

APPENDIX B

Data Quality Evaluation Report - Soil January – March 2011

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ACRONYMS AND ABBREVIATIONS

%	percent
%D	percent difference
BFF	Bulk Fuels Facility
CCV	continuing calibration verification
DL	Detection Limit
DoD	U.S. Department of Defense
DRO	Diesel Range Organics
EPA	U.S. Environmental Protection Agency
GRO	Gasoline Range Organics
ICP	inductively coupled plasma
ICS	interference check sample
ICV	initial calibration verification
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
OSRTI	Office of Superfund Remediation and Technology Innovation
OSWER	Office of Solid Waste and Emergency Response
ppb	parts per billion
ppm	parts per million
QAPjP	BFF Spill site-specific quality assurance/quality control plan
QC	quality control
QSM	Quality Systems Manual
quarterly report	<i>Quarterly Pre-Remedy Monitoring and Site Investigation Report for January – March 2011, Bulk Fuels Facility, Solid Waste Management Units ST-106 and SS-111</i>
RPD	relative percent difference
RRF	relative response factor
SDG	sample delivery groups
SM	Standard Method
SVOC	semivolatile organic compound

ACRONYMS AND ABBREVIATIONS (concluded)

TPH	total petroleum hydrocarbon
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency

VOC volatile organic compound

DATA QUALITY EVALUATION REPORT – SOIL JANUARY – MARCH 2011

1.1 Laboratory Data Quality Summary

This laboratory data quality summary describes the findings of the review of data from the first-quarter 2011 soil vapor monitoring well installation soil sampling event and is provided to document the quality of the analytical data used in the *Quarterly Pre-Remedy Monitoring and Site Investigation Report for January – March 2011, Bulk Fuels Facility, Solid Waste Management Units ST-106 and SS-111* (quarterly report). Sampling procedures and overall quality control (QC) and quality assurance protocols for the first-quarter 2011 soil vapor monitoring well installation soil sampling event are presented in the draft *Quality Assurance Project Plan (QAPjP), Bulk Fuels Facility Spill, Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base, Albuquerque, New Mexico* (U.S. Army Corps of Engineers [USACE], 2011).

Three hundred thirty-nine soil samples, thirty-six field duplicates, thirteen field blanks, twenty-five equipment rinse blanks, and twenty-nine trip blanks were collected during the period from January 18 through March 30, 2011, and sent to Gulf Coast Analytical Laboratories, Inc. (GCAL), Baton Rouge, LA for analyses. The laboratory holds a current U.S. Department of Defense (DoD) Environmental Laboratory Accreditation Program certification to perform the listed analyses.

Soil boring samples were analyzed for the following list of parameters:

- Volatile organic compounds (VOCs) - SW8260B;
- Semivolatile organic compounds (SVOCs) – SW8270D (new wells only);
- Total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) (C6-C10) - SW8015B;
- TPH as diesel range organics (DRO) (C10-C28) - SW8015B;
- Lead - SW6010C;

All analytical results obtained from the first-quarter 2011 soil vapor monitoring well installation soil sampling event were submitted in sample deliverable groups 211012024, 211012519, 211020705, 211021018, 211021620, 211021904, 211022225, 211022316, 211022506, 211030308, 211030411, 211030721, 211030817, 211030940, 211030942, 211031008, 211031124, 211031907, 211032219, 211032409 and 211040113. Attachment 1 to this report summarizes the location identification (ID), the Shaw sample ID, sample purpose, date of collection, GCAL's sample ID, and the specific analytical program for each sample collected during the first-quarter 2011 soil vapor monitoring well installation soil sampling event. An EPA Level III data review was performed on analytical results for the twenty-one sample delivery groups (SDGs). The review was performed in accordance with the guidelines and control criteria specified in the following documents:

- The site-specific Bulk Fuels Facility (BFF) Spill QAPjP (USACE, 2011);
- *DoD Quality Systems Manual for Environmental Laboratories, Version 4.2* (DoD, 2010);
- *USEPA Contract Laboratory Program, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (2006) (SW-846, 2006 and updates);
- USACE 200-1-10, *Environmental Quality – Guidance for Evaluating Performance-Based Chemical Data* (2005);
- *USEPA Contract Laboratory Program, National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008); and
- *EPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review*, Final (January 2010).

The following QC elements were included in the EPA Level III data review:

- Sample preservation and sample extraction and analysis holding times;
- Laboratory method blanks;
- Initial and continuing calibration blanks (metals only);
- Surrogate recoveries (organic analyses);
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries;
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries;
- Relative percent differences (RPDs);
- Initial calibration and verifications;

- Continuing calibration verifications;
- Inductively coupled plasma (ICP) interference check samples (metal analysis only);
- ICP serial dilution (metal analysis only);
- Internal Standards
- Field blanks; and
- Field duplicates.

Analytical data were reviewed in terms of precision, bias, representativeness, comparability, and completeness as follows:

- *Bias* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. The recovery of target analytes from fortified samples is compared to the acceptance criteria defined in the QAPjP and DoD Quality Systems Manual (QSM) (DoD, 2010). When the acceptance criteria are not available in the DoD QSM, results are compared to the laboratory in-house control limits. When these criteria are not met, the data are flagged accordingly.
- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are flagged accordingly.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods.
- *Completeness* is expressed as a ratio of the number of usable data to total of analytical data results.

The following presents EPA Level III data review findings. The discussion summarizes data quality outliers and their potential impact on the data quality and usability of analytical results. Attachment 2 (at the end of this report) presents definitions of data qualification and reason codes applied to the analytical results.

1.2 Sample Preservation, Sample Extraction and Analysis Holding Times (Reason Code H)

The sample coolers and samples were received intact at the laboratory and were within the required 0-6 degrees Celsius, and in compliance with EPA and Standard Method preservation requirements.

Sample holding times were evaluated by comparing the sample collection dates to the sample extraction dates and analysis dates. Extraction and analysis holding times were reviewed for all samples to determine the validity of the sample results. Holding times were not exceeded.

1.3 Laboratory Method Blanks (Reason Code B1)

The field sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch and for each analytical method. Positive results in the laboratory method blanks for SW8260B, SW8270D, and SW6010C Methods were observed and are summarized below:

Table 1.3-1. Summary of Laboratory Method Blank Contamination and Impacted Data

Analytical Method	Laboratory QC Batch #	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	MB915410	Chloroform	1.05	2.0	"U" qualified for analyte in SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0080
SW8260B	MB915840	Methylene chloride	2.74	5.0	"U" qualified for analyte in SB0015, SB0016, SB0078, SB0079
SW8260B	MB916241	Methylene chloride	4.82	5.0	None
SW8260B	MB920440	Toluene	1.43	2.0	None
SW8260B	MB922868	Toluene	0.436	2.0	"U" qualified for analyte in SB0002, SB0003, SB0008, SB0009, SB0012, SB0013, SB0109
SW6010C	MB925895	Lead	1.4	15	None
SW8260B	MB928289	1,2,4-Trimethylbenzene	0.692	2.00	None
SW8260B	MB928289	Ethylbenzene	0.578	2.00	"U" qualified for analyte for analyte in SB0160
SW8260B	MB928289	m,p-Xylene	1.62	4.00	"U" qualified for analyte in SB0160
SW6010C	MB926833	Lead	1.4	15	None
SW8260B	MB928313	m,p-Xylene	0.894	4.00	None
SW8260B	MB928616	m,p-Xylene	1.13	4.00	"U" qualified for analyte for SB0140, SB0288, SB0927, SB0929, SB0947

Table 1.3-1. Summary of Laboratory Method Blank Contamination and Impacted Data (concluded)

Analytical Method	Laboratory QC Batch #	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	MB928616	Ethylbenzene	0.313	2.00	"U" qualified for analyte in SB0116, SB0133, SB0136, SB0140, SB0288, SB0927, SB0928, SB0947
SW6010C	MB927222	Lead	290	15	None
SW6010C	MB927224	Lead	260	15	None
SW8260B	MB928684	Bromomethane	74.6	100	None
SW8260B	MB928684	2-Butanone	90.7	250	"U" qualified for analyte in SB0138, SB0140, SB0141, SB0142, SB0958
SW6010C	MB927787	Lead	230	600	None
SW8260B	MB928289	m,p-Xylene	1.62	4.00	"U" qualified for analyte in SB0129, SB0130, SB0131, SB0132, SB0160, SB0944
SW8260B	MB928289	Ethylbenzene	0.578	2.00	"U" qualified for analyte in SB0129, SB0130, SB0131, SB0132, SB0133, SB0135, SB0160, SB0944
SW8260B	MB928289	1,2,4-Trimethylbenzene	0.692	2.00	"U" qualified for analyte in SB0130, SB0131, SB0132, SB0135, SB0944
SW6010C	MB928136	Lead	150	600	None
SW6010C	MB928139	Lead	280	600	None
SW8260B	MB932261	Bromomethane	92.5	100	"U" qualified for analyte in SB1221
SW8270D	MB931597	Diethylphthalate	24.6	330	"U" qualified for analyte in SB1215
SW8260B	MB933063	Toluene	0.676	2.0	"U" qualified for analyte in SB0942, SB1226, SB1260, SB1262, SB1263, SB1264, SB1265, SB1267, SB1268, SB1753, SB1757
SW8270D	MB933574	Diethylphthalate	22.6	330	None

Based on the DoD QSM requirements, laboratory method blank levels are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants, such as acetone and methylene chloride. Table 1.3-1 summarizes method blank contamination and impacted sample results. As a result of the blank detections, the impacted results were qualified as non-detected (U). The detected concentrations in the samples were less than or equal to five times their corresponding level detected in the blank. The detected result for methylene chloride was also qualified as non-detected (U) at the LOQ when the detected sample result was less than ten times the blank level. The blank qualification has no impact on the data usability.

1.4 Initial and Continuing Calibration Blanks (Reason Code B2)

In addition to the laboratory method blank for metals, initial and continuing calibration blank results were reviewed to ensure that the instrument was free of contamination prior to the analyses. No qualification was necessary.

1.5 Surrogate Recoveries (Reason Code S)

Surrogate standards are organic compounds added to field and laboratory QC samples for organic analysis to evaluate matrix effect and method performance on an individual sample basis. Biased surrogate recoveries were noted for SW8260B, SW8270D and SW8015B Methods as summarized below:

Table 1.5-1. Summary of Surrogate Recovery Outlier and Impacted Data

Analytical Method	Sample	Surrogate Recovery Outlier (%)	Control Limit (%)	Qualifier
SW8270D	SB0044	Phenol-d5 (103%)	40-100%	None
SW8270D	SB0048	Phenol-d5 (104%)	40-100%	None
SW8270D	SB0049	Phenol-d5 (103%)	40-100%	None
SW8015B TPH DRO	SB0076	o-Terphenyl: diluted out	27%-129%	None
SW8260B	SB1736	4-Bromofluorobenzene (121%)	85-120%	"J+" qualify all results reported above the LOD
SW8015B TPH GRO	SB1735	Bromochlorobenzene (433%)	47-164%	None
SW8260B	SB0299	1,2-Dichloroethane-d4 (140%)	62-125%	"J+" qualified all results reported above the LOD except for 2-butanone, acetone, and naphthalene which were reported from another analysis
SW8270D	SB0304	Phenol-d5 (102%)	40-100%	None

In sample SB0076 for TPH -DRO analysis, elevated TPH-DRO concentrations were observed. In order to bring the sample results within the range, sample SB0076 was diluted at a 10x dilution factor and consequently, the surrogate o-terphenyl was diluted out. Data qualification was not applied to the TPH - DRO results because of the dilution.

In sample SB1736, the surrogate 4-bromofluorobenzene was recovered slightly above the upper control limit, however the recoveries of the remaining surrogates dibromofluoromethane, 1,2-dichloroethane-d4, and toluene-d8 in the same analysis were within the control range. Sample SB1736 reported results above the laboratory's LOD for analytes 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acetone and naphthalene. Results were qualified as biased high ("J+").

In sample SB1735 for TPH-GRO, elevated TPH-GRO concentrations were observed. In order to bring the sample results within the range, sample SB1735 was diluted at a 200x dilution factor. Data qualification was not applied to the TPH-GRO results because of the dilution.

In sample SB0299, the surrogate 1,2-dichloroethane-d4, was recovered slightly above the upper control limit, however the recoveries of the remaining surrogates 4-bromofluorobenzene, dibromofluoromethane, and toluene-d8 in the same analysis were within the control range. Sample SB0299 reported results above the laboratory's LOD for analytes 1,2,4-trimethylbenzene, 1,2-dibromomethane, 1,3,5-trimethylbenzene, benzene, ethylbenzene, styrene, toluene, xylene (total), m,p-xylene, n-propylbenzene, o-xylene and sec-butylbenzene. Results were qualified as biased high ("J+").

Samples SB0044, SB0048, SB0049, and SB0304 reported recoveries for phenol-d5 slightly above the upper control limit, however, the remaining associated acid surrogates, 2-fluorophenol and 2,4,6-tribromophenol in the same analysis were within the control range. No qualification action was necessary due to two of the three acid surrogates were within control limits.

Except where noted, surrogate recoveries in other samples analyzed for VOCs, SVOCs, TPH-GRO, and TPH -DRO met the acceptance criteria.

1.6 LCS/LCSD Recoveries (Reason Code L)

The LCS is an aliquot of analyte-free matrix spiked with target analytes and is prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. LCS recovery biases were reported for SW8260B and SW8270D Methods as presented below:

Table 1.6-1. Summary of LCS/LCSD Recovery Outliers and Impacted Data

Analytical Method	Laboratory QC Batch #	LCS/LCSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8270D	450607	Acenaphthylene (108%/109%)	45-105%	None
SW8270D	450533	Acenaphthylene (107%/ok)	45-105%	None
SW8260B	451077	Acetone (35% RPD)	0-30%	"J/UJ" qualified for analyte in SB0004, SB0006, SB1726
SW8270D	450960	Acenaphthylene (106%/106%)	50-105%	None
SW8270D	450960	m,p-Cresol (109%/ok)	40-105%	None
SW8270D	450966	m,p-Cresol (ok/106)	40-105%	None
SW8270D	451047	Pyrene (43% RPD)	0-30%	"UJ" qualified for analyte in SB0110
SW8260B	451043	Naphthalene (133%/145%)	40-125%	None
SW8260B	451043	1,1,2,2-Tetrachloroethane (ok/131%)	55-130%	None
SW8260B	451043	1,1,2-Trichloroethane (ok/127%)	60-125%	None
SW8260B	451043	1,2-Dibromo-3-chloropropane (ok/143%)	40-135%	None
SW8260B	451043	1,2-Dibromoethane (ok/128%)	70-125%	None
SW8260B	451077	Acetone (35% RPD)	0-30%	"J/UJ" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739
SW8270D	451047	Pyridine (43% RPD)	0-30%	"UJ" qualified for analyte in SB0114, SB0314, SB0315, SB0316, SB0317, SB0318, SB0319, SB0383, SB0384, SB0385, SB0386, SB0387, SB0388, SB0389
SW8270D	451048	3,3'-Dichlorobenzidine (34% RPD)	0-30%	"UJ" qualified for analyte in SB0390, SB0391, SB0392, SB0393, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1735, SB1736, SB1737, SB1738, SB1739
SW8270D	451048	3-Nitroaniline (33% RPD)	0-30%	"UJ" qualified for analyte in SB0390, SB0391, SB0392, SB0393, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1735, SB1736, SB1737, SB1738, SB1739

Table 1.6-1. Summary of LCS/LCSD Recovery Outliers and Impacted Data (continued)

Analytical Method	Laboratory QC Batch #	LCS/LCSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8270D	451048	4-Chloroaniline (40% RPD)	0-30%	"UJ" qualified for analyte in SB0390, SB0391, SB0392, SB0393, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1735, SB1736, SB1737, SB1738, SB1739
SW8270D	451048	Aniline (45% RPD)	0-30%	"UJ" qualified for analyte in SB0390, SB0391, SB0392, SB0393, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1735, SB1736, SB1737, SB1738, SB1739
SW8270D	451161	m,p-Cresol (108%/110%)	40-105%	None
SW8260B	451499	Chloroethane (46% RPD)	0-30%	"UJ" qualified in analyte for SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB1741, SB1743
SW8270D	451721	2,4-Dinitrophenol (32% RPD)	0-30%	"UJ" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0150, SB0151, SB0152, SB0153, SB0154, SB0300, SB0301, SB0302, SB0303, SB0304, SB0305
SW8270D	451721	Pyridine (36% RPD)	0-30%	"UJ" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0150, SB0151, SB0152, SB0153, SB0154, SB0300, SB0301, SB0302, SB0303, SB0304, SB0305
SW8260B	452229	1,2,3-Trichloropropane (ok/136%)	63-130%	None
SW8260B	452229	1,2-Dibromo-3-chloropropane (ok/148%)	40-135%	None
SW8260B	452229	1,2-Dibromomethane (ok/127%)	70-125%	None
SW8260B	452229	Acrolein (ok/167%)	34-158%	None
SW8260B	452229	Acrylonitrile (ok/155%)	49-142%	None
SW8260B	452229	Naphthalene (ok/127%)	40-125%	None
SW8260B	452229	Vinyl acetate (ok/150%)	59-146%	None
SW8270D	452181	4-Chloroaniline (40% RPD)	0-30%	"UJ" qualified for analyte in SB0129, SB0130, SB0131, SB0132, SB0133, SB0134, SB0135, SB0296, SB0297, SB0341, SB0944, SB0945, SB0946, SB0947, SB0948, SB0949, SB1747, SB1749
SW8270D	452266	Hexachlorocyclopentadiene (127%/125%)	48-116%	None

Table 1.6-1. Summary of LCS/LCSD Recovery Outliers and Impacted Data (concluded)

Analytical Method	Laboratory QC Batch #	LCS/LCSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8270D	452272	Hexachlorocyclopentadiene (ok/129%)	48-116%	None
SW8270D	452272	4-Chloroaniline (38% RPD)	0-30%	"UJ" qualified for analyte in SB0136, SB0137, SB0138, SB0139, SB0140, SB0141, SB0142, SB0927, SB0928, SB0929, SB0930, SB0931, SB0932, SB0933, SB0934, SB0935, SB0950, SB0951, SB0952
SW8270D	452361	Hexachlorocyclopentadiene (132%/130%)	48-116%	None
SW8270D	453039	n-Nitrosodiphenylamine (116%/ok)	50-115%	None
		m,p-Cresol (110%/110%)	40-105%	
SW8270D	452957	Hexachlorocyclopentadiene (140%/125%)	48-116%	None

Table 1.6-1 *Summary of LCS/LCSD Recovery Outliers and Impacted Data* summarizes LCS/LCSD outliers and impacted sample results. Impacted results were qualified as estimated ("J") or estimated non-detected ("UJ"). This data qualification was applied to all samples in the non-compliant batches. As shown above, the reported LCS recovery biases did not significantly deviate from their respective lower or upper control limit, and therefore the data usability is not affected. In addition to the above, high LCS recovery biases were noted for other VOCs and SVOCs analytes in several batches. Because these analytes were not detected in any samples, the sample results were not affected by the high LCS recovery biases and no data qualification was warranted.

1.7 Matrix Spike/Matrix Spike Duplicate Recoveries (Reason Code M)

The MS and MSD samples are a portion of a field sample spiked with target analytes and are prepared with each analytical batch. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch. In accordance with the QAPjP requirements (Shaw, 2011), the MS/MSD samples are to be collected at a rate of one per

20 soil samples. Table 1.7-1 identifies the site-specific MS/MSD samples collected during the first-quarter 2011 soil vapor monitoring well installation soil sampling event.

Table 1.7-1. Site-Specific MS/MSD Samples and Corresponding Analytical Suite

Well Location	Sample Number	MS/MSD Analysis
KAFB106113	SB0078	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106133	SB0360	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106115	SB0107	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106115	SB0108	SVOC, Metals
KAFB106133	SB0365	TPH-DRO
KAFB106108	SB0002	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106116	SB0113	SVOC
KAFB106130	SB0316	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106143	SB0387	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106146	SB1732	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106110	SB0035	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106134	SB0378	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106134	SB1750	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106114	SB0094	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106118	SB0145	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106111	SB0046	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106119	SB0160	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106116	SB0116	VOCs, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106117	SB0133	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10662	SB0949	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10661	SB0931	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10661	SB0936	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10661	SB0940	Metals
KAFB10676	SB1215	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10681	SB1262	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB10681	SB1271	SVOC
KAFB106109	SB0017	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106128	SB0287	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals
KAFB106131	SB0335	VOC's, SVOC, TPH-GRO, TPH-DRO, and, Metals

The RPDs between the MS and MSD recoveries met the precision acceptance criteria for all the listed analyses, however numerous MS/MSD %RPD's for VOC's were unusable due to the different amount of spike added for each MS and MSD sample. Table 1.7-2 *Summary of MS/MSD Recovery Outliers and Impacted Data* summarizes MS/MSD outliers and impacted sample results.

Table 1.7-2. Summary of MS/MSD Recovery Outliers and Impacted Data

Analytical Method	Spiked Sample	MS/MSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8260B	SB0078	2,2-Dichloropropane (58%/57%)	65-135	"UJ" qualified for non-detected analyte in SB0078
SW8015B	SB0078	TPH - DRO (48%/41%)	50-124	"J-" qualified for analyte in SB0078
SW6010C	SB0078	Lead (68%/79%)	80-120	"J-" qualified for detected analyte in SB0078
SW8260B	SB0360	1,1,1,2-Tetrachloroethane (ok/74%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,1-Dichloroethane (ok/71%)	60-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,2,3-Trichlorobenzene (35%/59%)	60-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,2,4-Trichlorobenzene(34%/59%)	65-130	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,2,4-Trimethylbenzene (51%/ok)	65-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,2-Dichlorobenzene (60%/67%)	75-120	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,3,5-Trimethylbenzene (46%/63%)	65-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,3-Dichlorobenzene (57%/67%)	70-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1,4-Dichlorobenzene (58%/65%)	70-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	1-Chlorohexane (46%/ok)	60-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	2-Chlorotoluene (58%/65%)	70-130	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	4-Chlorotoluene (62%/68%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	4-Isopropyltoluene (35%/56%)	75-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Benzene (ok/73%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Chlorobenzene (72%/70%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Ethylbenzene (66%/70%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Hexachlorobutadiene (14%/33%)	55-140	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Isopropylbenzene (47%/60%)	75-130	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Styrene (13%/21%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Tetrachloroethene (61%/ok)	65-140	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Toluene (67%/66%)	70-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Trichloroethene (74%/71%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	Xylene (total) (61%/66%)	75-125	"UJ" qualified for analyte in SB0360

Table 1.7-2. Summary of MS/MSD Recovery Outliers and Impacted Data (continued)

Analytical Method	Spiked Sample	MS/MSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8260B	SB0360	cis-1,3-Dichloropropene (ok/69%)	70-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	m,p-Xylene (61%/66%)	80-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	n-Butylbenzene (30%/54%)	65-140	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	n-Propylbenzene (47%/61%)	65-135	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	o-Xylene (60%/65%)	75-125	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	sec-Butylbenzene (34%/55%)	65-130	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	tert-Butylbenzene (39%/58%)	65-130	"UJ" qualified for analyte in SB0360
SW8260B	SB0360	trans-1,2-Dichloroethene (ok/56%)	65-135	"UJ" qualified for analyte in SB0360
SW8270D	SB0360	Acenaphthalene (ok/108%)	45-105	None
SW8270D	SB0360	m,p-Cresol (ok/107%)	40-105	None
SW8260B	SB0107	4-Isopropyltoluene (ok/63%)	75-135	"UJ" qualified for analyte in SB0107
SW8260B	SB0107	Hexachlorobutadiene (ok/26%)	55-140	"UJ" qualified for analyte in SB0107
SW8260B	SB0107	Isopropylbenzene (ok/70%)	75-130	"UJ" qualified for analyte in SB0107
SW8260B	SB0107	Styrene (40%/42%)	75-125	"UJ" qualified for analyte in SB0107
SW8260B	SB0107	n-Butylbenzene (ok/57%)	65-140	"UJ" qualified for analyte in SB0107
SW8260B	SB0107	sec-Butylbenzene (ok/60%)	65-130	"UJ" qualified for analyte in SB0107
SW8270D	SB0108	Acenaphthalene (ok/106%)	45-105	None
SW8015B	SB0365	TPH - DRO (17%/40%)	50-124	"J-" qualified for analyte in SB0365
SW6010C	SB0108	Lead (65%/76%)	80-120	"J-" qualified for analyte in SB0108
SW8260B	SB0002	1,2-Dibromo-3-chloropropane (136%/ok)	40-135	None
SW8270D	SB0002	Acenaphthylene (106%/108%)	45-105	None
SW8270D	SB0002	m,p-Cresol (109%/111%)	40-105	None
SW8270D	SB0113	Acenaphthylene (108%/106%)	45-105	None
SW8270D	SB0113	m,p-Cresol (109%/106%)	40-105	None
SW8260B	SB0316	1,2,3-Trichlorobenzene (19%/ok)	60-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1,2,4-Trichlorobenzene (20%/ok)	65-130	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1,2,4-Trimethylbenzene (54%/ok)	65-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1,2-Dichlorobenzene (68%/ok)	75-120	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1,3,5-Trimethylbenzene (53%/ok)	65-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1,3-Dichlorobenzene (63%/ok)	70-125	"UJ" qualified for analyte in SB0316

Table 1.7-2. Summary of MS/MSD Recovery Outliers and Impacted Data (continued)

Analytical Method	Spiked Sample	MS/MSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8260B	SB0316	1,4-Dichlorobenzene (66%/ok)	70-125	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	1-Chlorohexane (51%/ok)	60-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	4-Chlorotoluene (73%/ok)	75-125	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	4-Isopropyltoluene (35%/ok)	75-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	Ethylbenzene (69%/ok)	75-125	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	Hexachlorobutadiene (10%/52%)	55-140	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	Isopropylbenzene (52%/ok)	75-130	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	m,p-Xylene (68%/ok)	80-125	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	n-Butylbenzene (30%/ok)	65-140	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	n-Propylbenzene (56%/ok)	65-135	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	o-Xylene (70%/ok)	75-125	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	sec-Butylbenzene (38%/ok)	65-130	"UJ" qualified for analyte in SB0316
SW8260B	SB0316	tert-Butylbenzene (43%/ok)	65-130	"UJ" qualified for analyte in SB0316
SW8270D	SB0316	Aniline (ok/18%)	21-131	"UJ" qualified for analyte in SB0316
SW8270D	SB0316	Hexachlorobutadiene (ok/4%)	40-115	"UJ" qualified for analyte in SB0316
SW8015B	SB0316	TPH - DRO (ok/200%)	50-124	"J+" qualified for analyte in SB0316
SW6010C	SB0316	Lead (79%/78%)	80-120	"J-" qualified for analyte in SB0316
SW8260B	SB0387	Styrene (21%/54%)	75-125	"UJ" qualified for analyte in SB0387
SW8270D	SB0387	Acenaphthalene (107%/110%)	45-105	None
SW6010C	SB0387	Lead (76%/77%)	80-120	"J-" qualified for analyte in SB0387
SW6010C	SB1732	Lead (77%/79%)	80-120	"J-" qualified for analyte in SB1732
SW8260B	SB0035	Styrene (8%/10%)	75-125	"UJ" qualified for analyte in SB0035
SW8260B	SB0035	Tetrachloroethene (64%/61%)	65-140	"UJ" qualified for analyte in SB0035
SW8015B	SB0035	TPH - DRO (ok/138%)	50-124	"J+" qualified for analyte in SB0035
SW8260B	SB0094	Dichlorodifluoromethane (149%/151%)	35-135	None
SW8015B	SB0094	TPH - DRO (154%/ok)	50-124	"J+" qualified for analyte in SB0094

Table 1.7-2. Summary of MS/MSD Recovery Outliers and Impacted Data (continued)

Analytical Method	Spiked Sample	MS/MSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW6010C	SB0145	Lead (72%/78%)	80-120	"J-" qualified for analyte in SB0145, SB0146 (FD of SB0145)
SW8260B	SB0046	1,1,2,2-Tetrachloroethane (131%/ok)	55-130	None
SW8260B	SB0046	1,2,3-Trichloropropane (138%/ok)	63-130	None
SW8260B	SB0046	1,2-Dibromo-3-chloropropane (161%/143%)	40-135	None
SW8270D	SB0046	m.p-Cresol (113%/118%)	40-105	None
SW6010C	SB0046	Lead (75%/72%)	80-120	"J-" qualified for analyte in SB0046
SW6010C	SB0160	Lead (76%/77%)	80-120	"J-" qualified for analyte in SB0160
SW8260B	SB0116	Dichlorodifluoromethane (163%/142%)	35-135	None
SW8260B	SB0116	Hexachlorocyclobutadiene (118%/119%)	55-140	None
SW8260B	SB0116	Vinyl chloride (131%/ok)	60-125	None
SW8260B	SB0133	1,2,4-Trichlorobenzene (64%/ok)	65-130	"UJ" qualified for analyte in SB0133
SW8260B	SB0133	1,2,3-Trichloropropane (ok/133%)	63-130	None
SW8260B	SB0133	1,2-Dibromo-3-chloropropane (147%/170%)	40-135	None
SW8260B	SB0133	4-Isopropyltoluene (66%/71%)	75-135	"UJ" qualified for analyte in SB0133
SW8260B	SB0133	Dichlorodifluoromethane (ok/137%)	35-135	None
SW8260B	SB0133	Hexachlorobutadiene (30%/27%)	55-140	"UJ" qualified for analyte in SB0133
SW8260B	SB0133	n-Butylbenzene (60%/63%)	65-140	"UJ" qualified for analyte in SB0133
SW8270D	SB0133	Di-n-butylphthalate (111%/111%)	55-110	None
SW8270D	SB0133	Dibenz(a,h)anthracene (134%/ok)	40-125	None
SW8270D	SB0133	Fluoranthene (ok/116%)	55-115	None
SW8270D	SB0133	Indeno(1,2,3-cd)pyrene (129%/ok)	40-120	None
SW6010C	SB0133	Lead (76%/ok)	80-120	"J-" qualified for analyte in SB0133
SW8260B	SB0949	1,1,2,2-Tetrachloroethane (ok/142%)	55-130	None
SW8260B	SB0949	1,2,3-Trichloropropane (ok/148%)	63-130	None
SW8260B	SB0949	1,2-Dibromo-3-chloropropane (172%/205%)	40-135	None
SW8260B	SB0949	2,2-Dichloropropane (57%/ok)	65-135	"UJ" qualified for analyte in SB0949
SW8260B	SB0949	1,2-Dibromoethane (ok/132%)	70-125	None
SW8260B	SB0949	2-Hexanone (ok/210%)	45-145	None
SW8260B	SB0949	Acetone (ok/174%)	20-160	None
SW8260B	SB0949	Acrylonitrile (ok/144%)	49-142	None
SW8260B	SB0949	Hexachlorobutadiene (ok/54%)	55-140	"UJ" qualified for analyte in SB0949
SW8270D	SB0949	Dibenz(a,h)anthracene (129%/ok)	40-125	None
SW8270D	SB0949	Indeno(1,2,3-cd)pyrene (123%/ok)	40-120	None
SW8270D	SB0949	bis(2-Ethylhexyl)phthalate (141%/ok)	45/125	"J+" qualified for analyte in SB0949

Table 1.7-2. Summary of MS/MSD Recovery Outliers and Impacted Data (concluded)

Analytical Method	Spiked Sample	MS/MSD Recovery Outliers (%)	Control Limit (%)	Qualifier
SW8015B	SB0949	TPH - DRO (ok/45%)	50-124	"J-" qualified for analyte in SB0949
SW6010C	SB0949	Lead (74%/74%)	80-120	"J-" qualified for analyte in SB0949
SW6010C	SB0931	Lead (78%/75%)	80-120	"J-" qualified for analyte in SB0931
SW8270D	SB0936	Hexachlorocyclopentadiene (130%/128%)	55-140	None
SW6010C	SB0940	Lead (73%/75%)	80-120	"J-" qualified for analyte in SB0940
SW8260B	SB1215	1,1,2,2-Tetrachloroethane (ok/131%)	75-125	None
SW8260B	SB1215	1,1-Dichloroethane (ok/127%)	75-125	None
SW8260B	SB1215	1,2-Dibromo-3-chloropropane (152%/155%)	40-135	None
SW8260B	SB1215	1,3-Dichlorobenzene (126%/ok)	70-125	None
SW8260B	SB1215	1-Chlorohexane (144%/145%)	60-135	None
SW8260B	SB1215	2-Hexanone (246%/262%)	45-145	None
SW8260B	SB1215	4-Methyl-2-pentanone (146%/ok)	45-145	None
SW8260B	SB1215	Acrylonitrile (ok/147%)	49-142	None
SW8260B	SB1215	Trichlorofluoromethane (37% RPD)	0-30	"UJ" qualified for analyte in SB1215
SW8260B	SB1215	cis-1,2-Dichloroethene (135%/127%)	65-125	None
SW8260B	SB1215	cis-1,3-Dichloropropane (136%/ok)	70-125	None
SW8270D	SB1215	3,3'-Dichlorobenzidine (130%/ok)	24-127	None
SW8270D	SB1215	Di-n-octylphthalate (143%/148%)	40-130	None
SW8270D	SB1215	Fluoranthene (ok/118%)	55-115	None
SW8270D	SB1215	Hexachlorocyclopentadiene (134%/117%)	48-116	None
SW8015B	SB1215	TPH - DRO (ok/191%)	50-124	"J+" qualified for analyte in SB1215
SW8260B	SB1262	1,2-Dibromo-3-chloropropane (ok/143%)	40-135	None
SW8260B	SB1262	2-Hexanone (160%/208%)	45-145	None
SW8260B	SB1262	Hexachlorobutadiene (ok/52%)	55-140	"UJ" qualified for analyte in SB1262
SW8015B	SB1262	TPH - DRO (ok/11%)	50-124	"J-" qualified for analyte in SB1262
SW8270D	SB1271	Benzo(g,h,i)perylene (139%/131%)	40-125	None
SW8270D	SB1271	N-Nitrosodiphenylamine (118%/ok)	50-115	None
SW6010C	SB0017	Lead (ok/79%)	80-120	"J-" qualified for analyte in SB0017

Impacted results were qualified as estimated ("J+" or "J-") or estimated non-detected ("UJ"). This data qualification was applied to only the MS/MSD parent samples. As shown above, the reported MS/MSD recovery biases did not significantly deviate from their respective lower or upper control limit, and therefore the data usability is not affected. In addition to the above, high MS/MSD recovery biases were

noted for other VOCs and SVOCs analytes. Because these analytes were not detected in the parent sample, the sample results were not affected by the high MS/MSD recovery biases and no data qualification was warranted. Except where noted, the MS precision and bias results were acceptable for all other analyses.

1.8 Initial Calibration (Reason Code G)

Instrument calibration is performed for VOCs, SVOCs, TPH-GRO, TPH-DRO, and metals analyses according to the EPA method requirements. The linear analytical range is established for each method by analysis of standards prepared at increasing concentrations that cover the expected sample concentrations. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or linear coefficient. The initial calibration results were acceptable for all the listed methods, with the exception of the average RRF for VOC analysis summarized below:

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV11	Acrolein (0.02312)	0.1	"R" qualified for analyte in SB0015, SB0016, SB0017, SB0018, SB0019, SB0020, SB0021, SB0022, SB0023, SB0024, SB0025, SB0026, SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0078, SB0079, SB0080, SB0081, SB0082, SB0083.
SW8260B	MSV11	Acrylonitrile (0.05504)	0.1	"R" qualified for analyte in SB0015, SB0016, SB0017, SB0018, SB0019, SB0020, SB0021, SB0022, SB0023, SB0024, SB0025, SB0026, SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0078, SB0079, SB0080, SB0081, SB0082, SB0083.
SW8260B	MSV11	Acrylonitrile (0.04144)	0.1	"J" / "R" qualified for analyte in SB0027, SB0028, SB0348, SB0349, SB0356, SB0357, SB0358, SB0359, SB0360, SB0084, SB0085, SB0342, SB0343, SB0344, SB0345, SB0346, SB0347

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (continued)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV11	2-Butanone (0.0847)	0.1	"J" / "R" qualified for analyte in SB0027, SB0028, SB0348, SB0349, SB0356, SB0357, SB0358, SB0359, SB0360, SB0084, SB0085, SB0342, SB0343, SB0344, SB0345, SB0346, SB0347
SW8260B	MSV11	Acrylonitrile (0.04144)	0.1	"R" qualified for analyte in SB0100, SB0101, SB0102, SB0103, SB0104, SB0105, SB0106, SB0350, SB0351, SB0352, SB0353, SB0354, SB0361, SB0362, SB0107, SB0355, SB0363, SB0364, SB0365, SB0366, SB0367, SB0368, SB0108.
SW8260B	MSV11	2-Butanone (0.0847)	0.1	"J" / "R" qualified for analyte SB0100, SB0101, SB0102, SB0103, SB0104, SB0105, SB0106, SB0350, SB0351, SB0352, SB0353, SB0354, SB0361, SB0362, SB0107, SB0355, SB0363, SB0364, SB0365, SB0366, SB0367, SB0368, SB0108.
SW8260B	MSV9	Acrolein (0.02536)	0.1	"R" qualified for analyte in SB0001, SB0002, SB0003, SB0004, SB0005, SB0006, SB0007, SB0008, SB0009, SB0010, SB0011, SB0012, SB0013, SB0109, SB1726
SW8260B	MSV9	Acrylonitrile (0.03823)	0.1	"R" qualified for analyte in SB0001, SB0002, SB0003, SB0004, SB0005, SB0006, SB0007, SB0008, SB0009, SB0010, SB0011, SB0012, SB0013, SB0109, SB1726
SW8260B	MSV11	Acrylonitrile (0.03383)	0.1	"R" qualified for analyte in SB0014, SB0110, SB0111, SB0112, SB0113, SB1723, SB1724, SB1725, SB1727
SW8260B	MSV7	Chloroethane (0.09262)	0.1	"R" qualified for analyte in SB1735
SW8260B	MSV7	Acrolein (0.02267)	0.1	"R" qualified for analyte in SB1735
SW8260B	MSV9	Acrolein (0.02536)	0.1	"R" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (continued)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV9	Acrylonitrile (0.03823)	0.1	"R" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739
SW8260B	MSV11	Acrylonitrile (0.03383)	0.1	"R" qualified for analyte in SB0114, SB0315, SB0316, SB0317, SB0318, SB0319, SB0383, SB0385, SB0386, SB0387, SB0388, SB0389, SB0390, SB0391, SB0392, SB0393
SW8260B	MSV11	Acrolein (0.02156)	0.1	"R" qualified for analyte in SB0031, SB0032, SB0033, SB0035
SW8260B	MSV11	Acrylonitrile (0.05973)	0.1	"R" qualified for analyte in SB0031, SB0032, SB0033, SB0035
SW8260B	MSV11	Acrylonitrile (0.05594)	0.1	"R" qualified for analyte in SB0029, SB0030, SB0034, SB0320, SB0321
SW8260B	MSV11	1,2-Dibromo-3-chloropropane (0.0995)	0.1	"R" qualified for analyte in SB0029, SB0030, SB0034, SB0320, SB0321
SW8260B	MSV11	Acrolein (0.01907)	0.1	"R" qualified for analyte in SB0036, SB0322, SB0323, SB0324, SB0325, SB0326, SB0327, SB0379, SB0380, SB0381, SB0382, SB1750
SW8260B	MSV11	Acrylonitrile (0.03763)	0.1	"R" qualified for analyte in SB0036, SB0322, SB0323, SB0324, SB0325, SB0326, SB0327, SB0379, SB0380, SB0381, SB0382, SB1750
SW8260B	MSV9	Acrolein (0.02942)	0.1	"R" qualified for analyte in SB0039, SB0040, SB0041, SB0042, SB0058, SB0059, SB0060, SB0061, SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0093, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB1741, SB1743
SW8260B	MSV9	Acrylonitrile (0.04700)	0.1	"R" qualified for analyte in SB0039, SB0040, SB0041, SB0042, SB0058, SB0059, SB0060, SB0061, SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0093, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB1741, SB1743

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (continued)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV12	Acrolein (0.03714)	0.1	"R" qualified for analyte in SB0143, SB0144, SB0145, SB0146, SB0147, SB0148, SB0149, SB1742
SW8260B	MSV12	Acrylonitrile (0.05413)	0.1	"R" qualified for analyte in SB0143, SB0144, SB0145, SB0146, SB0147, SB0148, SB0149, SB1742
SW8260B	MSV11	Acrolein (0.02810)	0.1	"R" qualified for analyte in SB0071
SW8260B	MSV11	Acrylonitrile (0.07088)	0.1	"R" qualified for analyte in SB0071
SW8260B	MSV9	Acrylonitrile (0.06893)	0.1	"R" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0050, SB0051, SB0052, SB0053, SB0054, SB0055, SB0056, SB0057, SB0150, SB0151, SB0152, SB0153, SB0154, SB0155, SB0156, SB0157, SB0158, SB0159, SB0161, SB0162, SB0163, SB0300, SB0301, SB0302, SB0303, SB0304, SB0305, SB0306, SB0307, SB0308, SB0309, SB0310, SB0311, SB0312, SB0313, SB0328, SB0329, SB0330, SB0331, SB0332, SB0333, SB0334, SB0335, SB0336, SB0337, SB0338
SW8260B	MSV9	1,2-Dibromo-3-chloropropane (0.08812)	0.1	"R" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0050, SB0051, SB0052, SB0053, SB0054, SB0055, SB0056, SB0057, SB0150, SB0151, SB0152, SB0153, SB0154, SB0155, SB0156, SB0157, SB0158, SB0159, SB0161, SB0162, SB0163, SB0300, SB0301, SB0302, SB0303, SB0304, SB0305, SB0306, SB0307, SB0308, SB0309, SB0310, SB0311, SB0312, SB0313, SB0328, SB0329, SB0330, SB0331, SB0332, SB0333, SB0334, SB0335, SB0336, SB0337, SB0338

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (continued)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV9	Acrolein (0.02129)	0.1	"R" qualified for analyte in SB0115, SB0116, SB0117, SB0118, SB0119, SB0120, SB0121, SB0122, SB0123, SB0124, SB0125, SB0126, SB0127, SB0129, SB0130, SB0131, SB0132, SB0133, SB0134, SB0135, SB0136, SB0137, SB0139, SB0140, SB0160, SB0164, SB0165, SB0166, SB0168, SB0169, SB0170, SB0171, SB0286, SB0287, SB0288, SB0289, SB0290, SB0291, SB0292, SB0293, SB0294, SB0295, SB0297, SB0298, SB0339, SB0340, SB0341, SB0927, SB0928, SB0929, SB0930, SB0944, SB0945, SB0946, SB0947, SB0948, SB1747, SB1749
SW8260B	MSV9	Acrylonitrile (0.05874)	0.1	"R" qualified for analyte in SB0115, SB0116, SB0117, SB0118, SB0119, SB0120, SB0121, SB0122, SB0123, SB0126, SB0127, SB0129, SB0130, SB0131, SB0132, SB0133, SB0134, SB0135, SB0136, SB0137, SB0139, SB0140, SB0160, SB0164, SB0165, SB0166, SB0168, SB0169, SB0170, SB0171, SB0286, SB0288, SB0289, SB0290, SB0291, SB0292, SB0293, SB0294, SB0295, SB0297, SB0298, SB0339, SB0340, SB0341, SB0927, SB0928, SB0929, SB0930, SB0944, SB0945, SB0946, SB0947, SB0948, SB1747, SB1749
SW8260B	MSV7	Acrolein (0.02235)	0.1	"R" qualified for analyte in SB0128, SB0141, SB0142, SB0931, SB0932, SB0933, SB0934, SB0935, SB0937, SB0938, SB0939, SB0949, SB0950, SB0951, SB0952, SB0953, SB0954, SB0955, SB0956, SB0957, SB0959, SB1756

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (continued)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV7	Acrylonitrile (0.05749)	0.1	"R" qualified for analyte in SB0128, SB0141, SB0142, SB0931, SB0932, SB0933, SB0934, SB0935, SB0937, SB0938, SB0939, SB0949, SB0950, SB0951, SB0952, SB0953, SB0954, SB0955, SB0956, SB0957, SB0959, SB1756
SW8260B	MSV7	Acrylonitrile (0.0807)	0.1	"R" qualified for analyte in SB0138, SB0142, SB0167, SB0296, SB0299, SB0934, SB0936, SB0958,
SW8260B	MSV7	1,2-Dibromo-3-chloropropane (0.08987)	0.1	"R" qualified for analyte in SB0931, SB0932, SB0933, SB0934, SB0935, SB0949, SB0950, SB0951, SB0952
SW8260B	MSV12	Acrolein (0.0279)	0.1	"R" qualified for analytes in SB0940, SB0941, SB1209, SB1210, SB1211, SB1212, SB1213, SB1214, SB1215, SB1216, SB1217, SB1218, SB1219, SB1220, SB1752
SW8260B	MSV12	Acrylonitrile (0.06507)	0.1	"R" qualified for analytes in SB0940, SB0941, SB1209, SB1210, SB1211, SB1212, SB1213, SB1214, SB1215, SB1216, SB1217, SB1218, SB1219, SB1220, SB1752
SW8260B	MSV12	Acrolein (0.03036)	0.1	"R" qualified for analyte in SB1221, SB1222
SW8260B	MSV7	Acetone (0.07517)	0.1	"R" qualified for analyte in SB1270, SB1754
SW8260B	MSV7	Acrylonitrile (0.07356)	0.1	"R" qualified for analyte in SB1270, SB1754
SW8260B	MSV12	Acrolein (0.03131)	0.1	"R" qualified for analyte in SB0942, SB0943, SB1223, SB1224, SB1225, SB1226, SB1258, SB1259, SB1260, SB1261, SB1262, SB1263, SB1264, SB1265, SB1266, SB1267, SB1268, SB1269, SB1753, SB1757
SW8260B	MSV12	Acrylonitrile (0.08096)	0.1	"R" qualified for analyte in SB0942, SB0943, SB1223, SB1224, SB1225, SB1226, SB1258, SB1259, SB1260, SB1261, SB1262, SB1263, SB1264, SB1265, SB1266, SB1267, SB1268, SB1269, SB1753, SB1757
SW8260B	MSV12	Acrolein (0.02976)	0.1	"R" qualified for analyte in SB1758

Table 1.8-1. Summary of Initial Calibration Outliers and Impacted Data (concluded)

Analytical Method	Instrument#	ICV Outliers (RRF)	Control Limit (RRF)	Qualifier
SW8260B	MSV12	Acrylonitrile (0.08247)	0.1	"R" qualified for analyte in SB1758
SW8260B	MSV11	Acrylonitrile (0.07121)	0.1	"R" qualified for analyte in SB1271
SW8260B	MSV12	Acrolein (0.02976)	0.1	"R" qualified for analyte in SB1272, SB1273, SB1759
SW8260B	MSV12	Acrylonitrile (0.08247)	0.1	"R" qualified for analyte in SB1272, SB1273, SB1759

Immediately after the initial calibration for each method, an initial calibration verification (ICV) was conducted at the mid-point of instrument calibration range by using a second source calibration standard to verify the accuracy of the initial calibration. Except where noted, the ICV results met the acceptance criteria for all other analyses.

1.9 Continuing Calibration Verification (Reason Code C)

Routinely during sample analysis, the stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the linear range. Percent differences between the relative response factor (RRF) in the initial calibration and the RRF in the continuing calibration exceeded the acceptance criteria for VOCs and SVOCs analyses. The continuing calibration outliers that resulted in data qualification are summarized below in Table 1.9-1.

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV11	Acrolein (0.0217 RRF)	0.1	"R" qualified for analyte in SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0080
SW8260B	MSV11	Acrylonitrile (0.05629 RRF)	0.1	"R" qualified for analyte in SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0080

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV11	Acrolein (0.02329 RRF)	0.1	"R" qualified for analyte in SB0015, SB0016, SB0078, SB0080
SW8260B	MSV11	Acrylonitrile (0.06012 RRF)	0.1	"R" qualified for analyte in SB0015, SB0016, SB0078, SB0080
SW8260B	MSV11	Acrolein (0.02312 RRF)	0.1	"R" qualified for analyte in SB0017, SB0018, SB0019, SB0020, SB0021, SB0022, SB0023, SB0024, SB0025, SB0026, SB0081
SW8260B	MSV11	Acrylonitrile (0.06012 RRF)	0.1	"R" qualified for analyte in SB0017, SB0018, SB0019, SB0020, SB0021, SB0022, SB0023, SB0024, SB0025, SB0026, SB0081
SW8260B	MSV11	Acrolein (0.01935 RRF)	0.1	"R" qualified for analyte in SB0082, SB0083
SW8260B	MSV11	Acrylonitrile (0.04924 RRF)	0.1	"R" qualified for analyte in SB0082, SB0083
SW8260B	MSV11	Acrylonitrile (0.04029 RRF)	0.1	"R" qualified for analyte in SB0027, SB0028, SB0348, SB0349, SB0356, SB0357, SB0358, SB0359, SB0360, SB0084, SB0085, SB0342, SB0343, SB0344, SB0345, SB0346, SB0347
SW8260B	MSV11	2-Butanone (0.07692 RRF)	0.1	"J" / "R" qualified for analyte in SB0027, SB0028, SB0348, SB0349, SB0356, SB0357, SB0358, SB0359, SB0360, SB0084, SB0085, SB0342, SB0343, SB0344, SB0345, SB0346, SB0347
SW8260B	MSV11	Acrylonitrile (0.03836 RRF)	0.1	"R" qualified for analyte in SB0100, SB0101, SB0102, SB0104, SB0105, SB0106, SB0350, SB0351, SB0353, SB0354, SB0361
SW8260B	MSV11	2-Butanone (0.07685 RRF)	0.1	"J" / "R" qualified for analyte in SB0100, SB0101, SB0102, SB0104, SB0105, SB0106, SB0350, SB0351, SB0353, SB0354, SB0361
SW8260B	MSV11	Acrylonitrile (0.04223 RRF)	0.1	"R" qualified for analyte in SB0107, SB0103, SB0352, SB0355, SB0362, SB0363, SB0364, SB0365, SB0367, SB0366
SW8260B	MSV11	2-Butanone (0.08061 RRF)	0.1	"R" qualified for analyte in SB0107, SB0103, SB0352, SB0355, SB0362, SB0363, SB0364, SB0365, SB0367, SB0366

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV11	Acrylonitrile (0.04073 RRF)	0.1	"R" qualified for analyte in SB0108
SW8260B	MSV11	2-Butanone (0.07524 RRF)	0.1	"R" qualified for analyte in SB0108
SW8260B	MSV9	Acrolein (0.02253 RRF)	0.1	"R" qualified for analyte in SB0004, SB0006, SB1726
SW8260B	MSV9	Acrylonitrile (0.03715 RRF)	0.1	"R" qualified for analyte in SB0004, SB0006, SB1726
SW8260B	MSV9	Bromomethane (-20.6%)	\pm 20%	"UJ" qualified for analyte in SB0004, SB0006, SB1726
SW8260B	MSV11	Acrylonitrile (0.03211)	0.1	"R" qualified for analyte in SB0014, SB0110, SB0111, SB0112, SB0113, SB1723, SB1724, SB1725, SB1727
SW8260B	MSV11	Acetone (33.0%)	\pm 20%	J/"UJ" qualified for analyte in SB0014, SB0110, SB0111, SB0112, SB0113, SB1723, SB1724, SB1725, SB1727
SW8260B	MSV11	Methylene chloride (20.2%)	\pm 20%	J/"UJ" qualified for analyte in SB0014, SB0110, SB0111, SB0112, SB0113, SB1723, SB1724, SB1725, SB1727
SW8260B	MSV7	Chloroethane (0.07904 RRF)	0.1	"R" qualified for analyte in SB1735
SW8260B	MSV7	Acrolein (0.02411 RRF)	0.1	"R" qualified for analyte in SB1735
SW8260B	MSV7	Bromomethane (-21.8%)	\pm 20%	"UJ" qualified for analyte in SB1735
SW8260B	MSV7	Acetone (-23.7%)	\pm 20%	"UJ" qualified for analyte in SB1735
SW8260B	MSV7	Vinyl acetate (-21.7%)	\pm 20%	"UJ" qualified for analyte in SB1735
SW8260B	MSV7	2-Butanone (-24.8%)	\pm 20%	"UJ" qualified for analyte in SB1735
SW8260B	MSV7	2-Hexanone (-27.3%)	\pm 20%	"UJ" qualified for analyte in SB1735
SW8260B	MSV9	Acrolein (0.02253 RRF)	0.1	"R" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739
SW8260B	MSV9	Acrylonitrile (0.03715 RRF)	0.1	"R" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV9	Bromomethane (-20.6%)	± 20%	"UJ" qualified for analyte in SB0314, SB0384, SB1728, SB1729, SB1730, SB1731, SB1732, SB1733, SB1734, SB1736, SB1737, SB1738, SB1739
SW8260B	MSV11	Acrylonitrile (0.03221 RRF)	0.1	"R" qualified for analyte in SB0386, SB0387, SB0388, SB0389, SB0390, SB0391, SB0392, SB0393
SW8260B	MSV11	Acetone (33.0%)	± 20%	"R" qualified for analyte in SB0386, SB0387, SB0388, SB0389, SB0390, SB0391, SB0392, SB0393
SW8260B	MSV11	Methylene chloride (20.2%)	± 20%	"R" qualified for analyte in SB0386, SB0387, SB0388, SB0389, SB0390, SB0391, SB0392, SB0393
SW8260B	MSV11	Acrolein (0.02156 RRF)	0.1	"R" qualified for analyte in SB0031, SB0032, SB0033, SB0035
SW8260B	MSV11	Acrylonitrile (0.05973 RRF)	0.1	"R" qualified for analyte in SB0031, SB0032, SB0033, SB0035
SW8260B	MSV9	Acrolein (0.02607 RRF)	0.1	"R" qualified for analyte in SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0093, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB0143, SB0144, SB0145, SB0146, SB0147, SB0148, SB0149, SB1741, SB1742, SB1743
SW8260B	MSV9	Acrylonitrile (0.04365 RRF)	0.1	"R" qualified for analyte in SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0093, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB0143, SB0144, SB0145, SB0146, SB0147, SB0148, SB0149, SB1741, SB1742, SB1743
SW8260B	MSV9	Dichlorodifluoromethane (34.55%)	± 20%	"UJ" qualified for analyte in SB0062, SB0063, SB0064, SB0065, SB0066, SB0067, SB0068, SB0069, SB0070, SB0093, SB0094, SB0095, SB0096, SB0097, SB0098, SB0099, SB0143, SB0144, SB0145, SB0146, SB0147, SB0148, SB0149, SB1741, SB1742, SB1743

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV11	Acrolein (0.03017 RRF)	0.1	"R" qualified for analyte in SB0071
SW8260B	MSV11	Acrylonitrile (0.06977 RRF)	0.1	"R" qualified for analyte in SB0071
SW8260B	MSV9	Acrylonitrile (0.06858 RRF)	0.1	"R" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0055, SB0056, SB0057, SB0306, SB0307, SB0308, SB0309, SB0328, SB0329, SB0330, SB0331, SB0332, SB0333
SW8260B	MSV9	Acrylonitrile (0.06829 RRF)	0.1	"R" qualified for analyte in SB0155, SB0156, SB0157, SB0158, SB0159, SB0161, SB0162, SB0163, SB0310, SB0311, SB0312, SB0313, SB0334, SB0335, SB0336, SB0337, SB0338
SW8260B	MSV9	1,2-Dibromo-3-chloropropane (0.08158 RRF)	0.1	"R" qualified for analyte in SB0334, SB0335
SW8260B	MSV8	Acrolein (0.01864 RRF)	0.1	"R" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124, SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	Acrylonitrile (0.05874 RRF)	0.1	"R" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124, SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	2-Butanone (0.08847 RRF)	0.1	"R" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124, SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	2-Butanone (-21.1%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124, SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV8	4-Methyl-2-pentanone (-23.2%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	2-Hexanone (-22.8%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	n-Propylbenzene (20.4%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	sec-Butylbenzene (20.4%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	n-Butylbenzene (21.4%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV8	1,2-Dibromo-3-chloropane (-21.2%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0117, SB0121, SB0122, SB0123, SB0126, SB0127, SB0165, SB0166, SB0124. SB0125, SB0287, SB0290, SB0292, SB0293, SB0294, SB0295, SB0340, SB1747, SB1749
SW8260B	MSV9	Acrolein (0.02278 RRF)	0.1	"R" qualified for analyte in SB0341
SW8260B	MSV9	Acrylonitrile (0.05824 RRF)	0.1	"R" qualified for analyte in SB0341

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV9	Dichlorodifluoromethane (20.6%)	$\pm 20\%$	"UJ" qualified for analyte in SB0341
SW8260B	MSV9	Acrolein (0.02278 RRF)	0.1	"R" qualified for analyte in SB0128
SW8260B	MSV9	Acrylonitrile (0.05824 RRF)	0.1	"R" qualified for analyte in SB0128
SW8260B	MSV9	Acetone (0.09942 RRF)	0.1	"R" qualified for analyte in SB0128
SW8260B	MSV9	Dichlorodifluoromethane (20.6%)	$\pm 20\%$	"UJ" qualified for analyte in SB0128
SW8260B	MSV9	2-Hexanone (-22.9%)	$\pm 20\%$	"UJ" qualified for analyte in SB0128
SW8260B	MSV7	Acetone (0.09942 RRF)	0.1	"R" qualified for analyte in SB0138, SB0139, SB0140, SB0141, SB0142, SB0167, SB0296, SB0936, SB0958
SW8260B	MSV7	Acrylonitrile (0.08554 RRF)	0.1	"R" qualified for analyte in SB0138, SB0139, SB0140, SB0141, SB0142, SB0167, SB0296, SB0299
SW8260B	MSV9	Acrolein (0.02045 RRF)	0.1	"J" / "R" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	Acrylonitrile (0.05421 RRF)	0.1	"J" / "R" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	2-Butanone (0.08394 RRF)	0.1	"R" / "J" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	Dichlorodifluoromethane (-26.2%)	$\pm 20\%$	"R" / "J" / "UJ" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV9	Acetone (-24.8%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	2-Butanone (-25.2%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	4-Methyl-2-pentanone (-24.6%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	2-Hexanone (-31.4%)	± 20%	"R" / "J" / "UJ" qualified for analyte in SB0115, SB0118, SB0119, SB0120, SB0164, SB0168, SB0169, SB0170, SB0171, SB0286, SB0289, SB0291, SB0297, SB0298, SB0339, SB0945, SB0946, SB0948
SW8260B	MSV9	Acrolein (0.02278 RRF)	0.1	"R" qualified for analyte in SB0116, SB0133, SB0136, SB0137, SB0139, SB0140, SB0288, SB0299, SB0927, SB0928, SB0929, SB0930, SB0947
SW8260B	MSV9	Acrylonitrile (0.05824 RRF)	0.1	"R" qualified for analyte in SB0116, SB0133, SB0136, SB0137, SB0139, SB0140, SB0288, SB0299, SB0927, SB0928, SB0929, SB0930, SB0947
SW8260B	MSV9	Dichlorodifluoromethane (20.6%)	± 20%	"UJ" qualified for analyte in SB0116, SB0133, SB0136, SB0137, SB0139, SB0140, SB0288, SB0299, SB0927, SB0928, SB0929, SB0930, SB0947
SW8260B	MSV9	2-Butanone (-22.3%)	± 20%	"UJ" qualified for analyte in SB0299

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (continued)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV9	Dichlorodifluoromethane (39%)	\pm 20%	"UJ" qualified for analyte in SB0129, SB0130, SB0131, SB0132, SB0134, SB0135, SB0944
SW8260B	MSV9	Acrolein (0.02325 RRF)	0.1	"R" qualified for analytes in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV9	Acrylonitrile (0.05756 RRF)	0.1	"R" qualified for analytes in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV9	1,2-Dibromo-3-chloropropane (0.0786 RRF)	0.1	"R" qualified for analytes in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV9	Dichlorodifluoromethane (-23.2%)	\pm 20%	"UJ" qualified for analyte in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV9	2-Butanone (-22.3%)	\pm 20%	"UJ" qualified for analyte in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV9	2-Hexanone (-22.9%)	\pm 20%	"UJ" qualified for analyte in SB0141, SB0142, SB0931, SB0937, SB0938, SB0939, SB0949, SB0953, SB0954, SB0959, SB1756
SW8260B	MSV7	Acetone (0.09762 RRF)	0.1	"R" qualified for analyte in SB0934
SW8260B	MSV7	Acrylonitrile (0.07956 RRF)	0.1	"R" qualified for analyte in SB0934
SW8260B	MSV7	Dichlorodifluoromethane (-21.5%)	\pm 20%	"UJ" qualified for analyte in SB0934
SW8270D	MSSV6	3,3'-Dichlorobenzidine (21.5%)	\pm 20%	"UJ" qualified for analyte in SB0936, SB0937, SB0938, SB0939, SB0951, SB0952, SB0953, SB0954, SB0955, SB0956, SB0957, SB0958, SB0959, SB1756
SW8260B	MSV9	Chloromethane (121.1%)	\pm 20%	"UJ" qualified for analyte in SB0955, SB0956, SB0957
SW8260B	MSV12	Acrolein (0.02836 RRF)	0.1	"R" qualified for analyte in SB1215, SB1216, SB1219, SB1220

Table 1.9-1. Summary of Continuing Calibration Verification Outliers and Impacted Data (concluded)

Analytical Method	Instrument #	CCV Outlier (RRF/%)	Control Limit	Qualifier
SW8260B	MSV12	Acrylonitrile (0.08042 RRF)	0.1	"R" qualified for analyte in SB1215, SB1216, SB1219, SB1220
SW8260B	MSV12	Acetone (36.4%)	\pm 20%	"UJ" qualified for analyte in SB1215, SB1216, SB1219, SB1220
SW8260B	MSV12	1,1-Dichloroethene (22.5%)	\pm 20%	"UJ" qualified for analyte in SB1215, SB1216, SB1219, SB1220
SW8260B	MSV12	Acrylonitrile (23.6%)	\pm 20%	"UJ" qualified for analyte in SB1215, SB1216, SB1219, SB1220
SW8260B	MSV12	Hexachlorobutadiene (20.9%)	\pm 20%	"UJ" qualified for analyte in SB1215, SB1216, SB1219, SB1220
SW8260B	MSV12	Acrolein (0.02315 RRF)	0.1	"R" qualified for analyte in SB1217, SB1218, SB1752
SW8260B	MSV12	Acrylonitrile (0.0569 RRF)	0.1	"R" qualified for analyte in SB1217, SB1218, SB1752
SW8260B	MSV12	2-Hexanone (20.9%)	\pm 20%	"UJ" qualified for analyte in SB1217, SB1218, SB1752
SW8260B	MSV12	Acrolein (0.02562 RRF)	0.1	"R" qualified for analyte in SB1221, SB1222
SW8260B	MSV12	Acetone (-20.4%)	\pm 20%	"J" / "UJ" qualified for analyte in SB1221, SB1222
SW8270D	MSSV6	3,3'-Dichlorobenzidine (20.2%)	\pm 20%	"UJ" qualified for analyte in SB1215, SB1216, SB1217, SB1218, SB1219, SB1220, SB1221, SB1222, SB1752
SW8260B	MSV12	Acetone (0.08319 RRF)	0.1	"R" qualified for analyte in SB1270, SB1274
SW8260B	MSV12	Acrylonitrile (0.07712 RRF)	0.1	"R" qualified for analyte in SB1270, SB1274
SW8260B	MSV12	Acrolein (21.2%)	\pm 20%	"UJ" qualified for analyte in SB1270, SB1274
SW8260B	MSV12	Acrolein (0.03018 RRF)	0.1	"R" qualified for analyte in SB0942, SB1226, SB1260, SB1261, SB1262, SB1263, SB1264, SB1265, SB1266, SB1267, SB1268, SB1269, SB1753, SB1757
SW8260B	MSV12	Acrylonitrile (0.08547 RRF)	0.1	"R" qualified for analyte in SB0942, SB1226, SB1260, SB1261, SB1262, SB1263, SB1264, SB1265, SB1266, SB1267, SB1268, SB1269, SB1753, SB1757
SW8260B	MSV11	Acrylonitrile (0.0838 RRF)	0.1	"R" qualified for analyte in SB1271
SW8260B	MSV12	Bromomethane (127.9%)	\pm 20%	"UJ" qualified for analyte in SB1272, SB1273, SB1259
SW8260B	MSV12	Acrolein (123.1%)	\pm 20%	"UJ" qualified for analyte in SB1272, SB1273, SB1259

Analytes with initial calibration and continuing calibration verification RRF < 0.1 and not detected above the laboratory's DL in associated samples were qualified "R" as rejected which is due to the poor sensitivity of the method at low levels for these analytes. The "R" qualified data is determined to be unreliable at the laboratory's LOQ. Except where noted above in Table 1.9-1 *Summary of Continuing Calibration Verification Outliers and Impacted Data*, the continuing calibration results were acceptable for all other analyses.

1.10 Interference Check Samples (Reason Code O)

The ICP interference check sample (ICS) verifies the interelement and background correction factors. An ICS was analyzed at the beginning of each analytical sequence. All ICS results were within the established control limit.

1.11 ICP Serial Dilution (Reason Code A)

The ICP serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. The ICP serial dilution results were acceptable for all samples.

1.12 Ambient Blanks/Field Blanks (Reason Code K2)

Ambient blanks serve as a check on environmental contamination from contaminants in air at a sampling location. The ambient blank is prepared by pouring distilled water into a clean sample container in the field, and exposing this blank in the field at the time of sample collection and at a particular location. No ambient blanks were collected during first-quarter 2011 soil vapor monitoring well installation soil sampling event.

Field blanks are prepared in the actual sample containers and are kept with the investigative samples throughout the sampling event. A field blank is prepared by filling the sample container with distilled, organic free water, exposing to field conditions by adding preservatives and in general treating it as a

normal sample. At no time after their preparation is the sample containers opened before they reach the laboratory. Table 1.12-1 summarizes field blank contamination and impacted sample results.

Table 1.12-1. Summary of Field Blank Contamination and Impacted Data

Analytical Method	Field Blank	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	SB8001-FB	Bromodichloromethane	1.76	2.00	None
SW8260B	SB8001-FB	Chloroform	2.59	2.00	None
SW8260B	SB8001-FB	Dibromochloromethane	1.6	2.00	None
SW8260B	SB8002-FB	Acetone	4.8	5.00	"U" qualified for analyte in SB0043, SB0044, SB0045, SB0046, SB0047, SB0048, SB0049, SB0151, SB0152, SB0154, SB0300, SB0301, SB0302, SB0303, SB0304, SB0305
SW8260B	SB8004-FB	Bromodichloromethane	1.4	2.00	None
SW8260B	SB8004-FB	Chloroform	1.31	2.00	None
SW8260B	SB8004-FB	Dibromochloromethane	1.49	2.00	None
SW8260B	SB8005-FB	Bromodichloromethane	1.37	2.00	None
SW8260B	SB8005-FB	Chloroform	1.54	2.00	None
SW8260B	SB8005-FB	Dibromochloromethane	1.43	2.00	None
SW8260B	SB8006-FB	Bromodichloromethane	1.91	2.00	None
SW8260B	SB8006-FB	Chloroform	2.84	2.00	None
SW8260B	SB8006-FB	Dibromochloromethane	4.11	2.00	None
SW8260B	SB8007-FB	Bromodichloromethane	1.58	2.00	None
SW8260B	SB8007-FB	Chloroform	1.91	2.00	None
SW8260B	SB8007-FB	Dibromochloromethane	4.22	2.00	None
SW8260B	SB8008-FB	Bromodichloromethane	2.08	2.00	None
SW8260B	SB8008-FB	Chloroform	2.85	2.00	None
SW8260B	SB8008-FB	Dibromochloromethane	4.17	2.00	None
SW8260B	SB8009-FB	Bromodichloromethane	2.75	2.00	None
SW8260B	SB8009-FB	Chloroform	4.76	2.00	None
SW8260B	SB8009-FB	Dibromochloromethane	4.73	2.00	None
SW8260B	SB8010-FB	Bromodichloromethane	2.63	2.00	None
SW8260B	SB8010-FB	Chloroform	3.86	2.00	None
SW8260B	SB8010-FB	Dibromochloromethane	4.4	2.00	None
SW8260B	SB8011-FB	Dibromochloromethane	3.69	2.00	None
SW8260B	SB8012-FB	Bromodichloromethane	3.19	2.00	None
SW8260B	SB8012-FB	Chloroform	4.52	2.00	None
SW8260B	SB8012-FB	Dibromochloromethane	4.49	2.00	None
SW8260B	SB8013-FB	Bromodichloromethane	1.93	2.00	None
SW8260B	SB8013-RB	Bromoform	2.95	2.00	None
SW8260B	SB8013-FB	Chloroform	1.11	2.00	None
SW8260B	SB8013-FB	Dibromochloromethane	2.55	2.00	None
SW8260B	SB8014-FB	Bromodichloromethane	1.49	2.00	None
SW8260B	SB8014-FB	Chloroform	2.37	2.00	"U" qualified for analyte in SB1272, SB1273, SB1759
SW8260B	SB8014-FB	Dibromochloromethane	1.45	2.00	None
SW8260B	SB8016-FB	Bromodichloromethane	2.73	2.00	None
SW8260B	SB8016-FB	Chloroform	4.42	2.00	None
SW8260B	SB8016-FB	Dibromochloromethane	2.51	2.00	None

As a result of the field blank detections, the impacted results were qualified as non-detected ("U"). The detected concentrations in the samples were less than or equal to five times their corresponding level detected in the blank.

1.13 Trip Blanks (Reason Code K3)

Trip blanks were prepared by the laboratory and stored with the soil samples collected for VOC analysis. One trip blank sample was shipped with each cooler containing VOC samples shipped to the laboratory from January 18 through March 30, 2011. A total of twenty-nine trip blanks for the first quarter sampling event. Table 1.13-1 summarizes trip blank contamination and impacted sample results.

Table 1.13-1. Summary of Trip Blank Contamination and Impacted Data

Analytical Method	Trip Blank	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	SB8014-TB	Bromodichloromethane	2.18	2.0	None
SW8260B	SB8014-TB	Chloroform	4.59	2.0	None
SW8260B	SB8014-TB	Dibromochloromethane	3.07	2.0	None
SW8260B	SB8014-TB	Trichloroethene	3.07	2.0	None
SW8260B	SB8021-TB	Acetone	3.68	5.00	"U" qualified for analyte in SB0117, SB0121, SB0123, SB0125, SB0126, SB0127, SB0165, SB0287, SB0290, SB0293, SB0295, SB0341
SW8260B	SB8025-TB	Acetone	1.37	5.00	"U" qualified for analyte in SB1209, SB1210, SB1213, SB1214

1.14 Equipment Rinse Blanks (Reason Code K1)

Equipment rinse blanks are designed to check for contamination from sampling equipment and the results of the equipment rinse blanks are used for evaluating the efficiency of equipment decontamination procedures.

During the first-quarter 2011 soil vapor monitoring well installation soil sampling event, twenty-five equipment rinse blanks were collected. These twenty-five equipment rinse blank samples were prepared

by rinsing the sampling equipment with the distilled water obtained from the laboratory and then collecting the final rinse into appropriate sample containers. Equipment rinse blank samples were analyzed for VOCs, SVOCs, TPH-GRO, TPH-DRO, and metals. Table 1.14-1 summarizes rinsate blank contamination and impacted sample results.

Table 1.14-1. Summary of Rinsate Blank Contamination and Impacted Data

Analytical Method	Equipment Rinse Blank	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	SB8011-RB	Bromodichloromethane	1.33	2.0	None
SW8260B	SB8011-RB	Chloroform	2.62	2.0	"U" qualified for analyte in SB0072, SB0073, SB0074, SB0075, SB0076, SB0077, SB0080
SW8260B	SB8011-RB	Dibromochloromethane	1.27	2.0	None
SW8260B	SB8011-RB	Trichloroethene	1.08	2.0	None
SW8015B	SB8011-RB	TPH - DRO	159	128	None
SW8260B	SB8012-RB	Bromodichloromethane	1.14	2.0	None
SW8260B	SB8012-RB	Chloroform	2.42	2.0	"U" qualified for analyte in SB0017, SB0018, SB0019, SB0020, SB0021, SB0022, SB0023, SB0024, SB0025, SB0026, SB0081
SW8260B	SB8012-RB	Dibromochloromethane	1.15	2.0	None
SW8260B	SB8003-RB	Bromodichloromethane	1.84	2.0	None
SW8260B	SB8003-RB	Chloroform	2.83	2.0	None
SW8260B	SB8003-RB	Dibromochloromethane	1.57	2.0	None
SW8015B	SB8003-RB	TPH - DRO	65.8	130	None
SW6010C	SB8003-RB	Lead	2.7	15	None
SW8260B	SB8004-RB	Bromodichloromethane	2.14	2.0	None
SW8260B	SB8004-RB	Chloroform	4.16	2.0	None
SW8260B	SB8004-RB	Dibromochloromethane	1.49	2.0	None
SW8260B	SB8005-RB	Bromodichloromethane	2.56	2.0	None
SW8260B	SB8005-RB	Chloroform	5.21	2.0	None
SW8260B	SB8005-RB	Dibromochloromethane	1.85	2.0	None
SW8015B	SB8005-RB	TPH - DRO	56.6	128	None
SW8260B	SB8006-RB	Chloroform	1.88	2.0	None
SW8260B	SB8007-RB	Bromodichloromethane	2.39	2.0	None
SW8260B	SB8007-RB	Chloroform	4.82	2.0	None
SW8260B	SB8007-RB	Dibromochloromethane	5.4	2.0	None
SW8270D	SB8007-RB	bis(2-Ethylhexyl)phthalate	2.54	2.0	None
SW8270D	SB8007-RB	Di-n-butyl phthalate	0.302	2.0	None
SW8260B	SB8008-RB	Bromodichloromethane	2.45	2.0	None
SW8260B	SB8008-RB	Chloroform	4.58	2.0	None
SW8260B	SB8008-RB	Dibromochloromethane	5.72	2.0	None
SW8260B	SB8008-RB	Trichloroethene	3.34	2.0	None
SW8015B	SB8008-RB	TPH - DRO	289	125	"U" qualified for analyte in SB0384, SB0387
SW8260B	SB8009-RB	Bromodichloromethane	2.28	2.0	None
SW8260B	SB8009-RB	Chloroform	5.06	2.0	None

Table 1.14-1. Summary of Rinsate Blank Contamination and Impacted Data (continued)

Analytical Method	Equipment Rinse Blank	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8260B	SB8009-RB	Dibromochloromethane	5.50	2.0	None
SW8270D	SB8009-RB	bis(2-Ethylhexyl)phthalate	0.397	2.0	None
SW8260B	SB8010-RB	Bromodichloromethane	1.55	2.0	None
SW8260B	SB8010-RB	Chloroform	2.37	2.0	None
SW8260B	SB8010-RB	Dibromochloromethane	5.30	2.0	None
SW8270D	SB8010-RB	bis(2-Ethylhexyl)phthalate	0.487	2.0	None
SW8260B	SB8013-RB	Acetone	2.91	5.0	None
SW8260B	SB8013-RB	Bromodichloromethane	1.65	2.0	None
SW8260B	SB8013-RB	Chloroform	2.54	2.0	None
SW8260B	SB8013-RB	Dibromochloromethane	5.22	2.0	None
SW8270D	SB8013-RB	bis(2-Ethylhexyl)phthalate	0.688	2.0	None
SW8015B	SB8013-RB	TPH - DRO	55.9	130	None
SW8260B	SB8014-RB	Bromodichloromethane	2.03	2.0	None
SW8260B	SB8014-RB	Chloroform	4.32	2.0	None
SW8260B	SB8014-RB	Dibromochloromethane	5.49	2.0	None
SW8260B	SB8015-RB	Bromodichloromethane	3.15	2.0	None
SW8260B	SB8015-RB	Chloroform	5.00	2.0	None
SW8260B	SB8015-RB	Dibromochloromethane	2.58	2.0	None
SW8260B	SB8016-RB	Bromodichloromethane	2.73	2.0	None
SW8260B	SB8016-RB	Chloroform	4.42	2.0	None
SW8260B	SB8016-RB	Dibromochloromethane	2.51	2.0	None
SW8015B	SB8016-RB	TPH - DRO	71.0	132	None
SW8260B	SB8017-RB	Bromodichloromethane	2.18	2.0	None
SW8260B	SB8017-RB	Chloroform	2.98	2.0	None
SW8260B	SB8017-RB	Dibromochloromethane	2.28	2.0	None
SW8260B	SB8017-RB	Toluene	1.2	2.0	None
SW8270D	SB8017-RB	Dibenzofuran	0.253	11.1	None
SW8260B	SB8018-RB	Bromodichloromethane	2.92	2.0	None
SW8260B	SB8018-RB	Chloroform	4.35	2.0	None
SW8260B	SB8018-RB	Dibromochloromethane	2.63	2.0	None
SW8270D	SB8018-RB	bis(2-Ethylhexyl)phthalate	7.94	10.1	None
SW6010C	SB8018-RB	Lead	1.9	15	None
SW8260B	SB8019-RB	Bromodichloromethane	2.65	2.0	None
SW8260B	SB8019-RB	Chloroform	3.84	2.0	None
SW8260B	SB8019-RB	Dibromochloromethane	2.5	2.0	None
SW8260B	SB8020-RB	Bromodichloromethane	2.76	2.0	None
SW8260B	SB8020-RB	Chloroform	4.23	2.0	None
SW8260B	SB8020-RB	Dibromochloromethane	4.86	2.0	None
SW6010C	SB8020-RB	Lead	2.6	15	None
SW8260B	SB8021-RB	Bromodichloromethane	1.44	2.0	None
SW8260B	SB8021-RB	Chloroform	2.16	2.0	None
SW8260B	SB8021-RB	Dibromochloromethane	3.88	2.0	None
SW8260B	SB8022-RB	Bromodichloromethane	2.79	2.0	None
SW8260B	SB8022-RB	Chloroform	4.44	2.0	None
SW8260B	SB8022-RB	Dibromochloromethane	4.51	2.0	None
SW8260B	SB8023-RB	Bromodichloromethane	2.8	2.0	None
SW8260B	SB8023-RB	Chloroform	3.06	2.0	None
SW8260B	SB8023-RB	Dibromochloromethane	4.15	2.0	None

Table 1.14-1. Summary of Rinsate Blank Contamination and Impacted Data (concluded)

Analytical Method	Equipment Rinse Blank	Contaminant	Contaminant Level (ppb)	LOQ (ppb)	Qualifier
SW8270D	SB8023-RB	bis(2-Ethylhexyl)phthalate	28.7	10.3	"U" qualified for analyte in SB0930, SB0931, SB0934, SB0935, SB0952
SW6010C	SB8023-RB	Lead	4.4	15.0	None
SW8260B	SB8024-RB	Bromodichloromethane	1.51	2.0	None
SW8260B	SB8024-RB	Chloroform	2.31	2.0	None
SW8260B	SB8024-RB	Dibromochloromethane	4.0	2.0	None
SW8270D	SB8024-RB	bis(2-Ethylhexyl)phthalate	13.7	11.8	"U" qualified for analyte in SB0944, SB0945, SB0946
SW8260B	SB8025-RB	Bromodichloromethane	4.02	2.0	None
SW8260B	SB8025-RB	Chloroform	5.29	2.0	None
SW8260B	SB8025-RB	Dibromochloromethane	4.96	2.0	None
SW6010C	SB8025-RB	Lead	4.7	15	None
SW8260B	SB8026-RB	Acetone	2.63	5.0.	"U" qualified for analyte in SB1215, SB1216, SB1217, SB1219
SW8260B	SB8026-RB	Bromodichloromethane	2.01	2.0	None
SW8260B	SB8026-RB	Chloroform	4.04	2.0	None
SW8260B	SB8026-RB	Dibromochloromethane	1.94	2.0	None
SW8260B	SB8027-RB	Bromodichloromethane	1.94	2.0	None
SW8260B	SB8027-RB	Chloroform	3.01	2.0	None
SW8260B	SB8027-RB	Dibromochloromethane	1.82	2.0	None
SW8270D	SB8027-RB	bis(2-Ethylhexyl)phthalate	0.978	11.1	None
SW8015B	SB8027-RB	TPH - DRO	54.9	140	None

1.15 Field Duplicates

In accordance with the site-specific BFF Spill QAPjP (Shaw, 2011) requirements, field duplicate samples are to be collected at a minimum rate of 10 percent of the total number of soil samples. Field duplicate samples are evaluated by calculating the RPD between the sample and its corresponding duplicate sample. The RPD is calculated using the following equation:

$$RPD = [(S-D)/[(S+D)/2]] \times 100$$

where:

S = sample result
 D = duplicate result

Acceptable precision control criteria are established at less than or equal 50 percent for soil samples. The RPD is calculated between pairs of field duplicate samples when both results are reported above the LOQ.

Thirty-six duplicate pairs were collected for the first-quarter 2011 soil vapor monitoring well installation soil sampling event. Therefore, the 10 percent field duplicate frequency requirement was met. Field duplicate samples are collected in immediate succession after the initial parent samples are collected employing identical recovery techniques. The duplicate pairs were collected and analyzed for VOCs, SVOC, TPH-GRO, TPH-DRO, and metals. Table 1.15-1 is a summary of field duplicate results and impacted data.

Except for shaded analytes in Table 1.15-1, the RPDs for all other listed parameters were within the 50 percent field duplicate precision goal. Results exceeding the field duplicate precision limit were qualified as estimated (“J”). The high RPD values may be attributed to the following:

- At low concentrations the relative difference in results is magnified by the RPD calculation even though the results are comparable in absolute terms
- Non-homogeneity distribution of target analytes within the sample matrix

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data

Analytical Method	Analyte	KAFB-108113 Sample ID: SB0072 and Concentration (ppb)	KAFB-108113 Duplicate ID: SB0080 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	16.4	7.48	69.2%	<50%
SW8260B	Benzene	1.91 (value <LOQ)	0.691 (value <LOQ)	NC	<50%
SW8260B	Toluene	2.99	1.08 (value <LOQ)	NC	<50%
SW8270D	bis(2-Ethylhexyl)phthalate	66.3 (value <LOQ)	113 (value <LOQ)	NC	<50%
SW8270D	Butyl benzyl phthalate	Non-detect	12.5 (value <LOQ)	NC	<50%
SW8015B	TPH - DRO	6990	11300	-47.1%	<50%
SW6010C	Lead	4920	5080	-3.2%	<50%
Analytical Method	Analyte	KAFB-106109 Sample ID: SB0022 and Concentration (ppb)	KAFB-106109 Duplicate ID: SB0023 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Hexanone	45.0	38.1	16.6%	< 50%
SW8260B	Chloroform	1.32 (value <LOQ)	1.39 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	719	761	-5.7%	< 50%
SW8015B	TPH – DRO	16400	13700	17.9%	< 50%
SW6010C	Lead	7980	3390	80.7%	< 50%
Analytical Method	Analyte	KAFB-106132 Sample ID: SB0346 and Concentration (ppb)	KAFB-106132 Duplicate ID: SB0347 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	4.72 (value <LOQ)	Non-detect	NC	< 50%
SW8260B	Benzene	0.970 (value <LOQ)	0.959 (value <LOQ)	NC	< 50%
SW8260B	Toluene	1.53 (value <LOQ)	1.28 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	77.4 (value <LOQ)	70.4(value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	3620 (value <LOQ)	2560 (value <LOQ)	NC	< 50%
SW6010C	Lead	5160	4640	10.6%	< 50%
Analytical Method	Analyte	KAFB-106115 Sample ID: SB0100 and Concentration (ppb)	KAFB-106115 Duplicate ID: SB0101 and Concentration (ppb)	RPD%	Control Limit
SW8270D	bis(2-Ethylhexyl)phthalate	62.9 (value <LOQ)	46.1 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	2420 (value <LOQ)	2560 (value <LOQ)	NC	< 50%
SW6010C	Lead	3750	3820	-1.9	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106108 Sample ID: SB0005 and Concentration (ppb)	KAFB-106108 Duplicate ID: SB0006 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	44.7	23.2	63.3%	< 50%
SW8260B	2-Butanone	19.7	11.0	56.7%	< 50%
SW8260B	Benzene	1.58 (value <LOQ)	Non-detect	NC	< 50%
SW8260B	Toluene	2.96 (value <LOQ)	2.13 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	Non-detect	48.7 (value <LOQ)	NC	< 50%
SW6010C	Lead	7380	6910	6.6%	< 50%
Analytical Method	Analyte	KAFB-106115 Sample ID: SB0112 and Concentration (ppb)	KAFB-106115 Duplicate ID: SB0113 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	3.31 (value <LOQ)	4.08 (value <LOQ)	NC	< 50%
SW8260B	Benzene	1.24 (value <LOQ)	1.28 (value <LOQ)	NC	< 50%
SW8260B	Toluene	2.66	2.38	11.1%	< 50%
SW8015B	TPH - DRO	4440	41000	-160.9%	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	Non-detect	73.4 (value <LOQ)	NC	< 50%
SW6010C	Lead	2920	2610	11.2%	< 50%
Analytical Method	Analyte	KAFB-106144 Sample ID: SB0392 and Concentration (ppb)	KAFB-106144 Duplicate ID: SB0393 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	3.05 (value <LOQ)	2.66 (value <LOQ)	NC	< 50%
SW8260B	2-Butanone	4.57 (value <LOQ)	7.92	NC	< 50%
SW8260B	Benzene	0.512 (value <LOQ)	0.645 (value <LOQ)	NC	< 50%
SW8260B	Toluene	1.09 (value <LOQ)	1.07 (value <LOQ)	NC	< 50%
SW6010C	Lead	4470	4530	-1.3%	< 50%
Analytical Method	Analyte	KAFB-106146 Sample ID: SB1732 and Concentration (ppb)	KAFB-106146 Duplicate ID: SB1733 and Concentration (ppb)	RPD%	Control Limit
SW8220B	Acetone	Non-detect	3.68 (value <LOQ)	NC	< 50%
SW6010C	Lead	4960	4850	2.2%	< 50%
Analytical Method	Analyte	KAFB-106147 Sample ID: SB1738 and Concentration (ppb)	KAFB-106147 Duplicate ID: SB1739 and Concentration (ppb)	RPD%	Control Limit
SW8060B	Acetone	22.8	15.0	41.3%	< 50%
SW8260B	Toluene	2.46 (value <LOQ)	2.37	NC	< 50%
SW6010C	Lead	4400	4210	4.4%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106110 Sample ID: SB0031 and Concentration (ppb)	KAFB-106110 Duplicate ID: SB0032 and Concentration (ppb)	RPD%	Control Limit
SW8270D	bis(2-Ethylhexyl)phthalate	158 (value <LOQ)	40.2 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	23300	26900	-14.3%	< 50%
SW6010C	Lead	5640	5580	1.1%	< 50%
Analytical Method	Analyte	KAFB-106114 Sample ID: SB0088 and Concentration (ppb)	KAFB-106114 Duplicate ID: SB0089 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	6.56	6.86	-4.5%	< 50%
SW8260B	Benzene	2.87	Non-detect	NC	< 50%
SW8260B	Toluene	2.80	1.79 (value <LOQ)	NC	< 50%
SW8260B	m,p-Xylene	2.77 (value <LOQ)	2.16 (value <LOQ)	NC	< 50%
SW8260B	Ethylbenzene	Non-detect	1.03 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	1970 (value <LOQ)	Non-detect	NC	< 50%
SW6010C	Lead	7300	6440	12.5%	< 50%
Analytical Method	Analyte	KAFB-106130 Sample ID: SB0323 and Concentration (ppb)	KAFB-106130 Duplicate ID: SB0324 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	4.14 (value <LOQ)	9.13	NC	< 50%
SW8260B	2-Butanone	Non-detect	3.10 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	269 (value <LOQ)	Non-Detect	NC	< 50%
SW8015B	TPH - DRO	22400	1400 (value <LOQ)	NC	< 50%
SW6010C	Lead	3200	2560	22.2%	< 50%
Analytical Method	Analyte	KAFB-106134 Sample ID: SB0370 and Concentration (ppb)	KAFB-106134 Duplicate ID: SB0371 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	4.81 (value <LOQ)	Non-detect	NC	< 50%
SW8260B	Benzene	2.78	4.83	-53.9%	< 50%
SW8260B	Toluene	2.72	5.26	-63.7%	< 50%
SW8260B	m,p-Xylene	2.62 (value <LOQ)	5.15 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	364 (value <LOQ)	163 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	6270	17900	-96.2%	< 50%
SW6010C	Lead	7350	7620	-3.61%	< 50%
Analytical Method	Analyte	KAFB-106134 Sample ID: SB0382 and Concentration (ppb)	KAFB-106134 Duplicate ID: SB1750 and Concentration (ppb)	RPD%	Control Limit
SW8270D	bis(2-Ethylhexyl)phthalate	342	308 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	69000	29100	81.4%	< 50%
SW6010C	Lead	2710	5650	-70.3%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106110 Sample ID: SB0041 and Concentration (ppb)	KAFB-106110 Duplicate ID: SB1741 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	5.15 (value <LOQ)	4.19 (value <LOQ)	NC	< 50%
SW8260B	Benzene	Non-detect	0.405 (value <LOQ)	NC	< 50%
SW8260B	Toluene	Non-detect	0.871 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	146 (value <LOQ)	653	NC	< 50%
SW8015B	TPH - DRO	8550	35500	-122.4%	< 50%
SW6010C	Lead	2370	2430	-2.5%	< 50%
Analytical Method	Analyte	KAFB-106112 Sample ID: SB0062 and Concentration (ppb)	KAFB-106112 Duplicate ID: SB0063 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	5.82	4.77 (value <LOQ)	NC	< 50%
SW8260B	Acetone	19.9	18.4	7.8%	< 50%
SW8260B	Benzene	0.373 (value <LOQ)	0.462 (value <LOQ)	NC	< 50%
SW8260B	Toluene	0.778 (value <LOQ)	0.875 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	2980 (value <LOQ)	2470 (value <LOQ)	NC	< 50%
SW6010C	Lead	3830	4890	-24.3%	< 50%
Analytical Method	Analyte	KAFB-106114 Sample ID: SB0096 and Concentration (ppb)	KAFB-106114 Duplicate ID: SB1743 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	29.6	17.6	50.9%	< 50%
SW8260B	Benzene	1.30 (value <LOQ)	1.42 (value <LOQ)	NC	< 50%
SW8260B	Toluene	0.978 (value <LOQ)	0.486 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	109 (value <LOQ)	142 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	54000	39800	30.3%	< 50%
SW6010C	Lead	3750	4150	-10.3%	< 50%
Analytical Method	Analyte	KAFB-106112 Sample ID: SB0070 and Concentration (ppb)	KAFB-106112 Duplicate ID: SB1742 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	6.42 (value <LOQ)	7.70	NC	< 50%
SW8260B	Benzene	18.2	24.7	-30.3%	< 50%
SW8260B	Toluene	23.9	33.6	-33.7%	< 50%
SW8260B	m,p-Xylene	2.06 (value <LOQ)	3.20 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	202 (value <LOQ)	283 (value <LOQ)	NC	< 50%
SW8270D	n-Nitrosodiphenylamine	Non-detect	11.1 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	15900	23400	-38.2%	< 50%
SW6010C	Lead	2070	2240	-7.9%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106118 Sample ID: SB0145 and Concentration (ppb)	KAFB-106118 Duplicate ID: SB0146 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	10.7	10.1	5.8%	< 50%
SW8260B	Benzene	1.33 (value <LOQ)	0.839 (value <LOQ)	NC	< 50%
SW8260B	Toluene	0.643 (value <LOQ)	Non-detect	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	216 (value <LOQ)	431	NC	< 50%
SW8015B	TPH - DRO	13400	14900	-10.6%	< 50%
SW6010C	Lead	7360	5630	26.6%	< 50%
Analytical Method	Analyte	KAFB-106111 Sample ID: SB0043 and Concentration (ppb)	KAFB-106111 Duplicate ID: SB0044 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	4.10 (value <LOQ)	13.7	NC	< 50%
SW8260B	4-Methyl-2-pentanone	4.36 (value <LOQ)	11.4	NC	< 50%
SW8260B	Acetone	9.57	46.2	-131.4%	< 50%
SW8260B	Benzene	0.426 (value <LOQ)	0.844 (value <LOQ)	NC	< 50%
SW8270D	Benzo(a)anthracene	42.3 (value <LOQ)	Non-detect	NC	< 50%
SW8270D	Benzo(a)pyrene	25.2 (value <LOQ)	21.6 (value <LOQ)	NC	< 50%
SW8270D	Benzo(b)fluoranthene	45.2 (value <LOQ)	Non-detect	NC	< 50%
SW8270D	Benzo(g,h,i)perylene	16.2 (value <LOQ)	22.6 (value <LOQ)	NC	< 50%
SW8270D	Benzo(k)Fluoranthene	25.2 (value <LOQ)	14.6 (value <LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	68.3 (value <LOQ)	176 (value <LOQ)	NC	< 50%
SW8270D	Chrysene	47.5 (value <LOQ)	24.1 (value <LOQ)	NC	< 50%
SW8270D	Fluoranthene	83.5 (value <LOQ)	29.8 (value <LOQ)	NC	< 50%
SW8270D	Indeno(1,2,3-cd)Pyrene	237 (value <LOQ)	238 (value <LOQ)	NC	< 50%
SW8270D	Phenanthrene	54.3 (value <LOQ)	14.5 (value <LOQ)	NC	< 50%
SW8270D	Pyrene	82.6 (value <LOQ)	30.1 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	56700	65300	-14.1%	< 50%
SW6010C	Lead	6970	7070	-1.4%	< 50%
Analytical Method	Analyte	KAFB-106111 Sample ID: SB0055 and Concentration (ppb)	KAFB-106111 Duplicate ID: SB0056 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	2.25 (value <LOQ)	Non-detect	NC	< 50%
SW8260B	Benzene	4.88	5.53	-12.5%	< 50%
SW8260B	Toluene	10.8	10.4	3.8	< 50%
SW8260B	m,p-Xylene	2.25 (value <LOQ)	1.41 (value <LOQ)	NC	< 50%
SW8260B	o-Xylene	3.62	2.34	43.0%	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	251 (value <LOQ)	278 (value <LOQ)	NC	< 50%
SW8015B	TPH - DRO	18200	12700	35.6%	< 50%
SW8015B	TPH - GRO	1180 (value <LOQ)	1790 (value <LOQ)	NC	< 50%
SW6010C	Lead	3410	3160	0.5%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106129 Sample ID: SB0307 and Concentration (ppb)	KAFB-106129 Duplicate ID: SB0308 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	1.74 (value < LOQ)	1.47 (value < LOQ)	NC	< 50%
SW8260B	Acetone	3.91 (value < LOQ)	8.56	NC	< 50%
SW8260B	Benzene	0.163 (value < LOQ)	Non-detect	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	874	3520	-120.4%	< 50%
SW8015B	TPH - DRO	8500	67400	-155.2%	< 50%
SW8015B	TPH - GRO	Non-detect	806	NC	< 50%
SW6010C	Lead	3150	4110	-26.4%	< 50%
Analytical Method	Analyte	KAFB-106131 Sample ID: SB0330 and Concentration (ppb)	KAFB-106131 Duplicate ID: SB0331 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	2.32 (value < LOQ)	2.47 (value < LOQ)	NC	< 50%
SW8260B	Acetone	3.16 (value < LOQ)	3.99 (value < LOQ)	NC	< 50%
SW8260B	Benzene	1.23 (value < LOQ)	0.930 (value < LOQ)	NC	< 50%
SW8260B	Toluene	0.388 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	m,p-Xylene	1.83 (value < LOQ)	1.57 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	224 (value < LOQ)	90.8 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	21800	10600	69.1%	< 50%
SW6010C	Lead	6540	6510	0.4%	< 50%
Analytical Method	Analyte	KAFB-106128 Sample ID: SB0290 and Concentration (ppb)	KAFB-106128 Duplicate ID: SB0291 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	Non-detect	5.54	NC	< 50%
SW8260B	Acetone	11.7	16.5	-34.0%	< 50%
SW8260B	Benzene	Non-detect	1.24 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	Non-detect	0.707 (value < LOQ)	NC	< 50%
SW8260B	m,p-Xylene	Non-detect	0.774 (value < LOQ)	NC	< 50%
SW8260B	1,2,4-Trimethylbenzene	Non-detect	0.662 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	59.5 (value < LOQ)	Non-detect	NC	< 50%
SW8015B	TPH - DRO	7790	3090 (value < LOQ)	NC	< 50%
SW6010C	Lead	3730	3750	-0.5%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106128 Sample ID: SB0296 and Concentration (ppb)	KAFB-106128 Duplicate ID: SB1747 and Concentration (ppb)	RPD%	Control Limit
SW8260B	1,2,4-Trimethylbenzene	Non-detect	4.17	NC	< 50%
SW8260B	1,2-Dibromoethane	198	6.30	187.7%	< 50%
SW8260B	1,3,5-Trimethylbenzene	40.5 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	2-Butanone	1460	149	163.0%	< 50%
SW8260B	2-Hexanone	580	Non-detect	NC	< 50%
SW8260B	4-Methyl-2-pentanone	474	41.4	167.9%	< 50%
SW8260B	Acetone	3200	325 (value < LOQ)	NC	< 50%
SW8260B	Benzene	615	11.1	192.9%	< 50%
SW8260B	Ethylbenzene	52.8 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	Naphthalene	Non-detect	10.1	NC	< 50%
SW8260B	Toluene	2590	47.9	192.7%	< 50%
SW8260B	m,p-Xylene	309	10.4	187.0%	< 50%
SW8260B	n-Butylbenzene	Non-detect	2.30	NC	< 50%
SW8260B	o-Xylene	163	6.88	183.8%	< 50%
SW8270D	2-Methylnaphthalene	Non-detect	37.7 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	41.2 (value < LOQ)	6710	-197.1%	< 50%
SW8270D	Di-n-butylphthalate	Non-detect	21.3 (value < LOQ)	NC	< 50%
SW8270D	Naphthalene	Non-detect	90.7 (value < LOQ)	NC	< 50%
SW8270D	n-Nitrosodiphenylamine	Non-detect	164 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	8220	49300	-142.8%	< 50%
SW8015B	TPH - GRO	10800	2560	123.4%	< 50%
SW6010C	Lead	3800	3570	6.2%	< 50%
Analytical Method	Analyte	KAFB-106131 Sample ID: SB0340 and Concentration (ppb)	KAFB-106131 Duplicate ID: SB1749 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Benzene	Non-detect	2.76	NC	< 50%
SW8060B	Toluene	Non-detect	2.43	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	Non-detect	24.7 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	2790 (value < LOQ)	3330 (value < LOQ)	NC	< 50%
SW6010C	Lead	4140	4380	5.6%	< 50%
Analytical Method	Analyte	KAFB-106116 Sample ID: SB0119 and Concentration (ppb)	KAFB-106116 Duplicate ID: SB120 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	7.54	7.37 (value < LOQ)	NC	< 50%
SW8260B	Acetone	21.1	17.7	17.5%	< 50%
SW8260B	Benzene	0.809 (value < LOQ)	0.822 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	0.495 (value < LOQ)	0.509 (value < LOQ)	NC	< 50%
SW8260B	m,p-Xylene	0.560 (value < LOQ)	0.607 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	8240	7100	14.9%	< 50%
SW6010C	Lead	5970	5770	3.4%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-106119 Sample ID: SB0169 and Concentration (ppb)	KAFB-106119 Duplicate ID: SB0170 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	Non-detect	4.23 (value < LOQ)	NC	< 50%
SW8260B	Benzene	10.8	7.89	31.1%	< 50%
SW8260B	Ethylbenzene	0.401 (value < LOQ)	3.10	NC	< 50%
SW8260B	Toluene	20.3	47.6	-80.4%	< 50%
SW8260B	m,p-Xylene	1.37 (value < LOQ)	20.5	NC	< 50%
SW8260B	o-Xylene	Non-detect	10.6	NC	< 50%
SW8260B	1,2,4-Trimethylbenzene	Non-detect	1.31 (value < LOQ)	NC	< 50%
SW8260B	1,3,5-Trimethylbenzene	Non-detect	0.523 (value < LOQ)	NC	< 50%
SW8260B	Trichlorofluoromethane	Non-detect	15.8	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	59.4 (value < LOQ)	1010	NC	< 50%
SW8270D	n-Nitrosodiphenylamine	Non-detect	22.2 (value < LOQ)	NC	< 50%
SW8270D	n-Propylbenzene	Non-detect	0.655 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	3620 (value < LOQ)	46000	NC	< 50%
SW6010C	Lead	2690	2770	-2.9%	< 50%
Analytical Method	Analyte	KAFB-10662 Sample ID: SB0946 and Concentration (ppb)	KAFB-10662 Duplicate ID: SB0947 and Concentration (ppb)	RPD%	Control Limit
SW8260B	1,2,4-Trimethylbenzene	0.887 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	2-Butanone	3.66 (value < LOQ)	13.1 (value < LOQ)	NC	< 50%
SW8260B	Acetone	11.9	40.1	-108.5%	< 50%
SW8260B	Benzene	1.22 (value < LOQ)	2.51 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	0.487 (value < LOQ)	0.884 (value < LOQ)	NC	< 50%
SW8260B	m,p-Xylene	0.856 (value < LOQ)	2.35 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	105 (value < LOQ)	139 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	3500 (value < LOQ)	2240 (value < LOQ)	NC	< 50%
SW6010C	Lead	8850	7760	13.1%	< 50%
Analytical Method	Analyte	KAFB-106117 Sample ID: SB0136 and Concentration (ppb)	KAFB-106117 Duplicate ID: SB0137 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Ethylbenzene	0.477 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	Benzene	Non-detect	0.271 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	975	899	8.1%	< 50%
SW8015B	TPH - DRO	27200	31000	-13.1%	< 50%
SW6010C	Lead	2480	2610	-5.92%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-10661 Sample ID: SB0934 and Concentration (ppb)	KAFB-10661 Duplicate ID: SB0935 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	2.37 (value < LOQ)	Non-detect	NC	< 50%
SW8260B	Benzene	9.46	Non-detect	NC	< 50%
SW8260B	Toluene	44.2	Non-detect	NC	< 50%
SW8260B	Acetone	81.6 (value < LOQ)	21.2	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	32.8 (value < LOQ)	34.0 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	2520 (value < LOQ)	3190 (value < LOQ)	NC	< 50%
SW8015B	TPH - GRO	1150 (value < LOQ)	Non-detect	NC	< 50%
SW6010C	Lead	5740	4850	16.8%	< 50%
Analytical Method	Analyte	KAFB-10678 Sample ID: SB1211 and Concentration (ppb)	KAFB-10678 Duplicate ID: SB1212 and Concentration (ppb)	RPD%	Control Limit
SW8260B	1,2,4-Trimethylbenzene	1.21 (value < LOQ)	0.886 (value < LOQ)	NC	< 50%
SW8260B	1,3,5-Trimethylbenzene	0.652 (value < LOQ)	0.477 (value < LOQ)	NC	< 50%
SW8260B	2-Butanone	Non-detect	5.17 (value < LOQ)	NC	< 50%
SW8260B	Acetone	15.9	21.4	-29.5%	< 50%
SW8260B	Benzene	3.17	2.32 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	1.85 (value < LOQ)	1.43 (value < LOQ)	NC	< 50%
SW8260B	Toluene	6.15	4.62	28.4%	< 50%
SW8260B	m,p-Xylene	6.43	5.46	16.3%	< 50%
SW8270D	Benzo(g,h,i)perylene	13.0 (value < LOQ)	Non-detect	NC	< 50%
SW8270D	Butylbenzyl phthalate	9.14 (value < LOQ)	Non-detect	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	65.5 (value < LOQ)	188 (value < LOQ)	NC	< 50%
SW8270D	Di-n-butylphthalate	Non-detect	17.4 (value < LOQ)	NC	< 50%
SW8270D	Di-n-octylphthalate	8.98 (value < LOQ)	Non-detect	NC	< 50%
SW8015B	TPH - DRO	Non-detect	10000	NC	< 50%
SW6010C	Lead	7870	7880	-0.13%	< 50%
Analytical Method	Analyte	KAFB-10676 Sample ID: SB1218 and Concentration (ppb)	KAFB-10676 Duplicate ID: SB1752 and Concentration (ppb)	RPD%	Control Limit
SW8260B	2-Butanone	10.5	11.3	-7.3%	< 50%
SW8260B	Acetone	699	754	-7.6%	< 50%
SW8260B	Benzene	15.9	5.48	97.5%	< 50%
SW8260B	Ethylbenzene	6.18	3.63	52.0%	< 50%
SW8260B	Toluene	6.13	5.13	17.8%	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	346 (value < LOQ)	128 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	6080	5670	7.0%	< 50%
SW6010C	Lead	9570	9240	-3.5%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (continued)

Analytical Method	Analyte	KAFB-10678 Sample ID: SB1223 and Concentration (ppb)	KAFB-10678 Duplicate ID: SB1224 and Concentration (ppb)	RPD%	Control Limit
SW8260B	1,2,4-Trimethylbenzene	1.09 (value < LOQ)	1.61 (value < LOQ)	NC	< 50%
SW8260B	Acetone	15.2	18.1	-17.4%	< 50%
SW8260B	Benzene	0.552 (value < LOQ)	0.656 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	2.21	2.23	-0.9%	< 50%
SW8260B	Toluene	2.57	3.16	-21.2%	< 50%
SW8260B	m,p-Xylene	1.71 (value < LOQ)	2.70 (value < LOQ)	NC	< 50%
SW8260B	o-Xylene	0.686 (value < LOQ)	0.959 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	2780	1930	36.1%	< 50%
SW8270D	n-Nitrosodiphenylamine	19.4 (value < LOQ)	14.0 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	475000	327000	36.9%	< 50%
SW6010C	Lead	3790	3660	3.5%	< 50%
Analytical Method	Analyte	KAFB-10681 Sample ID: SB1260 and Concentration (ppb)	KAFB-10681 Duplicate ID: SB1753 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Acetone	6.00	7.58	-23.3%	< 50%
SW8260B	Benzene	1.07 (value < LOQ)	1.64 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	1.75 (value < LOQ)	2.20	NC	< 50%
SW8260B	Toluene	1.81	2.53	-33.2%	< 50%
SW8260B	m,p-Xylene	1.18 (value < LOQ)	1.41 (value < LOQ)	NC	< 50%
SW8260B	o-Xylene	Non-detect	0.362 (value < LOQ)	NC	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	121 (value < LOQ)	41.7 (value < LOQ)	NC	< 50%
SW8270D	Di-n-butylphthalate	18.8 (value < LOQ)	Non-detect	NC	< 50%
SW8270D	Diethylphthalate	22.7 (value < LOQ)	Non-detect	NC	< 50%
SW8015B	TPH - DRO	24300	20900	15.0%	< 50%
SW6010C	Lead	6700	7060	-5.2%	< 50%
Analytical Method	Analyte	KAFB-10681 Sample ID: SB1270 and Concentration (ppb)	KAFB-10681 Duplicate ID: SB1754 and Concentration (ppb)	RPD%	Control Limit
SW8260B	Benzene	886	955	-7.5%	< 50%
SW8260B	Ethylbenzene	71.0 (value < LOQ)	78.6 (value < LOQ)	NC	< 50%
SW8260B	Toluene	1400	1550	-10.2%	< 50%
SW8260B	m,p-Xylene	250	281	-11.7%	< 50%
SW8260B	o-Xylene	153	183	-17.9%	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	56.1 (value < LOQ)	27.1 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	5080	3650 (value < LOQ)	NC	< 50%
SW8015B	TPH - GRO	6680	5750	15.0%	< 50%
SW6010C	Lead	6250	6630	-5.9%	< 50%

Table 1.15-1. Summary of Field Duplicate Results and Impacted Data (concluded)

Analytical Method	Analyte	KAFB-106119 Sample ID: SB0157 and Concentration (ppb)	KAFB-106119 Duplicate ID: SB0158 and Concentration (ppb)	RPD%	Control Limit
SW8260B	1,2,4-Trimethylbenzene	1.17 (value < LOQ)	1.97 (value < LOQ)	NC	< 50%
SW8260B	2-Butanone	4.93 (value < LOQ)	7.3	NC	< 50%
SW8260B	Acetone	9.06	14.2	-44.2%	< 50%
SW8260B	Benzene	2.15	1.26 (value < LOQ)	NC	< 50%
SW8260B	Ethylbenzene	0.713 (value < LOQ)	0.981 (value < LOQ)	NC	< 50%
SW8260B	Toluene	2.25	1.13 (value < LOQ)	NC	< 50%
SW8260B	m,p-Xylene	2.81 (value < LOQ)	2.71 (value < LOQ)	NC	< 50%
SW8260B	o-Xylene	3.28	4.19	-24.4%	< 50%
SW8270D	bis(2-Ethylhexyl)phthalate	Non-detect	26.1 (value < LOQ)	NC	< 50%
SW8015B	TPH - DRO	3980 (value < LOQ)	2720 (value < LOQ)	NC	< 50%
SW6010C	Lead	8890	6430	32.1%	< 50%

1.16 Internal Standards (Reason Code I)

Biased internal standards recoveries were noted for SW8260B Methods as summarized below:

Table 1.16-1. Internal Standard Outliers and Impacted Data

Analytical Method	Sample	Internal Standard Recovery Outlier (%)	Control Limit (%)	Qualifier
SW8260B	SB0074	1,4-Dichlorobenzene-d4 (low)	-50% - +100%	"UJ" qualified associated compounds in SB0074

1.17 Completeness

The following sections present a discussion of contractual, analytical, and technical completeness for the first-quarter 2011 soil vapor monitoring well installation soil sampling event. Completeness calculations were performed only for the soil samples that were used for project decisions.

1.17.1 Contractual Completeness

Contractual completeness is a quantitative expression of how closely the laboratory adhered to the project requirements. The contractual completeness goal is 95 percent. Contractual completeness is calculated as follows:

$$\% \text{ Contractual Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

Contractual completeness is based on data qualified for QC outliers that are related to method performance and laboratory procedures only. These include data qualified for calibration or preparation blank contamination, missed holding times, and non-compliant LCS recovery and/or precision.

Contractual completeness for the first-quarter 2011 soil vapor monitoring well installation soil sampling event are summarized in Table 1.17-1.

Table 1.17-1. Contractual Completeness Summary

Analytical Method	Number of Unqualified Results	Total Number of Results	% Contractual Completeness
SW6010C	375	375	100%
SW8015B-GRO	375	375	100%
SW8015B-DRO	375	375	100%
SW8260B	25,132	26,250	95.7%
SW8270D	27,281	27,375	99.7%

The 95-percent contractual completeness goal was also met for all analytical suites (Lead by SW6010C, TPH-GRO by SW8015B, TPH-DRO by SW8015B, VOCs by SW8260B, and SVOCs by SW8270D). Sufficient acceptable results were obtained to meet the project objectives.

1.17.2 Analytical Completeness

Analytical completeness is a quantitative expression of how closely the results adhered to all QC requirements based on the number of data points qualified for any reason. The analytical completeness goal is 90 percent. Analytical completeness is calculated as follows:

$$\% \text{ Analytical Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

Analytical completeness is based on samples qualified for any reason and includes all target analytes with the exception of data qualified as estimated (“J”) due to the result being reported between the laboratory’s LOQ and DL. Analytical completeness for the first-quarter 2011 soil vapor monitoring well installation soil sampling event are summarized in Table 1.17-2.

Table 1.17-2. Analytical Completeness Summary

Analytical Method	Number of Unqualified Results	Total Number of Results	% Analytical Completeness
SW6010C	355	375	94.7%
SW8015B-GRO	373	375	99.3%
SW8015B-DRO	347	375	92.5%
SW8260B	24,938	26,250	95.0%
SW8270D	27,160	27,375	99.2%

The 90-percent analytical completeness goal was also met for all analytical suites (Lead by SW6010C, TPH-GRO by SW8015B, TPH-DRO by SW8015B, VOCs by SW8260B, and SVOCs by SW8270D). Sufficient acceptable results were obtained to meet the project objectives.

1.17.3 Technical Completeness

Technical completeness is a quantitative expression of the data usability based on the number of rejected data. For this project, the technical completeness for each method is established at equal to or greater than

95 percent. The technical completeness calculation considers all data that is not rejected to be usable and technical completeness is calculated as follows:

$$\% \text{ Technical Completeness} = \frac{\text{Number of Useable Results}}{\text{Total Number of Results}} \times 100$$

Technical completeness for the first-quarter 2011 soil vapor monitoring well installation soil sampling event are summarized in Table 1.17-3.

Table 1.17-3. Technical Completeness Summary

Analytical Method	Number of Unqualified Results	Total Number of Results	% Technical Completeness
SW6010C	375	375	100%
SW8015B-GRO	375	375	100%
SW8015B-DRO	375	375	100%
SW8260B	25,538	26,250	97.3%
SW8270D	27,375	27,375	100%

Analytes with initial calibration and continuing calibration verification RRF < 0.1 and not detected above the laboratory's DL in associated samples were qualified "R" as rejected which is due to the poor sensitivity of the method at low levels for these analytes. Impacted analytes include 1,2-dibromo-3-chloropropane, 2-butanone, 2-propenal, 2-propenenitrile, acetone, and chloroethane. The "R" qualified data is determined to be unreliable at the laboratory's LOQ. Sufficient acceptable results were obtained to meet the project objectives for technical completeness.

1.18 Summary

The analytical data reported for this event have been reviewed for completeness, bias, and precision. Data quality issues observed consisted of biased surrogate, spiked internal standard outliers, parent sample and field duplicate precision outliers, LCS/LCSD, MS/MSD recoveries, initial and continuing calibration

outliers, and laboratory and field blank contamination. The affected data was qualified as estimated or non detected with the exception of 1,2-dibromo-3-chloropropane, 2-butanone, 2-propenal, 2-propenenitrile, acetone, and chloroethane results for some samples which were qualified “R” for some samples due to initial calibration and/or continuing calibration verification RRF < 0.1. The “R” qualified data is determined to be unreliable at the laboratory’s LOQ but may be used for screening purposes only. The 95-percent technical completeness goal was exceeded for all methods.

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**Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico**

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106108	SB0001	REG	15-Feb-11	0	10	21102162001	X	X	X	X	X
KAFB106108	SB0002	REG	15-Feb-11	11	20	21102162002	X	X	X	X	X
KAFB106108	SB0003	REG	15-Feb-11	21	30	21102162005	X	X	X	X	X
KAFB106108	SB0004	REG	15-Feb-11	31	40	21102162006	X	X	X	X	X
KAFB106108	SB0005	REG	15-Feb-11	41	50	21102162007	X	X	X	X	X
KAFB106108	SB0006	FD	15-Feb-11	41	50	21102162008	X	X	X	X	X
KAFB106108	SB0007	REG	15-Feb-11	51	100	21102162011	X	X	X	X	X
KAFB106108	SB0008	REG	16-Feb-11	101	151	21102162012	X	X	X	X	X
KAFB106108	SB0009	REG	16-Feb-11	151	200	21102162013	X	X	X	X	X
KAFB106108	SB0010	REG	16-Feb-11	201	250	21102162014	X	X	X	X	X
KAFB106108	SB0011	REG	16-Feb-11	251	300	21102162015	X	X	X	X	X
KAFB106108	SB0012	REG	16-Feb-11	301	350	21102162016	X	X	X	X	X
KAFB106108	SB0013	REG	16-Feb-11	351	400	21102162017	X	X	X	X	X
KAFB106108	SB0014	REG	16-Feb-11	401	450	21102162018	X	X	X	X	X
KAFB106109	SB0015	REG	21-Jan-11	0	10	21101202411	X	X	X	X	X
KAFB106109	SB0016	REG	21-Jan-11	11	20	21101202412	X	X	X	X	X
KAFB106109	SB0017	REG	21-Jan-11	21	30	21101201901	X	X	X	X	X
KAFB106109	SB0018	REG	22-Jan-11	31	40	21101251902	X	X	X	X	X
KAFB106109	SB0019	REG	22-Jan-11	41	50	21101251903	X	X	X	X	X
KAFB106109	SB0020	REG	22-Jan-11	50	100	21101251904	X	X	X	X	X
KAFB106109	SB0021	REG	23-Jan-11	101	150	21101251905	X	X	X	X	X
KAFB106109	SB0022	REG	23-Jan-11	151	200	21101251906	X	X	X	X	X
KAFB106109	SB0023	FD	23-Jan-11	151	200	21101251907	X	X	X	X	X
KAFB106109	SB0024	REG	23-Jan-11	201	250	21101251908	X	X	X	X	X
KAFB106109	SB0025	REG	23-Jan-11	251	300	21101251909	X	X	X	X	X
KAFB106109	SB0026	REG	23-Jan-11	300	350	21101251910	X	X	X	X	X
KAFB106109	SB0027	REG	4-Feb-11	350	400	21102070501	X	X	X	X	X
KAFB106109	SB0028	REG	4-Feb-11	400	450	21102070502	X	X	X	X	X
KAFB106110	SB0029	REG	19-Feb-11	0	10	21102222501	X	X	X	X	X
KAFB106110	SB0030	REG	19-Feb-11	11	20	21102222502	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106110	SB0031	REG	19-Feb-11	21	30	21102222503	X	X	X	X	X
KAFB106110	SB0032	FD	19-Feb-11	21	30	21102222504	X	X	X	X	X
KAFB106110	SB0033	REG	20-Feb-11	31	40	21102222505	X	X	X	X	X
KAFB106110	SB0034	REG	20-Feb-11	41	50	21102222506	X	X	X	X	X
KAFB106110	SB0035	REG	20-Feb-11	51	100	21102222507	X	X	X	X	X
KAFB106110	SB0036	REG	20-Feb-11	101	150	21102222510	X	X	X	X	X
KAFB106110	SB0037	REG	21-Feb-11	151	200	21102222511	X	X	X	X	X
KAFB106110	SB0038	REG	21-Feb-11	201	250	21102222512	X	X	X	X	X
KAFB106110	SB0039	REG	22-Feb-11	251	300	21102231601	X	X	X	X	X
KAFB106110	SB0040	REG	22-Feb-11	301	350	21102231602	X	X	X	X	X
KAFB106110	SB0041	REG	22-Feb-11	351	400	21102231603	X	X	X	X	X
KAFB106110	SB1741	FD	22-Feb-11	351	400	21102231609	X	X	X	X	X
KAFB106110	SB0042	REG	22-Feb-11	401	450	21102231612	X	X	X	X	X
KAFB106111	SB0043	REG	1-Mar-11	0	10	21103030801	X	X	X	X	X
KAFB106111	SB0044	FD	1-Mar-11	0	10	21103030802	X	X	X	X	X
KAFB106111	SB0045	REG	1-Mar-11	11	20	21103030803	X	X	X	X	X
KAFB106111	SB0046	REG	1-Mar-11	21	30	21103030804	X	X	X	X	X
KAFB106111	SB0047	REG	1-Mar-11	31	40	21103030807	X	X	X	X	X
KAFB106111	SB0048	REG	1-Mar-11	41	50	21103030808	X	X	X	X	X
KAFB106111	SB0049	REG	1-Mar-11	51	100	21103030809	X	X	X	X	X
KAFB106111	SB0050	REG	2-Mar-11	101	150	21103041101	X	X	X	X	X
KAFB106111	SB0051	REG	2-Mar-11	151	200	21103041102	X	X	X	X	X
KAFB106111	SB0052	REG	2-Mar-11	201	250	21103041103	X	X	X	X	X
KAFB106111	SB0053	REG	2-Mar-11	251	300	21103041104	X	X	X	X	X
KAFB106111	SB0054	REG	2-Mar-11	301	350	21103041105	X	X	X	X	X
KAFB106111	SB0055	REG	2-Mar-11	351	400	21103041106	X	X	X	X	X
KAFB106111	SB0056	FD	2-Mar-11	351	400	21103041107	X	X	X	X	X
KAFB106111	SB0057	REG	3-Mar-11	401	450	21103041108	X	X	X	X	X
KAFB106112	SB0058	REG	22-Feb-11	0	10	21102231613	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106112	SB0059	REG	22-Feb-11	11	20	21102231614	X	X	X	X	X
KAFB106112	SB0060	REG	22-Feb-11	21	30	21102231615	X	X	X	X	X
KAFB106112	SB0061	REG	22-Feb-11	31	40	21102231616	X	X	X	X	X
KAFB106112	SB0062	REG	22-Feb-11	41	50	21102231617	X	X	X	X	X
KAFB106112	SB0063	FD	22-Feb-11	41	50	21102231618	X	X	X	X	X
KAFB106112	SB0064	REG	23-Feb-11	51	100	21102231619	X	X	X	X	X
KAFB106112	SB0065	REG	23-Feb-11	101	150	21102250601	X	X	X	X	X
KAFB106112	SB0066	REG	23-Feb-11	151	200	21102250602	X	X	X	X	X
KAFB106112	SB0067	REG	23-Feb-11	201	250	21102250603	X	X	X	X	X
KAFB106112	SB0068	REG	23-Feb-11	251	300	21102250604	X	X	X	X	X
KAFB106112	SB0069	REG	23-Feb-11	301	350	21102250605	X	X	X	X	X
KAFB106112	SB0070	REG	24-Feb-11	351	400	21102250606	X	X	X	X	X
KAFB106112	SB1742	FD	24-Feb-11	351	400	21102250617	X	X	X	X	X
KAFB106112	SB0071	REG	24-Feb-11	401	450	21102250607	X	X	X	X	X
KAFB106113	SB0072	REG	18-Jan-11	10	13	21101202401	X	X	X	X	X
KAFB106113	SB0080	FD	18-Jan-11	10	13	21101202402	X	X	X	X	X
KAFB106113	SB0073	REG	18-Jan-11	20	23	21101202403	X	X	X	X	X
KAFB106113	SB0074	REG	18-Jan-11	30	31	21101202404	X	X	X	X	X
KAFB106113	SB0075	REG	19-Jan-11	40	41	21101202405	X	X	X	X	X
KAFB106113	SB0076	REG	19-Jan-11	50	52	21101202406	X	X	X	X	X
KAFB106113	SB0077	REG	19-Jan-11	100	103	21101202408	X	X	X	X	X
KAFB106113	SB0078	REG	21-Jan-11	100	150	21101202413	X	X	X	X	X
KAFB106113	SB0079	REG	21-Jan-11	150	200	21101202416	X	X	X	X	X
KAFB106113	SB0081	REG	22-Jan-11	201	250	21101251911	X	X	X	X	X
KAFB106113	SB0082	REG	23-Jan-11	250	300	21101251912	X	X	X	X	X
KAFB106113	SB0083	REG	23-Jan-11	300	350	21101251913	X	X	X	X	X
KAFB106113	SB0084	REG	5-Feb-11	350	400	21102070504	X	X	X	X	X
KAFB106113	SB0085	REG	5-Feb-11	400	450	21102070505	X	X	X	X	X
KAFB106114	SB0086	REG	20-Feb-11	0	10	2110222513	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106114	SB0087	REG	20-Feb-11	11	20	21102222514	X	X	X	X	X
KAFB106114	SB0088	REG	20-Feb-11	21	30	21102222515	X	X	X	X	X
KAFB106114	SB0089	FD	20-Feb-11	21	30	21102222516	X	X	X	X	X
KAFB106114	SB0090	REG	20-Feb-11	31	40	21102222517	X	X	X	X	X
KAFB106114	SB0091	REG	20-Feb-11	41	50	21102222518	X	X	X	X	X
KAFB106114	SB0092	REG	21-Feb-11	51	100	21102222519	X	X	X	X	X
KAFB106114	SB0093	REG	22-Feb-11	100	150	21102231604	X	X	X	X	X
KAFB106114	SB0094	REG	22-Feb-11	150	200	21102231605	X	X	X	X	X
KAFB106114	SB0095	REG	22-Feb-11	200	250	21102231608	X	X	X	X	X
KAFB106114	SB0096	REG	22-Feb-11	250	300	21102231620	X	X	X	X	X
KAFB106114	SB1743	FD	22-Feb-11	250	300	21102231622	X	X	X	X	X
KAFB106114	SB0097	REG	23-Feb-11	301	350	21102231621	X	X	X	X	X
KAFB106114	SB0098	REG	23-Feb-11	351	400	21102250608	X	X	X	X	X
KAFB106114	SB0099	REG	23-Feb-11	401	450	21102250609	X	X	X	X	X
KAFB106115	SB0100	REG	9-Feb-11	0	10	21102101801	X	X	X	X	X
KAFB106115	SB0101	FD	9-Feb-11	0	10	21102101802	X	X	X	X	X
KAFB106115	SB0102	REG	9-Feb-11	11	20	21102101803	X	X	X	X	X
KAFB106115	SB0103	REG	9-Feb-11	21	30	21102101804	X	X	X	X	X
KAFB106115	SB0104	REG	9-Feb-11	31	40	21102101805	X	X	X	X	X
KAFB106115	SB0105	REG	9-Feb-11	41	50	21102101806	X	X	X	X	X
KAFB106115	SB0106	REG	9-Feb-11	51	100	21102101807	X	X	X	X	X
KAFB106115	SB0107	REG	10-Feb-11	101	150	21102101816	X	X	X	X	X
KAFB106115	SB0108	REG	10-Feb-11	151	200	21102121001	X	X	X	X	X
KAFB106115	SB0109	REG	15-Feb-11	201	250	21102162009	X	X	X	X	X
KAFB106115	SB0110	REG	16-Feb-11	251	300	21102162019	X	X	X	X	X
KAFB106115	SB0111	REG	16-Feb-11	301	350	21102162020	X	X	X	X	X
KAFB106115	SB0112	REG	17-Feb-11	351	400	21102162021	X	X	X	X	X
KAFB106115	SB0113	FD	17-Feb-11	351	400	21102162022	X	X	X	X	X
KAFB106115	SB0114	REG	17-Feb-11	401	450	21102190401	X	X	X	X	X
KAFB106116	SB0115	REG	4-Mar-11	0	10	21103094001	X	X	X	X	X
KAFB106116	SB0116	REG	4-Mar-11	11	20	21103094002	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106116	SB0117	REG	4-Mar-11	21	30	21103081701	X	X	X	X	X
KAFB106116	SB0118	REG	4-Mar-11	31	40	21103094005	X	X	X	X	X
KAFB106116	SB0119	REG	4-Mar-11	41	50	21103094006	X	X	X	X	X
KAFB106116	SB0120	FD	4-Mar-11	41	50	21103094007	X	X	X	X	X
KAFB106116	SB0121	REG	5-Mar-11	51	100	21103081702	X	X	X	X	X
KAFB106116	SB0122	REG	5-Mar-11	101	150	21103081703	X	X	X	X	X
KAFB106116	SB0123	REG	5-Mar-11	151	200	21103081704	X	X	X	X	X
KAFB106116	SB0124	REG	5-Mar-11	201	250	21103081705	X	X	X	X	X
KAFB106116	SB0125	REG	5-Mar-11	251	300	21103081706	X	X	X	X	X
KAFB106116	SB0126	REG	6-Mar-11	301	350	21103081707	X	X	X	X	X
KAFB106116	SB0127	REG	6-Mar-11	351	400	21103081708	X	X	X	X	X
KAFB106116	SB0128	REG	6-Mar-11	401	450	21103081709	X	X	X	X	X
KAFB106117	SB0129	REG	7-Mar-11	0	10	21103094201	X	X	X	X	X
KAFB106117	SB0130	REG	7-Mar-11	11	20	21103094202	X	X	X	X	X
KAFB106117	SB0131	REG	7-Mar-11	21	30	21103094203	X	X	X	X	X
KAFB106117	SB0132	REG	7-Mar-11	31	40	21103094204	X	X	X	X	X
KAFB106117	SB0133	REG	7-Mar-11	41	50	21103094205	X	X	X	X	X
KAFB106117	SB0134	REG	7-Mar-11	51	100	21103094208	X	X	X	X	X
KAFB106117	SB0135	REG	7-Mar-11	101	150	21103094209	X	X	X	X	X
KAFB106117	SB0136	REG	8-Mar-11	151	200	21103100801	X	X	X	X	X
KAFB106117	SB0137	FD	8-Mar-11	151	200	21103100802	X	X	X	X	X
KAFB106117	SB0138	REG	8-Mar-11	201	250	21103100803	X	X	X	X	X
KAFB106117	SB0139	REG	8-Mar-11	251	300	21103100804	X	X	X	X	X
KAFB106117	SB0140	REG	8-Mar-11	301	350	21103100805	X	X	X	X	X
KAFB106117	SB0141	REG	8-Mar-11	351	400	21103100806	X	X	X	X	X
KAFB106117	SB0142	REG	8-Mar-11	401	450	21103100807	X	X	X	X	X
KAFB106118	SB0143	REG	24-Feb-11	0	10	21102250610	X	X	X	X	X
KAFB106118	SB0144	REG	24-Feb-11	11	20	21102250611	X	X	X	X	X
KAFB106118	SB0145	REG	24-Feb-11	20	30	21102250612	X	X	X	X	X
KAFB106118	SB0146	FD	24-Feb-11	21	30	21102250613	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106118	SB0147	REG	24-Feb-11	31	40	21102250614	X	X	X	X	X
KAFB106118	SB0148	REG	24-Feb-11	41	50	21102250615	X	X	X	X	X
KAFB106118	SB0149	REG	24-Feb-11	51	100	21102250616	X	X	X	X	X
KAFB106118	SB0150	REG	1-Mar-11	101	150	21103030810	X	X	X	X	X
KAFB106118	SB0151	REG	1-Mar-11	151	200	21103030811	X	X	X	X	X
KAFB106118	SB0152	REG	1-Mar-11	201	250	21103030812	X	X	X	X	X
KAFB106118	SB0153	REG	1-Mar-11	251	300	21103030813	X	X	X	X	X
KAFB106118	SB0154	REG	1-Mar-11	301	350	21103030814	X	X	X	X	X
KAFB106118	SB0155	REG	3-Mar-11	351	400	21103072101	X	X	X	X	X
KAFB106118	SB0156	REG	3-Mar-11	401	450	21103072102	X	X	X	X	X
KAFB106119	SB0157	REG	3-Mar-11	0	10	21103072103	X	X	X	X	X
KAFB106119	SB0158	FD	3-Mar-11	0	10	21103072104	X	X	X	X	X
KAFB106119	SB0159	REG	3-Mar-11	11	20	21103072105	X	X	X	X	X
KAFB106119	SB0160	REG	3-Mar-11	21	30	21103072106	X	X	X	X	X
KAFB106119	SB0161	REG	3-Mar-11	31	40	21103072109	X	X	X	X	X
KAFB106119	SB0162	REG	3-Mar-11	41	50	21103072110	X	X	X	X	X
KAFB106119	SB0163	REG	3-Mar-11	51	100	21103072111	X	X	X	X	X
KAFB106119	SB0164	REG	4-Mar-11	101	150	21103094008	X	X	X	X	X
KAFB106119	SB0165	REG	4-Mar-11	151	200	21103081710	X	X	X	X	X
KAFB106119	SB0166	REG	4-Mar-11	201	250	21103081711	X	X	X	X	X
KAFB106119	SB0167	REG	4-Mar-11	251	300	21103094009	X	X	X	X	X
KAFB106119	SB0168	REG	4-Mar-11	301	350	21103094010	X	X	X	X	X
KAFB106119	SB0169	REG	4-Mar-11	351	400	21103094011	X	X	X	X	X
KAFB106119	SB0170	FD	4-Mar-11	351	400	21103094012	X	X	X	X	X
KAFB106119	SB0171	REG	4-Mar-11	401	450	21103094013	X	X	X	X	X
KAFB106128	SB0286	REG	5-Mar-11	0	10	21103094014	X	X	X	X	X
KAFB106128	SB0287	REG	5-Mar-11	11	20	21103081712	X	X	X	X	X
KAFB106128	SB0288	REG	5-Mar-11	21	30	21103094015	X	X	X	X	X
KAFB106128	SB0289	REG	5-Mar-11	31	40	21103094016	X	X	X	X	X
KAFB106128	SB0290	REG	5-Mar-11	41	50	21103081715	X	X	X	X	X
KAFB106128	SB0291	FD	5-Mar-11	40	50	21103094017	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106128	SB0292	REG	5-Mar-11	50	100	21103081716	X	X	X	X	X
KAFB106128	SB0293	REG	6-Mar-11	100	150	21103081717	X	X	X	X	X
KAFB106128	SB0294	REG	6-Mar-11	150	200	21103081718	X	X	X	X	X
KAFB106128	SB0295	REG	6-Mar-11	200	250	21103081719	X	X	X	X	X
KAFB106128	SB0296	REG	6-Mar-11	250	300	21103094018	X	X	X	X	X
KAFB106128	SB1747	FD	6-Mar-11	250	300	21103081722	X	X	X	X	X
KAFB106128	SB0297	REG	6-Mar-11	300	350	21103094019	X	X	X	X	X
KAFB106128	SB0298	REG	6-Mar-11	350	400	21103094020	X	X	X	X	X
KAFB106128	SB0299	REG	6-Mar-11	400	450	21103094021	X	X	X	X	X
KAFB106129	SB0300	REG	1-Mar-11	0	10	21103030815	X	X	X	X	X
KAFB106129	SB0301	REG	1-Mar-11	11	20	21103030816	X	X	X	X	X
KAFB106129	SB0302	REG	1-Mar-11	21	30	21103030817	X	X	X	X	X
KAFB106129	SB0303	REG	1-Mar-11	31	40	21103030818	X	X	X	X	X
KAFB106129	SB0304	REG	1-Mar-11	41	50	21103030819	X	X	X	X	X
KAFB106129	SB0305	REG	1-Mar-11	50	100	21103030820	X	X	X	X	X
KAFB106129	SB0306	REG	2-Mar-11	100	150	21103041109	X	X	X	X	X
KAFB106129	SB0307	REG	2-Mar-11	150	200	21103041110	X	X	X	X	X
KAFB106129	SB0308	FD	2-Mar-11	150	200	21103041111	X	X	X	X	X
KAFB106129	SB0309	REG	2-Mar-11	201	250	21103041112	X	X	X	X	X
KAFB106129	SB0310	REG	3-Mar-11	251	300	21103072112	X	X	X	X	X
KAFB106129	SB0311	REG	3-Mar-11	301	350	21103072113	X	X	X	X	X
KAFB106129	SB0312	REG	3-Mar-11	351	400	21103072114	X	X	X	X	X
KAFB106129	SB0313	REG	3-Mar-11	401	450	21103072115	X	X	X	X	X
KAFB106130	SB0314	REG	17-Feb-11	0	10	21102190402	X	X	X	X	X
KAFB106130	SB0315	REG	17-Feb-11	11	20	21102190403	X	X	X	X	X
KAFB106130	SB0316	REG	17-Feb-11	21	30	21102190404	X	X	X	X	X
KAFB106130	SB0317	REG	17-Feb-11	31	40	21102190407	X	X	X	X	X
KAFB106130	SB0318	REG	18-Feb-11	40	50	21102190408	X	X	X	X	X
KAFB106130	SB0319	REG	18-Feb-11	50	100	21102190409	X	X	X	X	X
KAFB106130	SB0320	REG	18-Feb-11	101	150	21102222520	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106130	SB0321	REG	19-Feb-11	151	200	21102222521	X	X	X	X	X
KAFB106130	SB0322	REG	19-Feb-11	201	250	21102222522	X	X	X	X	X
KAFB106130	SB0323	REG	19-Feb-11	251	300	21102222523	X	X	X	X	X
KAFB106130	SB0324	FD	19-Feb-11	251	300	21102222524	X	X	X	X	X
KAFB106130	SB0325	REG	19-Feb-11	301	350	21102222525	X	X	X	X	X
KAFB106130	SB0326	REG	19-Feb-11	351	400	21102222526	X	X	X	X	X
KAFB106130	SB0327	REG	19-Feb-11	401	450	21102222527	X	X	X	X	X
KAFB106131	SB0328	REG	2-Mar-11	0	10	21103041113	X	X	X	X	X
KAFB106131	SB0329	REG	2-Mar-11	11	20	21103041114	X	X	X	X	X
KAFB106131	SB0330	REG	2-Mar-11	21	30	21103041115	X	X	X	X	X
KAFB106131	SB0331	FD	2-Mar-11	21	30	21103041116	X	X	X	X	X
KAFB106131	SB0332	REG	2-Mar-11	31	40	21103041117	X	X	X	X	X
KAFB106131	SB0333	REG	2-Mar-11	41	50	21103041118	X	X	X	X	X
KAFB106131	SB0334	REG	2-Mar-11	51	100	21103041119	X	X	X	X	X
KAFB106131	SB0335	REG	3-Mar-11	101	150	21103041120	X	X	X	X	X
KAFB106131	SB0336	REG	3-Mar-11	151	200	21103072116	X	X	X	X	X
KAFB106131	SB0337	REG	3-Mar-11	201	250	21103072117	X	X	X	X	X
KAFB106131	SB0338	REG	3-Mar-11	251	300	21103072118	X	X	X	X	X
KAFB106131	SB0339	REG	4-Mar-11	300	350	21103094022	X	X	X	X	X
KAFB106131	SB0340	REG	5-Mar-11	350	400	21103081720	X	X	X	X	X
KAFB106131	SB1749	FD	5-Mar-11	350	400	21103081723	X	X	X	X	X
KAFB106131	SB0341	REG	5-Mar-11	401	450	21103081721	X	X	X	X	X
KAFB106132	SB0342	REG	6-Feb-11	0	10	21102070506	X	X	X	X	X
KAFB106132	SB0343	REG	6-Feb-11	11	20	21102070507	X	X	X	X	X
KAFB106132	SB0344	REG	7-Feb-11	21	30	21102070508	X	X	X	X	X
KAFB106132	SB0345	REG	7-Feb-11	31	40	21102070509	X	X	X	X	X
KAFB106132	SB0346	REG	7-Feb-11	41	50	21102070510	X	X	X	X	X
KAFB106132	SB0347	FD	7-Feb-11	41	50	21102070511	X	X	X	X	X
KAFB106132	SB0348	REG	7-Feb-11	51	100	21102070514	X	X	X	X	X
KAFB106132	SB0349	REG	8-Feb-11	100	150	21102070515	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106132	SB0350	REG	8-Feb-11	151	200	21102101808	X	X	X	X	X
KAFB106132	SB0351	REG	8-Feb-11	201	250	21102101809	X	X	X	X	X
KAFB106132	SB0352	REG	8-Feb-11	250	300	21102101810	X	X	X	X	X
KAFB106132	SB0353	REG	8-Feb-11	300	350	21102101811	X	X	X	X	X
KAFB106132	SB0354	REG	9-Feb-11	350	400	21102101812	X	X	X	X	X
KAFB106132	SB0355	REG	9-Feb-11	400	450	21102101819	X	X	X	X	X
KAFB106133	SB0356	REG	7-Feb-11	0	10	21102070516	X	X	X	X	X
KAFB106133	SB0357	REG	7-Feb-11	11	20	21102070517	X	X	X	X	X
KAFB106133	SB0358	REG	7-Feb-11	21	30	21102070518	X	X	X	X	X
KAFB106133	SB0359	REG	7-Feb-11	31	40	21102070519	X	X	X	X	X
KAFB106133	SB0360	REG	7-Feb-11	41	50	21102070520	X	X	X	X	X
KAFB106133	SB0361	REG	8-Feb-11	51	100	21102101813	X	X	X	X	X
KAFB106133	SB0362	REG	9-Feb-11	101	150	21102101814	X	X	X	X	X
KAFB106133	SB0363	REG	9-Feb-11	151	200	21102101820	X	X	X	X	X
KAFB106133	SB0364	REG	9-Feb-11	201	250	21102101821	X	X	X	X	X
KAFB106133	SB0365	REG	9-Feb-11	251	300	21102101822	X	X	X	X	X
KAFB106133	SB0366	REG	9-Feb-11	301	350	21102101823	X	X	X	X	X
KAFB106133	SB0367	REG	10-Feb-11	351	400	21102101824	X	X	X	X	X
KAFB106133	SB0368	REG	10-Feb-11	401	450	21102101828	X	X	X	X	X
KAFB106134	SB0369	REG	18-Feb-11	0	10	21102222528	X	X	X	X	X
KAFB106134	SB0370	REG	18-Feb-11	11	20	21102222529	X	X	X	X	X
KAFB106134	SB0371	FD	18-Feb-11	11	20	21102222530	X	X	X	X	X
KAFB106134	SB0372	REG	18-Feb-11	21	30	21102222531	X	X	X	X	X
KAFB106134	SB0373	REG	18-Feb-11	31	40	21102222532	X	X	X	X	X
KAFB106134	SB0374	REG	18-Feb-11	41	50	21102222533	X	X	X	X	X
KAFB106134	SB0375	REG	18-Feb-11	51	100	21102222534	X	X	X	X	X
KAFB106134	SB0376	REG	19-Feb-11	101	150	21102222535	X	X	X	X	X
KAFB106134	SB0377	REG	19-Feb-11	151	217	21102222536	X	X	X	X	X
KAFB106134	SB0378	REG	19-Feb-11	201	250	21102222537	X	X	X	X	X
KAFB106134	SB0379	REG	20-Feb-11	251	300	21102222540	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106134	SB0380	REG	20-Feb-11	301	350	21102222541	X	X	X	X	X
KAFB106134	SB0381	REG	20-Feb-11	351	400	21102222542	X	X	X	X	X
KAFB106134	SB0382	REG	20-Feb-11	400	460	21102222543	X	X	X	X	X
KAFB106134	SB1750	FD	20-Feb-11	400	460	21102222544	X	X	X	X	X
KAFB106143	SB0383	REG	17-Feb-11	0	0	21102190410	X	X	X	X	X
KAFB106143	SB0384	REG	17-Feb-11	0	5	21102190411	X	X	X	X	X
KAFB106143	SB0385	REG	17-Feb-11	0	10	21102190412	X	X	X	X	X
KAFB106143	SB0386	REG	17-Feb-11	10	15	21102190413	X	X	X	X	X
KAFB106143	SB0387	REG	17-Feb-11	15	20	21102190414	X	X	X	X	X
KAFB106144	SB0388	REG	16-Feb-11	0	0	21102190417	X	X	X	X	X
KAFB106144	SB0389	REG	16-Feb-11	0	5	21102190418	X	X	X	X	X
KAFB106144	SB0390	REG	16-Feb-11	8	10	21102190419	X	X	X	X	X
KAFB106144	SB0391	REG	16-Feb-11	10	15	21102190420	X	X	X	X	X
KAFB106144	SB0392	REG	16-Feb-11	15	20	21102190421	X	X	X	X	X
KAFB106144	SB0393	FD	16-Feb-11	15	20	21102190422	X	X	X	X	X
KAFB106145	SB1723	REG	16-Feb-11	0	0	21102162023	X	X	X	X	X
KAFB106145	SB1724	REG	16-Feb-11	0	5	21102162024	X	X	X	X	X
KAFB106145	SB1725	REG	16-Feb-11	0	10	21102162025	X	X	X	X	X
KAFB106145	SB1726	REG	16-Feb-11	10	15	21102162026	X	X	X	X	X
KAFB106145	SB1727	REG	16-Feb-11	11	20	21102162027	X	X	X	X	X
KAFB106146	SB1728	REG	16-Feb-11	0	0	21102190423	X	X	X	X	X
KAFB106146	SB1729	REG	16-Feb-11	0	5	21102190424	X	X	X	X	X
KAFB106146	SB1730	REG	16-Feb-11	0	10	21102190425	X	X	X	X	X
KAFB106146	SB1731	REG	16-Feb-11	10	15	21102190426	X	X	X	X	X
KAFB106146	SB1732	REG	16-Feb-11	15	20	21102190427	X	X	X	X	X
KAFB106146	SB1733	FD	16-Feb-11	15	20	21102190430	X	X	X	X	X
KAFB106147	SB1734	REG	16-Feb-11	0	0	21102190431	X	X	X	X	X
KAFB106147	SB1735	REG	16-Feb-11	0	5	21102190432	X	X	X	X	X
KAFB106147	SB1736	REG	16-Feb-11	0	10	21102190433	X	X	X	X	X
KAFB106147	SB1737	REG	17-Feb-11	10	15	21102190434	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB106147	SB1738	REG	17-Feb-11	11	20	21102190435	X	X	X	X	X
KAFB106147	SB1739	FD	17-Feb-11	11	20	21102190436	X	X	X	X	X
KAFB10661	SB0927	REG	8-Mar-11	0	10	21103100808	X	X	X	X	X
KAFB10661	SB0928	REG	8-Mar-11	10	20	21103100809	X	X	X	X	X
KAFB10661	SB0929	REG	8-Mar-11	21	30	21103100810	X	X	X	X	X
KAFB10661	SB0930	REG	8-Mar-11	31	40	21103100811	X	X	X	X	X
KAFB10661	SB0931	REG	8-Mar-11	41	50	21103100812	X	X	X	X	X
KAFB10661	SB0932	REG	8-Mar-11	51	100	21103100815	X	X	X	X	X
KAFB10661	SB0933	REG	8-Mar-11	101	150	21103100816	X	X	X	X	X
KAFB10661	SB0934	REG	9-Mar-11	151	200	21103100817	X	X	X	X	X
KAFB10661	SB0935	FD	9-Mar-11	151	200	21103100818	X	X	X	X	X
KAFB10661	SB0936	REG	9-Mar-11	201	250	21103112401	X	X	X	X	X
KAFB10661	SB0937	REG	9-Mar-11	251	300	21103112402	X	X	X	X	X
KAFB10661	SB0938	REG	9-Mar-11	301	350	21103112403	X	X	X	X	X
KAFB10661	SB0939	REG	10-Mar-11	351	400	21103112404	X	X	X	X	X
KAFB10661	SB0940	REG	15-Mar-11	401	450	21103190701	X	X	X	X	X
KAFB10661	SB0941	REG	15-Mar-11	451	500	21103190702	X	X	X	X	X
KAFB10661	SB0942	REG	21-Mar-11	501	550	21103240901	X	X	X	X	X
KAFB10661	SB0943	REG	22-Mar-11	551	600	21103240902	X	X	X	X	X
KAFB10661	SB1757	REG	23-Mar-11	600	620	21103240914	X	X	X	X	X
KAFB10662	SB0944	REG	7-Mar-11	0	10	21103094210	X	X	X	X	X
KAFB10662	SB0945	REG	7-Mar-11	11	20	21103094211	X	X	X	X	X
KAFB10662	SB0946	REG	7-Mar-11	21	30	21103094212	X	X	X	X	X
KAFB10662	SB0947	FD	7-Mar-11	21	30	21103094213	X	X	X	X	X
KAFB10662	SB0948	REG	7-Mar-11	31	40	21103094214	X	X	X	X	X
KAFB10662	SB0949	REG	7-Mar-11	41	50	21103094215	X	X	X	X	X
KAFB10662	SB0950	REG	8-Mar-11	51	100	21103100819	X	X	X	X	X
KAFB10662	SB0951	REG	8-Mar-11	100	150	21103100820	X	X	X	X	X
KAFB10662	SB0952	REG	8-Mar-11	150	200	21103100821	X	X	X	X	X
KAFB10662	SB0953	REG	9-Mar-11	201	250	21103112405	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB10662	SB0954	REG	9-Mar-11	251	300	21103112406	X	X	X	X	X
KAFB10662	SB0955	REG	9-Mar-11	301	350	21103112407	X	X	X	X	X
KAFB10662	SB0956	REG	9-Mar-11	351	400	21103112408	X	X	X	X	X
KAFB10662	SB0957	REG	9-Mar-11	401	450	21103112409	X	X	X	X	X
KAFB10662	SB0958	REG	10-Mar-11	451	500	21103112410	X	X	X	X	X
KAFB10662	SB0959	REG	10-Mar-11	501	550	21103112411	X	X	X	X	X
KAFB10662	SB1756	REG	10-Mar-11	550	600	21103112412	X	X	X	X	X
KAFB10678	SB1209	REG	18-Mar-11	0	10	21103190703	X	X	X	X	X
KAFB10678	SB1210	REG	18-Mar-11	11	20	21103190704	X	X	X	X	X
KAFB10678	SB1211	REG	18-Mar-11	21	30	21103190705	X	X	X	X	X
KAFB10678	SB1212	FD	18-Mar-11	21	30	21103190706	X	X	X	X	X
KAFB10678	SB1213	REG	18-Mar-11	31	40	21103190707	X	X	X	X	X
KAFB10678	SB1214	REG	18-Mar-11	41	50	21103190708	X	X	X	X	X
KAFB10678	SB1215	REG	18-Mar-11	51	100	21103221901	X	X	X	X	X
KAFB10678	SB1216	REG	18-Mar-11	101	150	21103221904	X	X	X	X	X
KAFB10678	SB1217	REG	19-Mar-11	151	200	21103221905	X	X	X	X	X
KAFB10678	SB1218	REG	19-Mar-11	200	250	21103221906	X	X	X	X	X
KAFB10678	SB1752	FD	19-Mar-11	200	250	21103221911	X	X	X	X	X
KAFB10678	SB1219	REG	20-Mar-11	250	300	21103221907	X	X	X	X	X
KAFB10678	SB1220	REG	20-Mar-11	300	350	21103221908	X	X	X	X	X
KAFB10678	SB1221	REG	20-Mar-11	350	400	21103221909	X	X	X	X	X
KAFB10678	SB1222	REG	20-Mar-11	400	450	21103221910	X	X	X	X	X
KAFB10678	SB1223	REG	22-Mar-11	450	500	21103240903	X	X	X	X	X
KAFB10678	SB1224	FD	22-Mar-11	450	500	21103240904	X	X	X	X	X
KAFB10678	SB1225	REG	23-Mar-11	500	550	21103240905	X	X	X	X	X
KAFB10678	SB1226	REG	24-Mar-11	550	600	21103240917	X	X	X	X	X
KAFB10681	SB1258	REG	22-Mar-11	0	10	21103240906	X	X	X	X	X
KAFB10681	SB1259	REG	23-Mar-11	10	20	21103240907	X	X	X	X	X
KAFB10681	SB1260	REG	23-Mar-11	20	30	21103240908	X	X	X	X	X
KAFB10681	SB1753	FD	23-Mar-11	20	30	21103240913	X	X	X	X	X

**Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)**

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
KAFB10681	SB1261	REG	23-Mar-11	30	40	21103240909	X	X	X	X	X
KAFB10681	SB1262	REG	23-Mar-11	40	50	21103240910	X	X	X	X	X
KAFB10681	SB1263	REG	24-Mar-11	50	100	21103240918	X	X	X	X	X
KAFB10681	SB1264	REG	23-Mar-11	100	150	21103240919	X	X	X	X	X
KAFB10681	SB1265	REG	23-Mar-11	150	200	21103240920	X	X	X	X	X
KAFB10681	SB1266	REG	24-Mar-11	200	250	21103240921	X	X	X	X	X
KAFB10681	SB1267	REG	24-Mar-11	250	300	21103240922	X	X	X	X	X
KAFB10681	SB1268	REG	24-Mar-11	300	350	21103240923	X	X	X	X	X
KAFB10681	SB1269	REG	24-Mar-11	350	400	21103240924	X	X	X	X	X
KAFB10681	SB1270	REG	24-Mar-11	400	450	21103240925	X	X	X	X	X
KAFB10681	SB1754	FD	24-Mar-11	400	450	21103240926	X	X	X	X	X
KAFB10681	SB1271	REG	30-Mar-11	450	500	21104011301	X	X	X	X	X
KAFB10681	SB1272	REG	30-Mar-11	500	550	21104011302	X	X	X	X	X
KAFB10681	SB1273	REG	30-Mar-11	550	600	21104011303	X	X	X	X	X
KAFB10681	SB1759	REG	30-Mar-11	600	617	21104011304	X	X	X	X	X
Field QC Summary											
FIELDQC	SB8003-RB	ER	6-Feb-11	---	---	21102070512	X	X	X	X	X
FIELDQC	SB8004-RB	ER	9-Feb-11	---	---	21102101825	X	X	X	X	X
FIELDQC	SB8005-RB	ER	10-Feb-11	---	---	21102101826	X	X	X	X	X
FIELDQC	SB8006-RB	ER	17-Feb-11	---	---	21102162028	X	X	X	X	X
FIELDQC	SB8007-RB	ER	16-Feb-11	---	---	21102190437	X	X	X	X	X
FIELDQC	SB8008-RB	ER	17-Feb-11	---	---	21102190438	X	X	X	X	X
FIELDQC	SB8009-RB	ER	18-Feb-11	---	---	21102222545	X	X	X	X	X
FIELDQC	SB8010-RB	ER	18-Feb-11	---	---	21102222546	X	X	X	X	X
FIELDQC	SB8011-RB	ER	19-Jan-11	---	---	21101202409	X	X	X	X	X
FIELDQC	SB8012-RB	ER	22-Jan-11	---	---	21101251915	X	X	X	X	X
FIELDQC	SB8013-RB	ER	20-Feb-11	---	---	21102222547	X	X	X	X	X
FIELDQC	SB8014-RB	ER	21-Feb-11	---	---	21102231610	X	X	X	X	X
FIELDQC	SB8015-RB	ER	23-Feb-11	---	---	21102231623	X	X	X	X	X
FIELDQC	SB8016-RB	ER	1-Mar-11	---	---	21103030824	X	X	X	X	X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (continued)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
FIELDQC	SB8017-RB	ER	2-Mar-11	---	---	21103041123	X	X	X	X	X
FIELDQC	SB8018-RB	ER	2-Mar-11	---	---	21103041124	X	X	X	X	X
FIELDQC	SB8019-RB	ER	3-Mar-11	---	---	21103041125	X	X	X	X	X
FIELDQC	SB8020-RB	ER	4-Mar-11	---	---	21103072120	X	X	X	X	X
FIELDQC	SB8021-RB	ER	5-Mar-11	---	---	21103081724	X	X	X	X	X
FIELDQC	SB8022-RB	ER	6-Mar-11	---	---	21103081725	X	X	X	X	X
FIELDQC	SB8023-RB	ER	8-Mar-11	---	---	21103100823	X	X	X	X	X
FIELDQC	SB8024-RB	ER	8-Mar-11	---	---	21103094220	X	X	X	X	X
FIELDQC	SB8025-RB	ER	9-Mar-11	---	---	21103100824	X	X	X	X	X
FIELDQC	SB8026-RB	ER	19-Mar-11	---	---	21103221912	X	X	X	X	X
FIELDQC	SB8027-RB	ER	30-Mar-11	---	---	21104011305	X	X	X	X	X
FIELDQC	SB8001-FB	FB	24-Feb-11	---	---	21102250618					X
FIELDQC	SB8002-FB	FB	1-Mar-11	---	---	21103030821					X
FIELDQC	SB8004-FB	FB	1-Mar-11	---	---	21103030822					X
FIELDQC	SB8005-FB	FB	1-Mar-11	---	---	21103030823					X
FIELDQC	SB8006-FB	FB	3-Mar-11	---	---	21103072119					X
FIELDQC	SB8007-FB	FB	4-Mar-11	---	---	21103081749					X
FIELDQC	SB8008-FB	FB	6-Mar-11	---	---	21103081750					X
FIELDQC	SB8009-FB	FB	6-Mar-11	---	---	21103081751					X
FIELDQC	SB8010-FB	FB	7-Mar-11	---	---	21103094218					X
FIELDQC	SB8011-FB	FB	9-Mar-11	---	---	21103100822					X
FIELDQC	SB8012-FB	FB	10-Mar-11	---	---	21103112413					X
FIELDQC	SB8013-FB	FB	22-Mar-11	---	---	21103240915					X
FIELDQC	SB8014-FB	FB	30-Mar-11	---	---	21104011306					X
FIELDQC	SB8001-TB	TB	19-Jan-11	---	---	21101202407					X
FIELDQC	SB8002-TB	TB	20-Jan-11	---	---	21101202410					X
FIELDQC	SB8003-TB	TB	21-Jan-11	---	---	21101202417					X
FIELDQC	SB8004-TB	TB	21-Jan-11	---	---	21101251914					X
FIELDQC	SB8005-TB	TB	4-Feb-11	---	---	21102070503					X
FIELDQC	SB8006-TB	TB	5-Feb-11	---	---	21102070513					X

Attachment 1. Bulk Fuels Facility Spill Solid Waste Management Units ST-106 and SS-111
First Quarter 2011 Soil Vapor Monitoring Well Installation Soil Sampling Summary
Kirtland Air Force Base, Albuquerque, New Mexico (concluded)

Location ID	Sample Number	Sample Purpose	Sample Date	Start Depth (ft)	End Depth (ft)	Laboratory Sample ID	Lead by SW-846 6010C	TPH-GRO by SW-846 8015B	TPH-DRO by SW-846 8015B	VOCs by SW-846 8260B	SVOCs by SW-846 8270D
FIELDQC	SB8007-TB	TB	8-Feb-11	---	---	21102070523				X	
FIELDQC	SB8008-TB	TB	9-Feb-11	---	---	21102101815				X	
FIELDQC	SB8009-TB	TB	10-Feb-11	---	---	21102101827				X	
FIELDQC	SB8010-TB	TB	10-Feb-11	---	---	21102121002				X	
FIELDQC	SB8011-TB	TB	15-Feb-11	---	---	21102162010				X	
FIELDQC	SB8012-TB	TB	17-Feb-11	---	---	21102162029				X	
FIELDQC	SB8013-TB	TB	18-Feb-11	---	---	21102190439				X	
FIELDQC	SB8014-TB	TB	18-Feb-11	---	---	21102222548				X	
FIELDQC	SB8015-TB	TB	22-Feb-11	---	---	21102231611				X	
FIELDQC	SB8016-TB	TB	23-Feb-11	---	---	21102231624				X	
FIELDQC	SB8017-TB	TB	24-Feb-11	---	---	21102250619				X	
FIELDQC	SB8018-TB	TB	1-Mar-11	---	---	21103030825				X	
FIELDQC	SB8019-TB	TB	3-Mar-11	---	---	21103041126				X	
FIELDQC	SB8020-TB	TB	4-Mar-11	---	---	21103072121				X	
FIELDQC	SB8021-TB	TB	5-Mar-11	---	---	21103081754				X	
FIELDQC	SB8022-TB	TB	7-Mar-11	---	---	21103094219				X	
FIELDQC	SB8023-TB	TB	8-Mar-11	---	---	21103100825				X	
FIELDQC	SB8024-TB	TB	9-Mar-11	---	---	21103112414				X	
FIELDQC	SB8025-TB	TB	15-Mar-11	---	---	21103190709				X	
FIELDQC	SB8026-TB	TB	18-Mar-11	---	---	21103221913				X	
FIELDQC	SB8027-TB	TB	21-Mar-11	---	---	21103240916				X	
FIELDQC	SB8028-TB	TB	24-Mar-11	---	---	21103240928				X	
FIELDQC	SB8029-TB	TB	30-Mar-11	---	---	21104011307				X	

X indicates a sample was collected and analyzed for the given parameter

ER equipment rinsate sample

REG regular field sample

FB field blank sample

TB trip blank

FD field duplicate sample

TPH-DRO total petroleum hydrocarbons - Diesel Range Organics

ft feet

TPH-GRO total petroleum hydrocarbons - Gasoline Range Organics

ID identification

VOCs volatile organic compounds

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Attachment 2. Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Organic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; associated numerical value is its approximate concentration with a high bias in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value represents its approximate concentration.
"UJ" qualified	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Resampling and reanalysis may be necessary to confirm or deny the presence of the analyte. Results are rejected and data are <u>unusable</u> for any purposes.

Data Qualifier Definitions For Inorganic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the level of the reported value. The reported value is the instrument detection limit for waters and the method detection limit (MDL) for soils for all the analytes except cyanide (CN) and mercury (Hg). For CN and Hg, the reported value is the contract-required detection limit.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; associated numerical value is its approximate concentration with a high bias in the sample.
"UJ" qualified	The analyte was analyzed for but was not detected above the reported value. The reported value may not accurately or precisely represent the sample reporting limit.
R	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Resampling and reanalysis may be necessary to confirm or deny the presence of the analyte. Results are rejected and data are <u>unusable</u> for any purposes.

Attachment 2. Data Qualification Flags and Reason Codes (concluded)**Reason Codes for Data Review and Validation**

Reason Code	Description
A	Serial dilution outside criteria (Level IV).
B1	Method blank contaminants above reporting limit.
B2	Calibration blank contaminants above reporting limit.
B2, Bias Flag “-”	Calibration blank indicates negative interference, false negatives may be present.
C	Calibration outside control limits.
D1	Sample duplicate RPD outside control limit.
D2	Matrix duplicate RPD outside control limit.
E	The sample results exceed the linear calibration range of the instrument.
F	Hydrocarbon pattern does not match hydrocarbon pattern in the standard.
G1	Initial calibration relative standard deviation outside control limit.
G2	Initial continuing calibration RRF outside control limit.
G3	Continuing calibration RRF outside control limit.
H	Holding time exceeded.
I	Internal standard recovery outside control limit.
K1	Equipment rinsate contamination.
K2	Ambient blank contamination.
K3	Trip blank contamination.
L	LCS outside control limits.
M	MS outside control limits.
O	Interference check sample outside acceptance criteria.
P	Analyte qualified based on the professional judgment of the reviewer.
S	Surrogate recovery outside control limit.
T	Temperature outside acceptance criteria.
Tr	Value reported detected between the MDL and practical quantitation limit.
W	Pesticide breakdown outside criteria (Level IV).
X	Raised reporting limit due to matrix interference or high analyte concentration.
Y	Analyte was not confirmed by a second column.
Y1	Primary and confirmation sample duplicate RPD outside control limit.

Well Installation Soil January - March 2011
 Gulf Coast Analytical Laboratories Analytical Data

LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106061	8-Mar-11	SB0927	211031008	SO
KAFB-106061	8-Mar-11	SB0928	211031008	SO
KAFB-106061	8-Mar-11	SB0929	211031008	SO
KAFB-106061	8-Mar-11	SB0930	211031008	SO
KAFB-106061	8-Mar-11	SB0931	211031008	SO
KAFB-106061	8-Mar-11	SB0932	211031008	SO
KAFB-106061	8-Mar-11	SB0933	211031008	SO
KAFB-106061	9-Mar-11	SB0934	211031008	SO
KAFB-106061	9-Mar-11	SB0935	211031008	SO
KAFB-106061	9-Mar-11	SB0936	211031124	SO
KAFB-106061	9-Mar-11	SB0937	211031124	SO
KAFB-106061	9-Mar-11	SB0938	211031124	SO
KAFB-106061	10-Mar-11	SB0939	211031124	SO
KAFB-106061	15-Mar-11	SB0940	211031907	SO
KAFB-106061	15-Mar-11	SB0941	211031907	SO
KAFB-106061	21-Mar-11	SB0942	211032409	SO
KAFB-106061	22-Mar-11	SB0943	211032409	SO
KAFB-106061	23-Mar-11	SB1757	211032409	SO
KAFB-106062	7-Mar-11	SB0944	211030942	SO
KAFB-106062	7-Mar-11	SB0945	211030942	SO
KAFB-106062	7-Mar-11	SB0946	211030942	SO
KAFB-106062	7-Mar-11	SB0947	211030942	SO
KAFB-106062	7-Mar-11	SB0948	211030942	SO
KAFB-106062	7-Mar-11	SB0949	211030942	SO
KAFB-106062	8-Mar-11	SB0950	211031008	SO
KAFB-106062	8-Mar-11	SB0951	211031008	SO
KAFB-106062	8-Mar-11	SB0952	211031008	SO
KAFB-106062	9-Mar-11	SB0953	211031124	SO
KAFB-106062	9-Mar-11	SB0954	211031124	SO
KAFB-106062	9-Mar-11	SB0955	211031124	SO
KAFB-106062	9-Mar-11	SB0956	211031124	SO
KAFB-106062	9-Mar-11	SB0957	211031124	SO
KAFB-106062	10-Mar-11	SB0958	211031124	SO
KAFB-106062	10-Mar-11	SB0959	211031124	SO
KAFB-106062	10-Mar-11	SB1756	211031124	SO
KAFB-106078	18-Mar-11	SB1209	211031907	SO
KAFB-106078	18-Mar-11	SB1210	211031907	SO
KAFB-106078	18-Mar-11	SB1211	211031907	SO
KAFB-106078	18-Mar-11	SB1212	211031907	SO
KAFB-106078	18-Mar-11	SB1213	211031907	SO
KAFB-106078	18-Mar-11	SB1214	211031907	SO
KAFB-106078	18-Mar-11	SB1215	211032219	SO
KAFB-106078	18-Mar-11	SB1216	211032219	SO
KAFB-106078	19-Mar-11	SB1217	211032219	SO
KAFB-106078	19-Mar-11	SB1218	211032219	SO
KAFB-106078	19-Mar-11	SB1752	211032219	SO

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 Gulf Coast Analytical Laboratories Analytical Data

LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106078	20-Mar-11	SB1219	211032219	SO
KAFB-106078	20-Mar-11	SB1220	211032219	SO
KAFB-106078	20-Mar-11	SB1221	211032219	SO
KAFB-106078	20-Mar-11	SB1222	211032219	SO
KAFB-106078	22-Mar-11	SB1223	211032409	SO
KAFB-106078	22-Mar-11	SB1224	211032409	SO
KAFB-106078	23-Mar-11	SB1225	211032409	SO
KAFB-106078	24-Mar-11	SB1226	211032409	SO
KAFB-106081	22-Mar-11	SB1258	211032409	SO
KAFB-106081	23-Mar-11	SB1259	211032409	SO
KAFB-106081	23-Mar-11	SB1260	211032409	SO
KAFB-106081	23-Mar-11	SB1261	211032409	SO
KAFB-106081	23-Mar-11	SB1262	211032409	SO
KAFB-106081	23-Mar-11	SB1264	211032409	SO
KAFB-106081	23-Mar-11	SB1265	211032409	SO
KAFB-106081	23-Mar-11	SB1753	211032409	SO
KAFB-106081	24-Mar-11	SB1263	211032409	SO
KAFB-106081	24-Mar-11	SB1266	211032409	SO
KAFB-106081	24-Mar-11	SB1267	211032409	SO
KAFB-106081	24-Mar-11	SB1268	211032409	SO
KAFB-106081	24-Mar-11	SB1269	211032409	SO
KAFB-106081	24-Mar-11	SB1270	211032409	SO
KAFB-106081	24-Mar-11	SB1754	211032409	SO
KAFB-106081	30-Mar-11	SB1271	211040113	SO
KAFB-106081	30-Mar-11	SB1272	211040113	SO
KAFB-106081	30-Mar-11	SB1273	211040113	SO
KAFB-106081	30-Mar-11	SB1759	211040113	SO
KAFB-106108	15-Feb-11	SB0001	211021620	SO
KAFB-106108	15-Feb-11	SB0002	211021620	SO
KAFB-106108	15-Feb-11	SB0003	211021620	SO
KAFB-106108	15-Feb-11	SB0004	211021620	SO
KAFB-106108	15-Feb-11	SB0005	211021620	SO
KAFB-106108	15-Feb-11	SB0006	211021620	SO
KAFB-106108	15-Feb-11	SB0007	211021620	SO
KAFB-106108	16-Feb-11	SB0008	211021620	SO
KAFB-106108	16-Feb-11	SB0009	211021620	SO
KAFB-106108	16-Feb-11	SB0010	211021620	SO
KAFB-106108	16-Feb-11	SB0011	211021620	SO
KAFB-106108	16-Feb-11	SB0012	211021620	SO
KAFB-106108	16-Feb-11	SB0013	211021620	SO
KAFB-106108	16-Feb-11	SB0014	211021620	SO
KAFB-106109	21-Jan-11	SB0015	211012024	SO
KAFB-106109	21-Jan-11	SB0016	211012024	SO
KAFB-106109	21-Jan-11	SB0017	211012519	SO
KAFB-106109	22-Jan-11	SB0018	211012519	SO
KAFB-106109	22-Jan-11	SB0019	211012519	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106109	22-Jan-11	SB0020	211012519	SO
KAFB-106109	23-Jan-11	SB0021	211012519	SO
KAFB-106109	23-Jan-11	SB0022	211012519	SO
KAFB-106109	23-Jan-11	SB0023	211012519	SO
KAFB-106109	23-Jan-11	SB0024	211012519	SO
KAFB-106109	23-Jan-11	SB0025	211012519	SO
KAFB-106109	23-Jan-11	SB0026	211012519	SO
KAFB-106109	4-Feb-11	SB0027	211020705	SO
KAFB-106109	4-Feb-11	SB0028	211020705	SO
KAFB-106110	19-Feb-11	SB0029	211022225	SO
KAFB-106110	19-Feb-11	SB0030	211022225	SO
KAFB-106110	19-Feb-11	SB0031	211022225	SO
KAFB-106110	19-Feb-11	SB0032	211022225	SO
KAFB-106110	20-Feb-11	SB0033	211022225	SO
KAFB-106110	20-Feb-11	SB0034	211022225	SO
KAFB-106110	20-Feb-11	SB0035	211022225	SO
KAFB-106110	20-Feb-11	SB0036	211022225	SO
KAFB-106110	21-Feb-11	SB0037	211022225	SO
KAFB-106110	21-Feb-11	SB0038	211022225	SO
KAFB-106110	22-Feb-11	SB0039	211022316	SO
KAFB-106110	22-Feb-11	SB0040	211022316	SO
KAFB-106110	22-Feb-11	SB0041	211022316	SO
KAFB-106110	22-Feb-11	SB0042	211022316	SO
KAFB-106110	22-Feb-11	SB1741	211022316	SO
KAFB-106111	1-Mar-11	SB0043	211030308	SO
KAFB-106111	1-Mar-11	SB0044	211030308	SO
KAFB-106111	1-Mar-11	SB0045	211030308	SO
KAFB-106111	1-Mar-11	SB0046	211030308	SO
KAFB-106111	1-Mar-11	SB0047	211030308	SO
KAFB-106111	1-Mar-11	SB0048	211030308	SO
KAFB-106111	1-Mar-11	SB0049	211030308	SO
KAFB-106111	2-Mar-11	SB0050	211030411	SO
KAFB-106111	2-Mar-11	SB0051	211030411	SO
KAFB-106111	2-Mar-11	SB0052	211030411	SO
KAFB-106111	2-Mar-11	SB0053	211030411	SO
KAFB-106111	2-Mar-11	SB0054	211030411	SO
KAFB-106111	2-Mar-11	SB0055	211030411	SO
KAFB-106111	2-Mar-11	SB0056	211030411	SO
KAFB-106111	3-Mar-11	SB0057	211030411	SO
KAFB-106112	22-Feb-11	SB0058	211022316	SO
KAFB-106112	22-Feb-11	SB0059	211022316	SO
KAFB-106112	22-Feb-11	SB0060	211022316	SO
KAFB-106112	22-Feb-11	SB0061	211022316	SO
KAFB-106112	22-Feb-11	SB0062	211022316	SO
KAFB-106112	22-Feb-11	SB0063	211022316	SO
KAFB-106112	23-Feb-11	SB0064	211022316	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106112	23-Feb-11	SB0065	211022506	SO
KAFB-106112	23-Feb-11	SB0066	211022506	SO
KAFB-106112	23-Feb-11	SB0067	211022506	SO
KAFB-106112	23-Feb-11	SB0068	211022506	SO
KAFB-106112	23-Feb-11	SB0069	211022506	SO
KAFB-106112	24-Feb-11	SB0070	211022506	SO
KAFB-106112	24-Feb-11	SB0071	211022506	SO
KAFB-106112	24-Feb-11	SB1742	211022506	SO
KAFB-106113	18-Jan-11	SB0072	211012024	SO
KAFB-106113	18-Jan-11	SB0073	211012024	SO
KAFB-106113	18-Jan-11	SB0074	211012024	SO
KAFB-106113	18-Jan-11	SB0080	211012024	SO
KAFB-106113	19-Jan-11	SB0075	211012024	SO
KAFB-106113	19-Jan-11	SB0076	211012024	SO
KAFB-106113	19-Jan-11	SB0077	211012024	SO
KAFB-106113	21-Jan-11	SB0078	211012024	SO
KAFB-106113	21-Jan-11	SB0079	211012024	SO
KAFB-106113	22-Jan-11	SB0081	211012519	SO
KAFB-106113	23-Jan-11	SB0082	211012519	SO
KAFB-106113	23-Jan-11	SB0083	211012519	SO
KAFB-106113	5-Feb-11	SB0084	211020705	SO
KAFB-106113	5-Feb-11	SB0085	211020705	SO
KAFB-106114	20-Feb-11	SB0086	211022225	SO
KAFB-106114	20-Feb-11	SB0087	211022225	SO
KAFB-106114	20-Feb-11	SB0088	211022225	SO
KAFB-106114	20-Feb-11	SB0089	211022225	SO
KAFB-106114	20-Feb-11	SB0090	211022225	SO
KAFB-106114	20-Feb-11	SB0091	211022225	SO
KAFB-106114	21-Feb-11	SB0092	211022225	SO
KAFB-106114	22-Feb-11	SB0093	211022316	SO
KAFB-106114	22-Feb-11	SB0094	211022316	SO
KAFB-106114	22-Feb-11	SB0095	211022316	SO
KAFB-106114	22-Feb-11	SB0096	211022316	SO
KAFB-106114	22-Feb-11	SB1743	211022316	SO
KAFB-106114	23-Feb-11	SB0097	211022316	SO
KAFB-106114	23-Feb-11	SB0098	211022506	SO
KAFB-106114	23-Feb-11	SB0099	211022506	SO
KAFB-106115	9-Feb-11	SB0100	211021018	SO
KAFB-106115	9-Feb-11	SB0101	211021018	SO
KAFB-106115	9-Feb-11	SB0102	211021018	SO
KAFB-106115	9-Feb-11	SB0103	211021018	SO
KAFB-106115	9-Feb-11	SB0104	211021018	SO
KAFB-106115	9-Feb-11	SB0105	211021018	SO
KAFB-106115	9-Feb-11	SB0106	211021018	SO
KAFB-106115	10-Feb-11	SB0107	211021018	SO
KAFB-106115	10-Feb-11	SB0108	211021018	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106115	15-Feb-11	SB0109	211021620	SO
KAFB-106115	16-Feb-11	SB0110	211021620	SO
KAFB-106115	16-Feb-11	SB0111	211021620	SO
KAFB-106115	17-Feb-11	SB0112	211021620	SO
KAFB-106115	17-Feb-11	SB0113	211021620	SO
KAFB-106115	17-Feb-11	SB0114	211021904	SO
KAFB-106116	4-Mar-11	SB0115	211030940	SO
KAFB-106116	4-Mar-11	SB0116	211030940	SO
KAFB-106116	4-Mar-11	SB0117	211030817	SO
KAFB-106116	4-Mar-11	SB0118	211030940	SO
KAFB-106116	4-Mar-11	SB0119	211030940	SO
KAFB-106116	4-Mar-11	SB0120	211030940	SO
KAFB-106116	5-Mar-11	SB0121	211030817	SO
KAFB-106116	5-Mar-11	SB0122	211030817	SO
KAFB-106116	5-Mar-11	SB0123	211030817	SO
KAFB-106116	5-Mar-11	SB0124	211030817	SO
KAFB-106116	5-Mar-11	SB0125	211030817	SO
KAFB-106116	6-Mar-11	SB0126	211030817	SO
KAFB-106116	6-Mar-11	SB0127	211030817	SO
KAFB-106116	6-Mar-11	SB0128	211030817	SO
KAFB-106117	7-Mar-11	SB0129	211030942	SO
KAFB-106117	7-Mar-11	SB0130	211030942	SO
KAFB-106117	7-Mar-11	SB0131	211030942	SO
KAFB-106117	7-Mar-11	SB0132	211030942	SO
KAFB-106117	7-Mar-11	SB0133	211030942	SO
KAFB-106117	7-Mar-11	SB0134	211030942	SO
KAFB-106117	7-Mar-11	SB0135	211030942	SO
KAFB-106117	8-Mar-11	SB0136	211031008	SO
KAFB-106117	8-Mar-11	SB0137	211031008	SO
KAFB-106117	8-Mar-11	SB0138	211031008	SO
KAFB-106117	8-Mar-11	SB0139	211031008	SO
KAFB-106117	8-Mar-11	SB0140	211031008	SO
KAFB-106117	8-Mar-11	SB0141	211031008	SO
KAFB-106117	8-Mar-11	SB0142	211031008	SO
KAFB-106118	24-Feb-11	SB0143	211022506	SO
KAFB-106118	24-Feb-11	SB0144	211022506	SO
KAFB-106118	24-Feb-11	SB0145	211022506	SO
KAFB-106118	24-Feb-11	SB0146	211022506	SO
KAFB-106118	24-Feb-11	SB0147	211022506	SO
KAFB-106118	24-Feb-11	SB0148	211022506	SO
KAFB-106118	24-Feb-11	SB0149	211022506	SO
KAFB-106118	1-Mar-11	SB0150	211030308	SO
KAFB-106118	1-Mar-11	SB0151	211030308	SO
KAFB-106118	1-Mar-11	SB0152	211030308	SO
KAFB-106118	1-Mar-11	SB0153	211030308	SO
KAFB-106118	1-Mar-11	SB0154	211030308	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106118	3-Mar-11	SB0155	211030721	SO
KAFB-106118	3-Mar-11	SB0156	211030721	SO
KAFB-106119	3-Mar-11	SB0157	211030721	SO
KAFB-106119	3-Mar-11	SB0158	211030721	SO
KAFB-106119	3-Mar-11	SB0159	211030721	SO
KAFB-106119	3-Mar-11	SB0160	211030721	SO
KAFB-106119	3-Mar-11	SB0161	211030721	SO
KAFB-106119	3-Mar-11	SB0162	211030721	SO
KAFB-106119	3-Mar-11	SB0163	211030721	SO
KAFB-106119	4-Mar-11	SB0164	211030940	SO
KAFB-106119	4-Mar-11	SB0165	211030817	SO
KAFB-106119	4-Mar-11	SB0166	211030817	SO
KAFB-106119	4-Mar-11	SB0167	211030940	SO
KAFB-106119	4-Mar-11	SB0168	211030940	SO
KAFB-106119	4-Mar-11	SB0169	211030940	SO
KAFB-106119	4-Mar-11	SB0170	211030940	SO
KAFB-106119	4-Mar-11	SB0171	211030940	SO
KAFB-106128	5-Mar-11	SB0286	211030940	SO
KAFB-106128	5-Mar-11	SB0287	211030817	SO
KAFB-106128	5-Mar-11	SB0288	211030940	SO
KAFB-106128	5-Mar-11	SB0289	211030940	SO
KAFB-106128	5-Mar-11	SB0290	211030817	SO
KAFB-106128	5-Mar-11	SB0291	211030940	SO
KAFB-106128	5-Mar-11	SB0292	211030817	SO
KAFB-106128	6-Mar-11	SB0293	211030817	SO
KAFB-106128	6-Mar-11	SB0294	211030817	SO
KAFB-106128	6-Mar-11	SB0295	211030817	SO
KAFB-106128	6-Mar-11	SB0296	211030940	SO
KAFB-106128	6-Mar-11	SB0297	211030940	SO
KAFB-106128	6-Mar-11	SB0298	211030940	SO
KAFB-106128	6-Mar-11	SB0299	211030940	SO
KAFB-106128	6-Mar-11	SB1747	211030817	SO
KAFB-106129	1-Mar-11	SB0300	211030308	SO
KAFB-106129	1-Mar-11	SB0301	211030308	SO
KAFB-106129	1-Mar-11	SB0302	211030308	SO
KAFB-106129	1-Mar-11	SB0303	211030308	SO
KAFB-106129	1-Mar-11	SB0304	211030308	SO
KAFB-106129	1-Mar-11	SB0305	211030308	SO
KAFB-106129	2-Mar-11	SB0306	211030411	SO
KAFB-106129	2-Mar-11	SB0307	211030411	SO
KAFB-106129	2-Mar-11	SB0308	211030411	SO
KAFB-106129	2-Mar-11	SB0309	211030411	SO
KAFB-106129	3-Mar-11	SB0310	211030721	SO
KAFB-106129	3-Mar-11	SB0311	211030721	SO
KAFB-106129	3-Mar-11	SB0312	211030721	SO
KAFB-106129	3-Mar-11	SB0313	211030721	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106130	17-Feb-11	SB0314	211021904	SO
KAFB-106130	17-Feb-11	SB0315	211021904	SO
KAFB-106130	17-Feb-11	SB0316	211021904	SO
KAFB-106130	17-Feb-11	SB0317	211021904	SO
KAFB-106130	18-Feb-11	SB0318	211021904	SO
KAFB-106130	18-Feb-11	SB0319	211021904	SO
KAFB-106130	18-Feb-11	SB0320	211022225	SO
KAFB-106130	19-Feb-11	SB0321	211022225	SO
KAFB-106130	19-Feb-11	SB0322	211022225	SO
KAFB-106130	19-Feb-11	SB0323	211022225	SO
KAFB-106130	19-Feb-11	SB0324	211022225	SO
KAFB-106130	19-Feb-11	SB0325	211022225	SO
KAFB-106130	19-Feb-11	SB0326	211022225	SO
KAFB-106130	19-Feb-11	SB0327	211022225	SO
KAFB-106131	2-Mar-11	SB0328	211030411	SO
KAFB-106131	2-Mar-11	SB0329	211030411	SO
KAFB-106131	2-Mar-11	SB0330	211030411	SO
KAFB-106131	2-Mar-11	SB0331	211030411	SO
KAFB-106131	2-Mar-11	SB0332	211030411	SO
KAFB-106131	2-Mar-11	SB0333	211030411	SO
KAFB-106131	2-Mar-11	SB0334	211030411	SO
KAFB-106131	3-Mar-11	SB0335	211030411	SO
KAFB-106131	3-Mar-11	SB0336	211030721	SO
KAFB-106131	3-Mar-11	SB0337	211030721	SO
KAFB-106131	3-Mar-11	SB0338	211030721	SO
KAFB-106131	4-Mar-11	SB0339	211030940	SO
KAFB-106131	5-Mar-11	SB0340	211030817	SO
KAFB-106131	5-Mar-11	SB0341	211030817	SO
KAFB-106131	5-Mar-11	SB1749	211030817	SO
KAFB-106132	6-Feb-11	SB0342	211020705	SO
KAFB-106132	6-Feb-11	SB0343	211020705	SO
KAFB-106132	7-Feb-11	SB0344	211020705	SO
KAFB-106132	7-Feb-11	SB0345	211020705	SO
KAFB-106132	7-Feb-11	SB0346	211020705	SO
KAFB-106132	7-Feb-11	SB0347	211020705	SO
KAFB-106132	7-Feb-11	SB0348	211020705	SO
KAFB-106132	8-Feb-11	SB0349	211020705	SO
KAFB-106132	8-Feb-11	SB0350	211021018	SO
KAFB-106132	8-Feb-11	SB0351	211021018	SO
KAFB-106132	8-Feb-11	SB0352	211021018	SO
KAFB-106132	8-Feb-11	SB0353	211021018	SO
KAFB-106132	9-Feb-11	SB0354	211021018	SO
KAFB-106132	9-Feb-11	SB0355	211021018	SO
KAFB-106133	7-Feb-11	SB0356	211020705	SO
KAFB-106133	7-Feb-11	SB0357	211020705	SO
KAFB-106133	7-Feb-11	SB0358	211020705	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106133	7-Feb-11	SB0359	211020705	SO
KAFB-106133	7-Feb-11	SB0360	211020705	SO
KAFB-106133	8-Feb-11	SB0361	211021018	SO
KAFB-106133	9-Feb-11	SB0362	211021018	SO
KAFB-106133	9-Feb-11	SB0363	211021018	SO
KAFB-106133	9-Feb-11	SB0364	211021018	SO
KAFB-106133	9-Feb-11	SB0365	211021018	SO
KAFB-106133	9-Feb-11	SB0366	211021018	SO
KAFB-106133	10-Feb-11	SB0367	211021018	SO
KAFB-106133	10-Feb-11	SB0368	211021018	SO
KAFB-106134	18-Feb-11	SB0369	211022225	SO
KAFB-106134	18-Feb-11	SB0370	211022225	SO
KAFB-106134	18-Feb-11	SB0371	211022225	SO
KAFB-106134	18-Feb-11	SB0372	211022225	SO
KAFB-106134	18-Feb-11	SB0373	211022225	SO
KAFB-106134	18-Feb-11	SB0374	211022225	SO
KAFB-106134	18-Feb-11	SB0375	211022225	SO
KAFB-106134	19-Feb-11	SB0376	211022225	SO
KAFB-106134	19-Feb-11	SB0377	211022225	SO
KAFB-106134	19-Feb-11	SB0378	211022225	SO
KAFB-106134	20-Feb-11	SB0379	211022225	SO
KAFB-106134	20-Feb-11	SB0380	211022225	SO
KAFB-106134	20-Feb-11	SB0381	211022225	SO
KAFB-106134	20-Feb-11	SB0382	211022225	SO
KAFB-106134	20-Feb-11	SB1750	211022225	SO
KAFB-106143	17-Feb-11	SB0383	211021904	SO
KAFB-106143	17-Feb-11	SB0384	211021904	SO
KAFB-106143	17-Feb-11	SB0385	211021904	SO
KAFB-106143	17-Feb-11	SB0386	211021904	SO
KAFB-106143	17-Feb-11	SB0387	211021904	SO
KAFB-106144	16-Feb-11	SB0388	211021904	SO
KAFB-106144	16-Feb-11	SB0389	211021904	SO
KAFB-106144	16-Feb-11	SB0390	211021904	SO
KAFB-106144	16-Feb-11	SB0391	211021904	SO
KAFB-106144	16-Feb-11	SB0392	211021904	SO
KAFB-106144	16-Feb-11	SB0393	211021904	SO
KAFB-106145	16-Feb-11	SB1723	211021620	SO
KAFB-106145	16-Feb-11	SB1724	211021620	SO
KAFB-106145	16-Feb-11	SB1725	211021620	SO
KAFB-106145	16-Feb-11	SB1726	211021620	SO
KAFB-106145	16-Feb-11	SB1727	211021620	SO
KAFB-106146	16-Feb-11	SB1728	211021904	SO
KAFB-106146	16-Feb-11	SB1729	211021904	SO
KAFB-106146	16-Feb-11	SB1730	211021904	SO
KAFB-106146	16-Feb-11	SB1731	211021904	SO
KAFB-106146	16-Feb-11	SB1732	211021904	SO

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LOCATION	SDATE	SAMPLE_NO	SDG	TYPE
KAFB-106146	16-Feb-11	SB1733	211021904	SO
KAFB-106147	16-Feb-11	SB1734	211021904	SO
KAFB-106147	16-Feb-11	SB1735	211021904	SO
KAFB-106147	16-Feb-11	SB1736	211021904	SO
KAFB-106147	17-Feb-11	SB1737	211021904	SO
KAFB-106147	17-Feb-11	SB1738	211021904	SO
KAFB-106147	17-Feb-11	SB1739	211021904	SO