RL74 DATA VERIFICATION SUMMARY REPORT
for soil vapor samples collected from
CAMP STANLEY STORAGE ACTIVITY
BOERNE, TEXAS

Data Verifiers: Michelle Wolfe and Tammy Chang
Parsons ES

INTRODUCTION

The following data validation summary report covers environmental soil vapor samples and associated field quality control (QC) sample collected from the Camp Stanley Storage Activity Site B-3 on June 20 and 21, 2000. Samples in the following laboratory Sample Delivery Group (SDG) were analyzed for selected volatile organic compounds (VOCs):

200272

All samples were collected by Parsons Engineering Science (Parsons ES). All analyses were performed by Environmental Analytical Service, Inc. following procedures outlined in the AFCEE QAPP, version 3.0.

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the AFCEE QAPP, version 3.0. Information reviewed in the data packages include sample results; the summary of laboratory quality control results; case narrative; raw data; and chain-of-custody forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the AFCEE QAPP were met.

VOC SDG 200272

General

This SDG consisted of nine (9) samples confirmation environmental soil vapor samples. The samples were collected on June 20 and 21, 2000 and analyzed for selected volatile organic compounds (VOCs): ***cis*-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride**.

VOC analyses were performed using United States Environmental Protection Agency (USEPA) Method TO-14. All samples for this SDG were collected and analyzed following the procedures and protocols outlined in the AFCEE QAPP.

Accuracy

Accuracy was normally evaluated using the %R results for the MS/MSD samples; LCS samples; and surrogate spikes. There was no MS/MSD analysis in this SDG.

The LCS and surrogate %Rs were within acceptance criteria.

Precision Results

Precision was normally evaluated using the Relative Percent Difference (RPD) results obtained from MS/MSD %Rs; LCS %Rs; and the field duplicate analyte values. There was no MS/MSD analysis in this SDG. The parent sample for the field duplicates was not analyzed due to pressure problems. Therefore, there were no field duplicates analyzed in this SDG.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All the results for the samples in this SDG were usable. The completeness for this SDG is 100.0% compared to the minimum acceptance limit of 90%.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the chain-of-custody procedures to those described in the AFCEE QAPP
- Comparing actual analytical procedures to those described in the AFCEE QAPP
- Evaluating holding times

- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this SDG were collected and analyzed following the sampling, chain-of-custody (COC) and analytical procedures described in the AFCEE QAPP with the exceptions noted in the introduction of this report. All samples collected were prepared and analyzed within the holding times required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All continuing calibration criteria were met.
- All second source verification criteria were met.
- All internal standard criteria were met.

There was one method blank associated with the VOC analyses in this SDG. The method blank was free of target VOCs above the RL.

DATA VALIDATION SUMMARY REPORT
FOR

CAMP STANLEY STORAGE ACTIVITY (B – 3)

soil vapor samples collected from

CAMP STANLEY

BOERNE, TEXAS

Data Validator: Michelle Wolfe

INTRODUCTION

The following data validation summary report covers environmental soil vapor samples and associated field quality control (QC) sample collected from the Camp Stanley Storage Activity Site B-3 during the period February 14 and 15, 2000. The samples were analyzed for *cis*-1,2-Dichloroethene, Tetrachloroethene, Trichloroethene and Vinyl chloride by the following laboratory Sample Delivery Group (SDG):

200064

All samples were collected by Parsons Engineering Science (Parsons ES). All analyses were performed by Environmental Analytical Service, Inc. following procedures outlined in the AFCEE QAPP, version 3.0.

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and validated following the guidelines outlined in the AFCEE QAPP, version 3.0. Information reviewed in the data packages include sample results; the summary of laboratory quality control results; case narrative; raw data; and chain-of-custody forms. The analyses and findings presented in this report are based on the reviewed information, and meeting guidelines in the AFCEE QAPP (with the exceptions noted below).

VOC SDG 200064

General

This SDG consisted of ten (10) samples, including nine (9) confirmation environmental air samples and one field duplicate air sample. The samples were collected on February 14 and 15, 2000 and analyzed for volatile organic compounds (VOCs).

VOC analyses were performed using United States Environmental Protection Agency (USEPA) Method TO-14. Except where indicated in this report, all samples for this SDG were collected and analyzed following the procedures outlined in the AFCEE QAPP.

Accuracy Results

Accuracy was evaluated using the %R results for the MS/MSD samples; LCS samples; and surrogate spikes. There was no MS/MSD analysis in this SDG.

The LCS and surrogate %Rs were within acceptance criteria.

Precision Results

Precision was evaluated using the Relative Percent Difference (RPD) results obtained from MS/MSD results and the field duplicate analyte values. There was no MS/MSD analysis in this SDG. Sample DUP-1 was the field duplicate of sample EMISSION - 3.

All field duplicate RPDs were within acceptance criteria.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All the results for the samples in this SDG were usable. The completeness for this SDG is 100.0% compared to the minimum acceptance limit of 90%.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the chain-of-custody procedures to those described in the AFCEE QAPP
- Comparing actual analytical procedures to those described in the AFCEE QAPP
- Evaluating holding times

- Examining laboratory blanks for cross contamination of samples during the analysis.

All samples in this SDG were analyzed following the chain-of-custody (COC) and analytical procedures described in the AFCEE. All samples collected were prepared and analyzed within the holding times required by the respective method.

- All instrument performance check criteria was met.
- All initial calibration criteria were met.
- All continuing calibration criteria were met.
- All second source verification criteria were met.
- All internal standard criteria were met.

There were two method blanks associated with the VOC analyses in this SDG. All blanks were free of VOCs above the RL.

RL83 DATA VERIFICATION SUMMARY REPORT
for

soil vapor samples collected from

CAMP STANLEY STORAGE ACTIVITY

BOERNE, TEXAS

Data Verifiers: Michelle Wolfe & Tammy Chang

INTRODUCTION

The following data validation summary report covers environmental soil vapor samples and associated field quality control (QC) sample collected from the Camp Stanley Storage Activity Site B-3 (under RL83) on November 6 & 7, 2000. Samples in the following laboratory Sample Delivery Group (SDG) were analyzed for selected volatile organic compounds (VOCs):

200513

All samples were collected by Parsons Engineering Science (Parsons ES). All analyses were performed by Environmental Analytical Service, Inc. following procedures outlined in the AFCEE QAPP, version 3.0.

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the AFCEE QAPP, version 3.0. Information reviewed in the data packages include sample results; the summary of laboratory quality control results; case narrative; raw data; and chain-of-custody forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the AFCEE QAPP were met.

VOC SDG 200513

General

This SDG consisted of ten (10) samples, including nine (9) confirmation environmental soil vapor samples and one field duplicate sample. The samples were collected on November 6 & 7, 2000 and analyzed for selected volatile organic compounds (VOCs): ***cis*-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride**.

VOC analyses were performed using United States Environmental Protection Agency (USEPA) Method TO-14. All samples for this SDG were collected and analyzed following the procedures and protocols outlined in the AFCEE QAPP.

Accuracy

Accuracy was evaluated using the %R results for the MS/MSD samples; two LCS samples; and surrogate spikes. There was no MS/MSD analysis in this SDG.

The LCS and surrogate %Rs were within acceptance criteria.

Precision

Precision was evaluated using the Relative Percent Difference (RPD) results obtained from MS/MSD %Rs; LCS %Rs; and the field duplicate analyte values. There was no MS/MSD analysis in this SDG. Sample DUP1 was the field duplicate of sample Emission 3.

Most of the field duplicate RPDs were within acceptance criteria except for as follows:

Field Dup. Pair	Analyte	RPD	QC
Emission 3 and DUP1	*cis*-1,2-dichloroethene	25.4	20

The cis-1,2-dichloroethene result in the parent and field duplicate are considered estimated and flagged “J”.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All the results for the samples in this SDG were usable. The completeness for this SDG is 100.0% compared to the minimum acceptance limit of 90%.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the chain-of-custody procedures to those described in the AFCEE QAPP;
- Comparing actual analytical procedures to those described in the AFCEE QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

All samples in this SDG were collected and analyzed following the sampling, chain-of-custody (COC) and analytical procedures described in the AFCEE QAPP. All samples collected were prepared and analyzed within the holding times required by the method.

- All instrument performance check criteria were met.
- There were two initial calibration curves established for this report. All initial calibration criteria for both ICAL curves were met.
- All continuing calibration criteria were met.
- All second source verification criteria were met.
- All internal standard criteria were met.

There were two method blanks associated with the VOC analyses in this SDG. The method blanks were free of target VOCs above the RL.

TO58 DATA VERIFICATION SUMMARY REPORT

for samples collected from

CAMP STANLEY STORAGE ACTIVITY

BOERNE, TEXAS

Data Verification by: Katherine LaPierre
Parsons - Austin

INTRODUCTION

The following data verification summary report covers three water samples collected from Camp Stanley Storage Activity (CSSA) under Task Order 0058 on July 19, 2002. The samples in the following Sample Delivery Group (SDG) were analyzed for volatile organic compounds (VOCs):

0207142

According to the DQOs for this project, no trip blanks, or field QC samples of any kind, are required for screening data.

All samples were collected by Parsons. The volatile analyses were performed by DHL Analytical following the procedures outlined in the Statement of Work and SW846 methodology. It should be noted that the data in this SDG is considered screening data, and thus, DHL was not required to follow AFCEE QAPP, Version 3.0. However, the QAPP was used as the primary tool in the verification of the data.

The cooler associated with this SDG was received at a temperature of 3.4^0 C, which is within the $2\text{-}6^0$ C range recommended by the QAPP.

It should be noted that sample B3-VEW1-7/19 was not analyzed undiluted. The lowest dilution run for this sample was 10x due to the high concentration of cis-1,2-dichloroethene present in the sample. Most analytes were non-detect at the 10x dilution. Cis-1,2-dichloroethene required a dilution of 100x.

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the AFCEE QAPP, version 3.0. Information reviewed in the data packages included sample results; laboratory quality control results; method blanks; calibrations; case narrative; raw data; and chain-of-custody (COC) forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the AFCEE QAPP, version 3.0, were met.

VOLATILES

General

This SDG consisted of three (3) groundwater samples. The samples were collected on July 19, 2002 and were analyzed for the full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B.

Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the MS/MSD samples, LCS samples and the surrogate spikes. No sample was designated for MS/MSD analysis on the chain of custody. However, the laboratory analyzed an MS/MSD pair on sample AOC65-PZ1-7/19. It should be noted that only a small subset of analytes (1,1-dichloroethene, benzene, chlorobenzene, toluene, and trichloroethene) were spiked for the MS/MSD samples.

All MS/MSD, LCS and surrogate %Rs were within acceptance criteria.

Precision

Precision was evaluated using the relative percent difference (RPD) obtained from the MS/MSD concentrations.

All MS/MSD RPDs were within acceptance criteria.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the AFCEE QAPP;
- Comparing actual analytical procedures to those described in the AFCEE QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

All samples in this SDG were analyzed following the COC and the analytical procedures described in the AFCEE QAPP. All samples were prepared and analyzed within the holding time required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All internal standard criteria were met.
- All initial calibration verification criteria were met, except for the following:

ICV Date	Analyte	%D	QC Criteria
7/23/02	Chloroethane	27.7	≤ 20%
	Dichlorodifluoromethane	23.3	

Dichlorodifluoromethane was recovered high and all associated samples were non-detect, so no corrective action was necessary. Chloroethane was recovered low and all associated sample results were non-detect. Because this data was used for screening only, the results for chloroethane were not rejected. Both the LCS and the second source verification had acceptable recoveries for this analyte, so the low ICV recovery was attributed to the standard used.

- All second source verification criteria were met.

There was one method blank associated with the VOC analyses in this SDG. The blank was free of any target VOCs at or above the RL.

Completeness

Completeness has been evaluated by comparing the total number of samples collected, the total number of volatile results reported for those samples, and the total number of analytical results flagged as unusable (R).

All analytical results in this SDG were determined to be usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 90%.

TO58 DATA VERIFICATION SUMMARY REPORT

for samples collected from

CAMP STANLEY STORAGE ACTIVITY

BOERNE, TEXAS

Data Verification by: Katherine LaPierre
Parsons - Austin

INTRODUCTION

The following data verification summary report covers two water samples collected from Camp Stanley Storage Activity (CSSA) under Task Order 0058 on July 23, 2002. The samples in the following Sample Delivery Group (SDG) were analyzed for volatile organic compounds (VOCs):

0207154

According to the DQOs for this project, no trip blanks, or field QC samples of any kind, are required for screening data.

All samples were collected by Parsons and analyzed by DHL Analytical following the procedures outlined in the Statement of Work and SW846 methodology. It should be noted that the data in this SDG is considered screening data, and thus, DHL was not required to follow AFCEE QAPP, Version 3.0. However, the QAPP was used as the primary tool in the verification of the data.

The cooler associated with this SDG was received at a temperature of 0.0^0 C, which is below the $2\text{-}6^0$ C range recommended by the QAPP. The samples were received in good condition and were not frozen during transit, so data quality was not adversely affected.

It should be noted that sample B3-VEW01 was not analyzed undiluted. The lowest dilution run for this sample was 10x due to the high concentration of cis-1,2-dichloroethene present in the sample. Most analytes were non-detect at the 10x dilution. Cis-1,2-dichloroethene required a dilution of 100x.

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the AFCEE QAPP, version 3.0. Information reviewed in the data packages included sample results; laboratory quality control results; method blanks; calibrations; case narrative; raw data; and chain-of-custody (COC) forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the AFCEE QAPP, version 3.0, were met.

VOLATILES

General

This SDG consisted of two (2) groundwater samples. The samples were collected on July 23, 2002 and were analyzed for the full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B.

Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the MS/MSD samples, LCS samples and the surrogate spikes. No sample was designated for MS/MSD analysis on the chain of custody. However, the laboratory analyzed an MS/MSD pair on sample AOC65-RO-7/23. It should be noted that only a small subset of analytes (1,1-dichloroethene, benzene, chlorobenzene, toluene, and trichloroethene) were spiked for the MS/MSD samples.

All MS/MSD, LCS and surrogate %Rs were within acceptance criteria.

Precision

Precision was evaluated using the relative percent difference (RPD) obtained from the MS/MSD concentrations.

All MS/MSD RPDs were within acceptance criteria.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the AFCEE QAPP;
- Comparing actual analytical procedures to those described in the AFCEE QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

All samples in this SDG were analyzed following the COC and the analytical procedures described in the AFCEE QAPP. All samples were prepared and analyzed within the holding time required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All internal standard criteria were met.
- All initial calibration verification criteria were met.
- All second source verification criteria were met.

There was one method blank associated with the VOC analyses in this SDG. The blank was free of any target VOCs at or above the RL.

Completeness

Completeness has been evaluated by comparing the total number of samples collected, the total number of volatile results reported for those samples, and the total number of analytical results flagged as unusable (R).

All analytical results in this SDG were determined to be usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 90%.