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PARSONS

Parsons Engineering Science, Inc.
1700 Broadway, Suite 900 • Denver, Colorado 80290 • (303) 831-8100 • Fax: (303) 831-8208

November 4, 1998

Mr. Jerry Branum
Eaker AFBCA/DA
2809 Atlanta Street
Eaker AFB, Arkansas 72315

Subject: Report on Bioventing System Removal and Well and Monitoring Point Abandonment at Buildings 457 and 702, Eaker Air Force Base, Arkansas (Contract Number F41624-92-8036, Delivery Order 17)

Dear Mr. Branum:

This letter provides a brief description of groundwater monitoring well and soil vapor monitoring point (MP) abandonment performed at Building 457, and bioventing system removal and MP abandonment performed at Building 702, located at Eaker Air Force Base (AFB), Arkansas. Personnel from the Denver, Colorado and Billings, Montana offices of Parsons Engineering Science, Inc. (Parsons ES) and a qualified local electrician performed the abandonment activities in September 1998. Site layouts for Buildings 457 and 702 are provided in the attached Figures 1 and 2, respectively.

Parsons ES installed bioventing systems for treatment of fuel-contaminated soils at both sites in March and April 1996. The systems were in operation for one year, and Parsons ES conducted post-remediation respiration testing and soil, soil gas, and groundwater sampling at both sites in June 1997. A letter report presenting the results of this testing and sampling event was delivered to the Air Force Center for Environmental Excellence (AFCEE) and Eaker AFB on October 1, 1997. After reviewing the letter report for these two sites, the Arkansas Department of Pollution Control and Ecology (ADPC&E) issued a letter dated June 15, 1998. The letter indicated that the former tanks at Buildings 457 and 702 apparently were not regulated units. In these cases, the ADPC&E references the American Society for Testing and Materials (ASTM) Risk-Based Corrective Action (RBCA) guidance and compares soil analytical data to Tier 1 exposure scenarios. Based on the results of previous sampling events, no Tier 1 exceedances were noted for reasonable exposure scenarios, and no further remedial action was recommended by ADPC&E. The residual petroleum contamination in shallow soils at these two sites presents no risk, and would only present future risk if unprotected workers were allowed to excavate in these small areas.

A draft sampling and analysis plan (SAP) had been prepared by Parsons ES for closure sampling at Building 457, but the plan was not executed because the no further remedial action recommendation was issued by the ADPC&E based on data presented in the October 1, 1997 letter. The bioventing system and well abandonment were completed in accordance with the

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work plan prepared by Parsons ES for Eaker AFB and AFCEE dated 24 July 1998, with one exception noted below.

Scope of Work Performed at Building 457

The abandonment activities at the Building 457 site included the following:

- Three soil vapor MPs (MPA, MPB, and MPC) were abandoned, and the ground surface was restored.
- Four temporary groundwater monitoring wells (TW1501 through TW1504) were abandoned, and the ground surface was restored.
- The air supply piping from the blower system to the vent wells was abandoned in place.
- As described in the work plan, the bioventing system was left in place for possible future use at the adjacent Building 410 site.

The MPs were abandoned by excavating the wellhead to a depth of 2 feet bgs and cutting and clamping the tubing. A six-inch layer of concrete was placed in each excavation, and the rest of the excavation was backfilled with native soil.

The temporary groundwater monitoring wells were abandoned according to procedures set forth by the Arkansas Water Well Construction Commission and presented by the ADPC&E. An excavation was dug at each wellhead, and the well casings were cut off at a depth of 2 feet bgs. Each casing was filled with bentonite chips. After the top of each casing was capped, a 6-inch concrete layer was placed at the bottom of the excavation, and the rest of the excavation was backfilled with native soil.

The underground piping to the two vent wells was abandoned by cutting the pipe at each end (at the blower system and at the wellhead) at 6 inches below ground surface (bgs). A plug of concrete was placed inside the pipe, and a polyvinyl chloride (PVC) cap was then placed over each end of the pipe. A three-inch thick layer of concrete was placed on top of the capped pipe, and a three-inch layer of soil was then placed over the concrete.

Scope of Work Performed at Building 702

The abandonment activities at the Building 702 site included the following:

- The electrical system associated with the blower unit was disconnected and removed. The blower, blower shed, and electrical panel were transported to a storage area designated by the Base.
- Three soil vapor MPs (MPA, MPB, and MPC) were abandoned, and the ground surface was restored.
- The air supply piping from the blower system to the vent well was abandoned in place.

- The work plan called for the abandonment of four temporary groundwater monitoring wells (TW1601 through 1604) that had been installed at the site. When the Parsons ES field crew arrived onsite, it was discovered that another contractor had already abandoned the monitoring wells. This represents the only significant deviation from the work plan.

Removal of the bioventing system involved disconnecting the power supply to the blower and removing associated wire and conduit connected to the switch, disconnecting and removing the regenerative blower from the vent well piping, and removing the blower housing. The meter was removed and reclaimed by the power company.

The MPs were abandoned by excavating around the wellhead to a depth of 2 feet bgs, and cutting and clamping the tubing. A six-inch layer of concrete was placed in each excavation, and the rest of the excavation was backfilled with native soil.

The underground piping to the vent well was abandoned by cutting the pipe at each end (at the blower system and at the wellhead) at 6 inches bgs. A plug of concrete was placed inside the pipe, and a PVC cap was then placed over each end of the pipe. A three-inch thick layer of concrete was placed on top of the capped pipe, and a three-inch layer of soil was then placed over the concrete.

This is the final deliverable for Buildings 457 and 702 under the AFCEE Extended Bioventing Project at Eaker AFB, Arkansas. Results reports for Spill Site No. 1 should be delivered in December 1998. Please call Mr. Dave Teets at (406) 254-6533 or Mr. John Ratz at (303) 831-8100 if you have any questions regarding this report or any other environmental issues that you may have.

Sincerely,

PARSONS ENGINEERING SCIENCE, INC.

JWR for DBT

David B. Teets
Site Manager

John W. Ratz, P.E.
Project Manager

Attachments

cc: Major Ed Marchand, AFCEE/ERT
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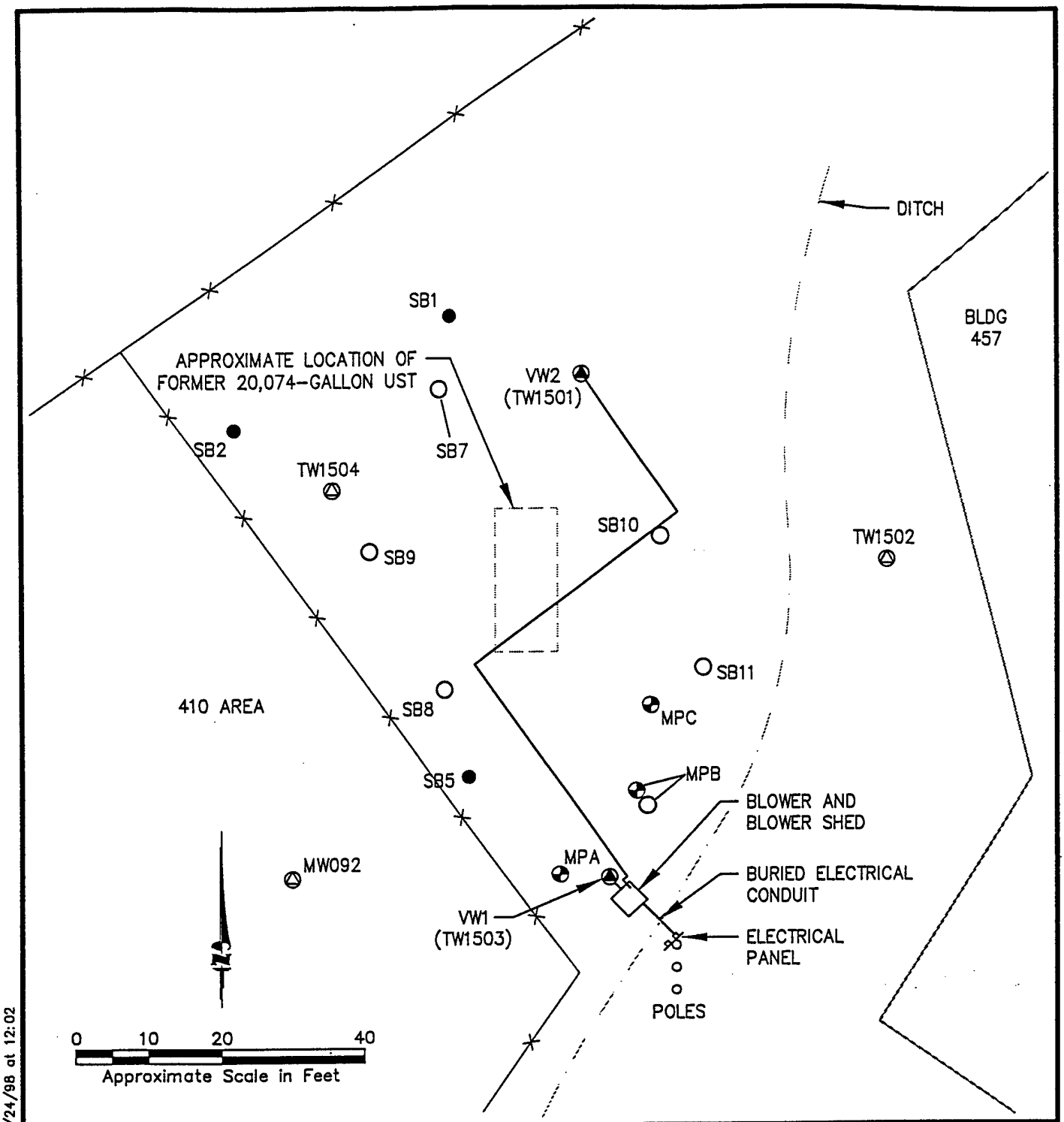

LEGEND

- VAPOR MONITORING POINT
- VENT WELL/MONITORING WELL
- MONITORING WELL
- GEOPROBE BORING (1996)
- GEOPROBE BORING (1997)
- 2" PVC AIR INJECTION PIPE (BURIED)

FIGURE 1

BUILDING 457 AREA LAYOUT

Eaker AFB, Arkansas

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Denver, Colorado

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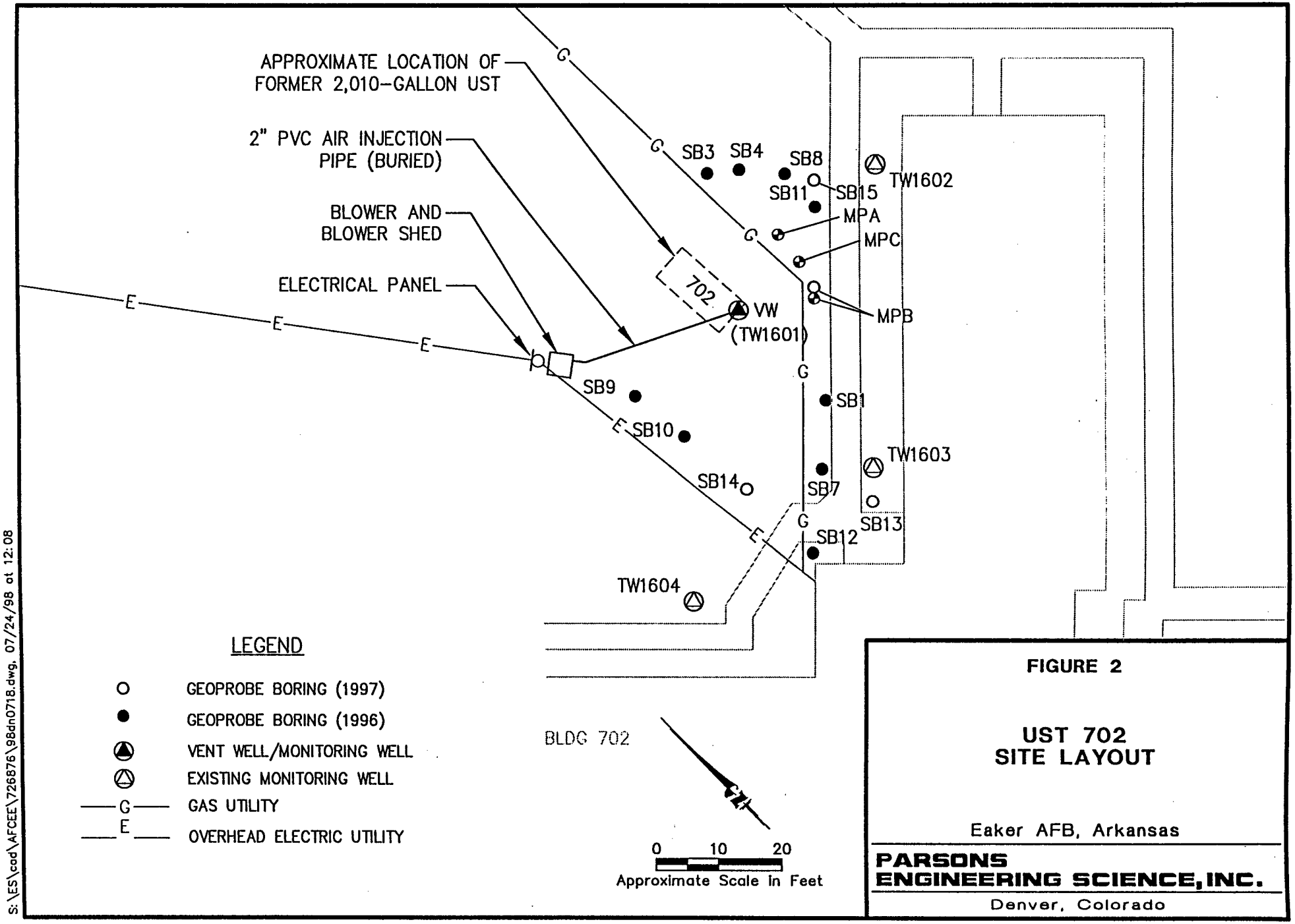

FIGURE 2

UST 702
SITE LAYOUT

Eaker AFB, Arkansas

PARSONS ENGINEERING SCIENCE, INC.

Denver, Colorado