense's (DoD) primary mechanism for environmental response actions on U.S. Air Force installations. IRP activities are governed by provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and other applicable federal and state regulations. These activities are being conducted through the combined efforts of the Air Force Center for Environmental Excellence (AFCEE) and the Air Force Base Conversion Agency (AFBCA). Under provisions of RCRA, the Air Force identified 68 solid waste management units (SWMU) and 19 areas of concern (AOC) at NAS Fort Worth JRB for further study and clean up, if necessary.

### CARSWELL ON-BASE

### RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 49 AND 50

SWMUs 49 and 50 are former aircraft washing areas 1 and 2, respectively. Because of the nature and location of these units, work on SWMU 49 is contingent on the findings of potential contamination at SWMU 50. Therefore, work plans were prepared for the sampling at SWMU 50 only. The Final Work Plan for SWMU 50 was submitted to AFCEE in September 2000, and the first round of field work was conducted at this location in December 2000. Initial results from the December 2000 sampling event have been validated, and it was determined that further soil sampling is necessary at SWMU 50. In addition, a groundwater investigation also will be conducted to determine to what extent, if any, groundwater has been impacted.

### SITE INVESTIGATION OF AREAS OF CONCERN 17 AND 18

The first round of field sampling activities was completed in May 2000 for the Site Investigations (SI) at a suspected former landfill (AOC 17) and suspected former fire training area (AOC 18). Based on the sampling results, it does not appear as though a release of hazardous constituents has occurred from either of these units. Therefore, an SI report recommending closure of these units was submitted to the regulators in December 2000. Closure of these sites was received on March 7, 2001.

### LIMITED RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 45, 54, AND 55

The Final Work Plans to conduct a limited RCRA Facility Investigation (RFI) were completed in September 2000 for the following areas: Building 1027 Waste Oil Tank Vault (SWMU 45); Storm Water Interceptors (SWMU 54); and the East Gate Oil/Water Separator (SWMU 55). As-built drawings obtained for the oil/water separator serving Building 1027 indicate that a waste oil tank vault associated with the oil/water separator does not exist. Archival research produced legible photographs identifying SWMU 45 in the RCRA Facility Assessment (RFA) conducted in 1989. It is evident from these photographs that a sanitary sewer lift station was mistakenly identified as SWMU 45. Based on this information, a report recommending closure was prepared and submitted to Texas Natural Resource Conservation Commission (TNRCC) in January 2001. Subsequently, in a letter dated March 9, 2001, the TNRCC granted closure of SWMU 45.

Soil sampling was conducted for SWMUs 54 and 55 to determine if these units have released hazardous constituents to the environment. The first round of field work was conducted in December 2000. Based on the results from the first round, a second round of soil, sediment, and surface water sampling is necessary. The second round of sampling is planned for late May or early June.

### BASEWIDE GROUNDWATER MONITORING CONTINUES

The Air Force collects groundwater samples at basewide locations four times a year to monitor the status of the contaminant plumes and to provide information for establishing trends. The current program (called Basewide Quarterly Groundwater Sampling and Analysis Program, or GSAP) has been in place since April 1995. Quarterly events occur in January, April, July, and October of each year. The GSAP Plan was updated for the year 2001's sampling events. Based on the data collected over the past 5 years, it was recommended that groundwater monitoring activities be reduced from four to two times per year. Therefore, the last round of sampling was conducted in April 2001, and the next round will be conducted in October 2001.

### RCRA FACILITY INVESTIGATION OF LANDFILLS CONTINUES

RFIs continue at six former landfills, also referred to as SWMUs. These landfills include Landfill 7 (SWMU 17), Landfill 3 (SWMU 26), Landfill 1 (SWMU 28), Landfill 2 (SWMU 29), Landfill 9 (SWMU 30), and Landfill 6 (SWMU 62). The results of the RFIs will determine if a source of potential contamination exists and if the source has impacted the soil, groundwater, surface water, or sediments at or near each landfill. Work plans were prepared for the fourth phase of investigations at Landfills 1, 2, 3, 6, 7, and 9, and field work for the fourth phase was completed in February 2001. Sample data collected during the fourth phase has been analyzed, validated, and evaluated. Based on this evaluation, interim remedial actions, also referred to as "hot spot removals," will be necessary prior to the completion of the RFI. These hot spot removals will likely be conducted this summer.

### WASTE ACCUMULATION AREA RCRA FACILITY INVESTIGATION

An RFI of 16 Waste Accumulation Areas (WAA) was completed in June 1999. Based on the results of the initial investigation, an RFI report recommending regulatory closure was prepared for 7 of the 16 WAAs and submitted to the regulators in July 2000. Closure of these seven WAAs was approved by the TNRCC in November 2000. A Phase II soil and groundwater investigation was performed on the remaining nine WAAs in May 2000. Based on the results of the Phase II investigation, a Final RFI Report recommending site closure was submitted to TNRCC for four additional sites in March 2001. [Please refer to Executive Summary #27 for more information regarding the Final RFI Report for these former sites.] Additional investigations

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and/or remedial actions will be required at the remaining five WAAs. Work plans for additional soil and groundwater sampling were submitted to AFCEE in January 2001.

## **RCRA FACILITY INVESTIGATION OF SOLID WASTE MANAGEMENT UNITS 19, 20, 21, AND 53 AND AREA OF CONCERN 19**

The first round of field sampling activities was completed in May 2000 for RCRA Facility Investigations of the following areas: former Fire Training Area No. 2 (SWMU 19), former aboveground waste fuel storage tank (SWMU 20), former underground storage tank (SWMU 21), former fire training area (AOC 19), and the storm water drainage system (SWMU 53). Based on the results of the data collected, further sampling is necessary at each of these units. The additional field work was conducted for SWMU 53 in December 2000, and based on these sampling results, an RFI Report was submitted to the TNRCC recommending closure in March 2001. [Please refer to Executive Summary #28 for more information regarding the Final RFI Report for SWMU 53.]

A geophysical survey was completed at SWMUs 19, 20, and 21 and AOC 19 in February 2001. Monitoring wells were installed at these sites in February, and groundwater sampling was conducted in February and April. Based on the results of this survey, several areas of buried metal will be excavated. Based on the outcome of these excavations, additional soil sampling will be conducted. After the sampling is complete, the Draft RFI Report will be prepared.

## **UNDERGROUND STORAGE TANK PROGRAM**

Soil samples collected at the location of the former Underground Storage Tank (UST) 1427-1 during the initial UST investigations indicated that a release to the environment had occurred from the UST. As a result, the site was determined to meet the TNRCC definition of a Leaking Petroleum Storage Tank (LPST) site. A Final Release Determination Report for UST 1427-1 was submitted to the TNRCC in July 2000 presenting this discovery and requesting a TNRCC LPST site identification number. A Plan A Site Assessment was completed for the LPST at Building 1427, and this information was presented in a Draft Site Assessment Report that was submitted for AFCEE review in April 2001.

Additional sampling of groundwater at AOC 1, the Base Service/Gas Station, and the delineation of contaminants further downgradient of AOC 1 were requested by the TNRCC in January 2000. The delineation consisted of the installation and sampling of three downgradient off-base wells and the continued groundwater monitoring of existing on-base wells. Three off-base wells were installed and sampled in May 2000, and the first semi-annual groundwater sampling at seven existing on-base wells was performed in April 2000. The most recent semi-annual sampling event occurred in October 2000. A Draft Annual Groundwater Monitoring Report was submitted to AFCEE for review in April 2001.

The Final 1999 Annual Groundwater Sampling Report for AOC 4, the Fuel Hydrant System, was submitted to the TNRCC in July 2000, fulfilling the TNRCC reporting requirements for an LPST site undergoing a long-term monitoring program. This report presents four quarters of groundwater sampling that was performed in 1999. For the year 2000, groundwater monitoring at this site was reduced to a semi-annual (April and October) sampling schedule. Product removal activities from two wells at AOC 4 continue on a weekly to monthly basis depending on the occurrence of free product. A Final 2000 Annual Groundwater Monitoring Report and a Site Closure Request form was submitted to TNRCC in March 2001. [Please refer to Executive Summary #30 for more information regarding the Final 2000 Annual Groundwater Monitoring Report and Site Closure Request for AOC 4.]

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The TNRCC requested a historical review in the form of a Site Assessment Report for SWMU 68 (the Petroleum, Oil, and Lubricants Tank Farm) and AOC 7 (the former Base Refueling Area). The final Site Assessment Report for SWMU 68 and AOC 7 was submitted to the TNRCC in October 2000. Product removal activities at four wells associated with SWMU 68 and AOC 7 have continued on a weekly to monthly basis depending on the occurrence of free product. Semi-annual groundwater sampling to monitor the stability of groundwater contaminants began in April 2000 with the most recent semi-annual sampling taking place in October 2000. A Draft Annual Groundwater Monitoring Report and a Site Closure Request form was submitted to AFCEE for review in March 2001.

A second round of soil and/or groundwater samples was collected in May 2000 at six individual UST sites to investigate potential release points discovered during the initial UST investigation. A Draft Site Investigation Summary for the six UST (non-LPST) sites was prepared in January 2001 and submitted for AFCEE review. The comments were incorporated in the final version and submitted to the TNRCC in February 2001.

## **CORRECTIVE MEASURES CONDUCTED AT AREA OF CONCERN 13**

Field work for the removal and replacement of the oil/water separator (OWS) system associated with Building 1145, the Auto Hobby Shop, was performed in May 2000. This OWS system is referred to as AOC 13. The removal activities consisted of the over excavation of soils around the system, the removal and disposal of one OWS and one UST, and the excavation of soils beneath and around the system that appeared to be affected as the result of the system. Confirmation soil sampling was conducted at the limits of the excavation along the walls of the pit. A review of the analytical data from the soil sampling was performed, and it was determined that further investigation is necessary at this site. The last round of sampling was conducted in December 2000. An RFI report was prepared and submitted to AFCEE in April 2001.

## **RCRA FACILITY INVESTIGATION OF OIL/WATER SEPARATORS**

An RFI is being conducted on 21 OWS sites at NAS Fort Worth JRB. Based on the results of the initial investigation, one OWS (SWMU 7) received closure in July 2000 based on evidence that a release of hazardous constituents to the environment has not occurred from this unit. An RFI Report for five additional OWS sites at Buildings 1101, 1320, 1423, 1656, and 4160 was submitted to the regulators for closure, also based on evidence of no release, in December 2000. The TNRCC granted No Further Action status for these five sites in a letter dated March 23, 2001.

Investigations will continue at the remaining 15 sites before closure can be requested. Phase III Work Plans for 14 OWS sites were submitted in November 2000, and the field work was completed soon thereafter. A draft RFI report requesting closure for 13 of these sites at Buildings 1015, 1027, 1060, 1064, 1190, 1191, 1194, 1414, 1602, 1643, 3358, 4146, and 4210 was submitted to AFCEE for review in February 2001, and comments were received in early April 2001. The Final RFI report will be submitted to the TNRCC in May 2001. The one remaining OWS site (Building 1655) requires additional investigation. The OWS at Building 1145 (AOC 13) has been removed and will be closed under a separate header (see "Corrective Measures Conducted at Area of Concern 13" above).

## **ONLINE DOCUMENTS FOR CARSWELL**

All documents published in the Carswell Administrative Record/Information Repository can be obtained from the web site hosted by AFCEE for the Carswell AFB Restoration Advisory Board. The address is <http://www.afcee.brooks.af.mil/er/carswell/nasfw/>.

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## CARSWELL OFF-BASE

### RCRA FACILITY INVESTIGATION OF LANDFILLS

Field work was completed at four former landfills in September 2000. These landfills include Landfills (LF) No. 4, 5, and 8 and Waste Pile (WP) 07. Installation of earthen caps at LFs 4 and 5 were completed, and the Final Cover System Evaluation Reports were issued to the TNRCC for approval in September 2000. The hot spot removal from LF 8 also was completed in 2000 as was drum and hot spot removal at WP07. A post removal geophysical survey verified that the removal of drums was complete. Final disposal of the hazardous waste from WP07 was completed in October 2000. All data was provided for the completion of the RCRA Facility Investigation Closure Report for these sites and has been submitted to TNRCC for review and approval. In summary, all work at these landfills is complete, and in a letter dated 5 March 2001, the TNRCC stated that LFs 4, 5, 8 and WP07 have been granted closure under the Risk Reduction Standard 2.

### SANITARY SEWER SYSTEM RFI

Results from Phase II soil and groundwater sampling in March 2000 have verified that most sections of the Sanitary Sewer may be recommended for closure. However, a Phase III RCRA Facility Investigation is required to complete confirmation and/or delineation of some contaminants. The Phase III RFI also will involve collecting samples from Sanitary Sewer areas with questionable structural integrity as identified in a camera survey. The results of the RFI will be used to determine which TNRCC Risk Reduction Standard is appropriate for closure of the unit. If the analytical results are below background, then a closure with No Further Action will be requested. If the sites have contaminants above background level concentrations, then additional efforts will be accomplished that may include remediation of the sites. The Phase III RFI began on 14 February 2001 and is currently in progress. All soil samples have been collected and are awaiting laboratory results. Once the results have been received groundwater sampling will begin, if necessary.

### OFF-SITE WEAPON STORAGE AREA

All field work has been completed, and areas of previous excavation have been filled and regraded. The RFI site closure report was submitted to the regulators in July 2000, and U.S. EPA comments were received August 2000. The Draft Final Closure Report was submitted to the regulators in September 2000. TNRCC approval for closure under Risk Reduction Standard 2 was received on 5 February 2001. Final closure of three underground storage tanks under the TNRCC Petroleum Storage Tank Division will be completed within the next quarter.

### GROUNDS MAINTENANCE YARD AND AEROSPACE MUSEUM SITE

- The regulatory agencies have stated that they have no additional comments and concur on closure of the Grounds Maintenance Yard under RRS2.
- As per TNRCC requirement for closure, deed certification for the Grounds Maintenance Yard was submitted on 5 April 2001.
- The results of this sampling are contained in the draft Aerospace Museum Site Investigation Report submitted to AFCEE on 20 April 2001.

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### PROPERTY TRANSFERS

- Property transfer for the Kings Branch Housing Area was completed in October 2000.
- Property transfer for the Federal Bureau of Prisons was completed on 15 December 2000.
- Property transfer for the Stables will be completed by 1 May 2001.

### RCRA PERMIT RENEWAL UPDATE

The RCRA permit was signed by the TNRCC on 2 May 1990 and became effective 7 February 1991. It is required to be updated and renewed every 10 years. The permit renewal application was submitted to the regulatory agency on 1 February 2001 with application approval projected by 1 August 2001. Permit approval could take an additional 12 months. Since the issuance of the permit, the Container Storage Area has been closed (4 November 1999) and an additional 48 SWMUs and 19 Areas of Concern (AOC) have been identified and have undergone or are undergoing RFIs. Twenty-seven SWMUs and six AOCs have so far been closed. Currently, no hazardous waste is stored at the base for more than 90 days. The permit renewal with amendment is a vehicle to ensure Corrective Actions continue until sites are closed. This permit also serves to request formally the removal of the Container Storage Area (CSA) and the SWMUs and AOCs that have achieved site closure and/or No Further Action (NFA).

On 14 March 2001, the permit application was declared administratively complete by the TNRCC and required a public notice of the proposed activity. This requires the application to be placed in a public place for review and copying. A public notice was placed in the Fort Worth Star-Telegram on 13 April 2001 stating that the permit renewal application was placed in the City of White Settlement Public Library.

### TETRACHLOROETHENE (PERC) SITE

PERC contamination previously was detected in the soil in the vicinity of the Unnamed Stream and along Farmer's Branch Creek. In order to confirm the nature and extent of previously detected PERC contamination in the soil, additional soil sampling is being conducted at previous soil gas survey and soil boring locations. Sampling was conducted in March 2001. Once the samples have been analyzed, the data will be provided to the TNRCC for review and approval under the RRS 2. In addition, selected groundwater monitoring wells are being sampled as part of the Air Force Plant 4 long-term monitoring program.

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## GLOSSARY OF TERMS

**Area of Concern (AOC)** – an area identified as a potential environmental concern.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** – Also known as “Superfund,” this law was enacted in 1980 and requires the identification, investigation, and clean up of contaminated sites.

**Oil/Water Separator (OWS)** – an oil water separator is used to separate the oil from waste water. Oil water separators are used commonly with service stations, maintenance shops, and surface water drainage systems where surface water run off may collect oil drippings or small spills.

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**Resource Conservation and Recovery Act (RCRA)** – a law enacted to identify active hazardous waste generating facilities, investigate past site contamination, and initiate cleanup and pollution prevention measures.

**RCRA Facility Assessment (RFA)** – an assessment of a unit used for storing wastes and the potential for this unit to release hazardous constituents into the environment.

**RCRA Facility Investigation (RFI)** – an investigation of soil and groundwater contamination resulting from a release of contaminants from a storage unit regulated under RCRA.

**Risk Reduction Standard (RRS)** – a risk-based cleanup standard for soil and groundwater defined by the Texas Natural Resource Conservation Commission.

**Site Investigation (SI)** – a preliminary environmental study of a site possibly contaminated by an underground storage tank used for storing petroleum products such as gasoline or aviation fuels.

**Solid Waste Management Unit (SWMU)** – a defined area used for storage or disposal of hazardous wastes as defined by RCRA.

**Trichloroethene (TCE)** – an industrial solvent used to dissolve or disperse another substance such as oil; often used in degreasing metal parts.

**Underground Storage Tank (UST)** – a tank installed beneath the ground surface used for storing liquids such as gasoline, aviation fuels, and waste oils.

**Waste Accumulation Area (WAA)** – a specified area used for temporary storage of hazardous wastes.

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## FOR MORE INFORMATION

*If you would like more information, please see our web site at <http://www.afcee.brooks.af.mil/er/carswell/nasfw/> or contact the following individuals:*

***Carswell On-Base:** Michael Dodyk, HQ AFCEE, at (817) 782-7167 or via e-mail at [Mike.Dodyk@carswell.af.mil](mailto:Mike.Dodyk@carswell.af.mil) or Don Ficklen, HQ AFCEE, at (210) 536-5290 or via e-mail at [Holmes.Ficklen@HQAFCEE.brooks.af.mil](mailto:Holmes.Ficklen@HQAFCEE.brooks.af.mil)*

***AFP 4:** George Walters, the Aeronautical Systems Center, Wright-Patterson Air Force Base, OH, at (800) 982-7248 Ext. 416 or via e-mail at [George.Walters@wpafb.af.mil](mailto:George.Walters@wpafb.af.mil)*

***Carswell Off-Base:** Charles Pringle, AFCEE ERB, at (210) 536-4477 or via e-mail at [Charles.Pringle@HQAFCEE.brooks.af.mil](mailto:Charles.Pringle@HQAFCEE.brooks.af.mil)*