Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-01-50

Date: 1/10/12

Time: 1350

Field Crew: AT

Crew Signature:

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BZVOC @ BH Docks 3.1 ppm

CALCULATIONS

(A) Depth to Well Bottom	52 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	. ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.068 ft^3	(J) Filter Pack Volume (F x G)	.40 ft^3
(D) Depth to Top of Screen	50 ft	(K) One Purge Volume (C + J)	.47 ft^3
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.7 ft^3

Static Pressure: +.30 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1350	0	0	.10	21.02	35	
1352	2	0	.16	20.90	20	
1354	4	0	.18	20.84	18	
1356	6	0	.18	20.60	12	

Values Prior to Sampling

1356	6	0	.18	20.60	12	

Sample ID: VA1002 VA1003

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-01-100

Field Crew: AT

Site / SWMU No.: 106

Date: 1/10/12

Crew Signature:

Weather: Sunny

Time: 1438

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes BZVOC ∅

BH vocs 1136 ppm

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136 ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.136 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.53 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.3 ft³

Static Pressure: +.10 in H₂O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1438	0	0	2.80	17.11	1842	
1440	2	0	5.12	14.28	2920	
1442	4	0	5.22	14.14	3040	
1444	6	0	5.34	14.68	2960	

Values Prior to Sampling

1444	6	0	5.34	14.68	2960	

X Y

Sample ID: VA1004

X Y

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-01-250

Date: 1/10/12

Time: 1501

Field Crew: AT

Crew Signature: Anton Tyrell

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOC's 0

BH VOC's 80.6 ppm

CALCULATIONS

(A) Depth to Well Bottom	250.7 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	250.7 ft	(K) One Purge Volume (C + J)	.74 ft³
(E) Depth to Bottom of Screen	253.2 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: +.70 H_2O"

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1501	0	0	.32	20.77	80	
1503	2	0	.40	20.46	28	
1505	4	0	.40	20.24	24	
1507	6	0	.44	20.46	23	
1509	8	0	.40	20.15	21	

Values Prior to Sampling

1509	8	0	.40	20.15	21	

Sample ID: VA1005

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SWMW-01-250

Date: 1/20/12

Time: 0910

Field Crew: AT, DA

Crew Signature:

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: Bkt VOCs ∅
Bkt VOCs 5.3 ppm

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00138, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	250.7 ft	(K) One Purge Volume (C + J)	.74 ft³
(E) Depth to Bottom of Screen	253.2 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: +.80 "H2O Purge Flow Rate: 1.0 cFm

PURGE DATA

2m Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/20/12 0910	0	0	.76	19.72	16	
0912	2	0	.76	19.92	16	
0914	4	0	.76	19.62	12	
0916	6	0	.74	19.68	12	
0918	8	0	.74	19.72	10	

Values Prior to Sampling

0918	8	0	.74	19.72	10	

Sample ID: VA-1005R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SMW-09-300

Date: 1/10/12

Time: 1527

Field Crew: AT

Crew Signature: Antonio Trujillo

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BZ VOCs: 0

BH VOCs 199.5 ppm

CALCULATIONS

(A) Depth to Well Bottom	308.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.41 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	308.5 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	311 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: +.40 H_2O"

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1527	0	0	.24	20.54	179	
1529	2	0	.48	20.23	297	
1531	4	0	.46	20.88	296	
1533	6	0	.48	20.94	301	
1535	8	0	.48	20.74	298	

Values Prior to Sampling

1535	8	0	.48	20.74	298	

Sample ID: VA1006

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny 70s

Well ID No/Interval: SVMW-22-50

Date: 3-14-12

Time: 1433

Field Crew: DA, DM

Crew Signature:

Review Signature and Date: 03/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) / Damaged

Locked: (Yes) / No

Well ID Mark: (Yes) / No

Notes: VOCs 0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.068 ft^3	(J) Filter Pack Volume (F x G)	.40875 ft^3
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	.47657 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.7657 ft^3

Static Pressure: +.22 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-14-12 2 min						
1433	0	0	2.86	19.46	76	
1435	2	0	4.90	14.54	115	
1437	4	0	4.90	14.42	120	
1439	6	0	5.00	14.36	119	

Values Prior to Sampling

1439	6	0	5.00	14.36	119	

Sample ID: VA1007

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny 70s

Well ID No/Interval: SVMW-02-100

Date: 3-14-12

Time: 1509

Field Crew: DA, DM

Crew Signature:

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 14.6 in BH Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.136 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	97.5 ft	(K) One Purge Volume (C + J)	0.54475 ft³
(E) Depth to Bottom of Screen	100 ft	(L) 10 Purge Volumes (K*10)	5.4475 ft³

Static Pressure: +.22

Purge Flow Rate: 1.0 cfm

PURGE DATA

3-14-12 Date/Time (2 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1509	0	Ø	2.14	16.72	1,086	
1511	2	Ø	6.72	11.93	8,960	
1513	4	Ø	6.81	11.78	9,146	
1515	6	Ø	6.96	11:54	9,350	

Values Prior to Sampling

1515	6	Ø	6.96	11.54	9,350	

Sample ID: *VA1008*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-02-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-14-12
Crew Signature:
Weather: Sunny 70's
Time: 1534
Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.204 ft^3	(J) Filter Pack Volume (F x G)	0.408175 ft^3
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	0.61275 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	6.1275 ft^3

Static Pressure: -.11
Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time (3-14-12) 2 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1534	0	Ø	0.42	18.78	240	
1536	2	Ø	0.98	17.92	569	
1538	4	Ø	1.06	17.78	573	
1540	6	Ø	1.04	17.82	577	

Values Prior to Sampling

1540	6	Ø	1.04	17.82	577	

Sample ID: KA1009

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW-03-50 | Field Crew: DA, TN

Site / SWMU No.: 106 | Date: 3-5-12 | Crew Signature:

Weather: Sunny 60s | Time: 1319 | Review Signature and Date: 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact / Damaged | Locked: Yes / No | Well ID Mark: Yes / No

Notes: VOCs 10 in BH 0 in BZ

CALCULATIONS

A) Depth to Well Bottom	52.5 ft	(F) Filter Pack Length (E – D)	2.5 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218. 3" = 04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.0714 ft³	(J) Filter Pack Volume (F x G)	.409 ft³
D) Depth to Top of Screen	50 ft	(K) One Purge Volume (C + J)	.481 ft³
E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.81 ft³

Static Pressure: -.03 | Purge Flow Rate: 1.0

PURGE DATA

1 min Date/Time 3-5-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1319	0	Ø	3.86	18.18	2240	
1320	1	Ø	7.46	9.28	4460	
1321	2	Ø	7.48	9.26	4470	
1322	3	Ø	7.48	9.25	4470	
1323	4	Ø	7.48	9.27	4460	
1324	5	Ø	7.48	9.29	4450	

Values Prior to Sampling

1324	5	Ø	7.48	9.29	4450	

Sample ID: VA1010

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-03-100

Field Crew: DA, TN

Site / SWMU No.: 106

Date: 3-5-12

Crew Signature:

Weather: Sunny 60s

Time: 1338

Review Signature and Date: 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 10 in BH Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	102.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = (.00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft² ~~.409~~ .409
(C) One Well Casing Volume (A x B):	.1394 ft³	(J) Filter Pack Volume (F x G)	.409 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.549 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.49 ft³

Static Pressure: +.11

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3-5-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1338	2	Ø	2.16	18.73	219	
1340	4	Ø	8.02	9.57	5990	
1342	6	Ø	8.08	9.45	6070	

Values Prior to Sampling

1342	6	Ø	8.08	9.45	6070	

Sample ID: VA1011

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW02250

Field Crew: DA, TN

Site / SWMU No.: 106

Date: 3-5-12

Crew Signature:

Weather: Sunny 60's

Time: 1403

Review Signature and Date: 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark (Yes) - No

Notes: VOCs 10 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	252.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = (.00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft² .409
(C) One Well Casing Volume (A x B):	.343 ft³	(J) Filter Pack Volume (F x G)	.409 ft³
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.752 ft³
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.52 ft³

Static Pressure: +.16 Purge Flow Rate: 1.0

PURGE DATA

2 min Date/Time 3-5-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1403	2	0	0.04	~~20.8~~ 21.01	31	
1405	4	0	4.96	12.58	9730	
1407	6	0	4.96	12.57	9720	
1409	8	0	4.98	12.57	9760	

Values Prior to Sampling

1409	8	0	4.98	12.57	9760	

Sample ID: VA1012

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-03-300
Field Crew: DA, TN
Site / SWMU No.: 106
Date: 3-5-12
Crew Signature:
Weather: Sunny 60s
Time: 1423
Review Signature and Date: 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 10 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	302.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00163 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.494 ft³	(J) Filter Pack Volume (F x G)	.409 ft³
(D) Depth to Top of Screen	300 ft	(K) One Purge Volume (C + J)	0.903 ft³
(E) Depth to Bottom of Screen	302.5 ft	(L) 10 Purge Volumes (K*10)	9.03 ft³

Static Pressure: +.29 Purge Flow Rate:

PURGE DATA

2 min Date/Time 3-5-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1423	0	Ø	1.52 ~~2.90~~	19.18	290	
1425	2	Ø	2.76	15.77	3340	
1427	4	Ø	2.86	15.50	3790	
1429	6	Ø	2.88	15.49	3860	
1431	8	Ø	2.98	15.32	4190	
1433	10	Ø	2.98	15.29	4250	

Values Prior to Sampling

1433	10	Ø	2.98	15.29	4250	

Sample ID: VA1013

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-04-050

Date: 3/13/12

Time: 0925

Field Crew: AT, TN

Crew Signature:

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes (No)

Well ID Mark: (Yes) - No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.068 ft³	(J) Filter Pack Volume (F x G)	.41 ft³
(D) Depth to Top of Screen	50 ft	(K) One Purge Volume (C + J)	.47 ft³
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: -.08 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/13/12 925	0	0	9.88	7.28	1069	
927	2	0	10.22	6.85	1129	
929	4	0	10.24	6.88	1123	
931	6	0	10.24	6.91	1121	

Values Prior to Sampling

931	6	0	10.24	6.91	1121	

Sample ID: VA 1014

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-04-100

Date: 3/13/12

Time:

Field Crew: AT, TN

Crew Signature:

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) No Well ID Mark: (Yes) - No

Notes:

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.130 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: -.06" H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min

Date/Time 3/13/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1002	0	0	11.22	5.47	15290	inst
1004	2	0	11.52	5.95	10880	inst
1006	4	0	11.58	5.30	16220	inst
1008	6	0	11.58	5.63	16970	inst
					1455 * 9	
					= 13095	by dilution

Values Prior to Sampling

1008	6	0	11.58	5.63	~~16970~~ TN 13095	by dilution

Sample ID: VA1015 X VA1016 X

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-04-250

Field Crew: VAT, TN

Site / SWMU No.: 106

Date: 3/13/12

Crew Signature:

Weather: Sunny

Time: 1043

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes (No) Well ID Mark: (Yes) - No

Notes: BHVOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	25 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.34 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	200 ft	(K) One Purge Volume (C + J)	.748 ft³
(E) Depth to Bottom of Screen	~~252.5~~ ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: -.44" H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Date/Time 3/13/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1043	0	Ø	.08	20.63	275	
1045	2	Ø	.66	19.21	1174	
1047	4	Ø	.92	18.64	2120	
1049	6	Ø	.98	18.50	2500	
1051	8	Ø	1.04	18.39	2790	

Values Prior to Sampling

1051	8	Ø	1.04	18.39	2790	

* *

Sample ID: VA1017

* *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FF

Well ID No/Interval: SVMW-04-300

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/13/12

Crew Signature: AT, TN

Weather: Sunny

Time: 1227

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BH VOCs ND
BZ VOCs ND

CALCULATIONS

(A) Depth to Well Bottom	300 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.408 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	297.5 ft	(K) One Purge Volume (C + J)	.816 ft³
(E) Depth to Bottom of Screen	300 ft	(L) 10 Purge Volumes (K*10)	8.2 ft³

Static Pressure: -.52" H_2O

Purge Flow Rate:

PURGE DATA

2 min Date/Time 3/13/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1227	0	0	0.86	18.62	419	
1229	2	0	.82	18.64	386	
1231	4	0	.84	18.70	373	
1233	6	0	.81	18.97	347	
1235	8	0	.82	19.55	335	
1237	10	0	.82	19.62	332	

Values Prior to Sampling

1237	10	0	.82	19.62	332	

Sample ID: VA 1018

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 10 SVMW-5-50

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-14-17

Crew Signature: DMA

Weather: Sunny 60s

Time: 1219

Review Signature and Date: 3/15/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH & 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.068 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	.47675 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.7675 ft³

Static Pressure: +.04 "H₂O

Purge Flow Rate: 1.0 cfm

PURGE DATA

3-14-17 Date/Time 2 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1219	0	0	1.87	18.79	~~18.79~~ 16	
1221	2	0	3.26	16.91	10	
1223	4	0	3.29	16.70	8	
1225	6	0	3.36	16.60	9	

Values Prior to Sampling

1225	6	0	3.36	16.60	9	

Sample ID: VA1019

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-5-100

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-14-17

Crew Signature:

Weather: Sunny 60s

Time: 1237

Review Signature and Date: 3/15/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 1.9 in BH+0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.136 ft^3	(J) Filter Pack Volume (F x G)	.40875 ft^3
(D) Depth to Top of Screen	97.5 ft	(K) One Purge Volume (C + J)	0.5447 ft^3
(E) Depth to Bottom of Screen	100 ft	(L) 10 Purge Volumes (K*10)	5.447 ft^3

Static Pressure: +.03 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

3-14-17 Date/Time 2 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1237	0	0	2.82	20.18	64	
1239	2	0	4.76	15.01	126	
1241	4	0	4.84	15.50	132	
1243	6	0	4.76	15.88	129	

Values Prior to Sampling

1243	6	0	4.76	15.88	129	

Sample ID: VA1020

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-05-230

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-14-12

Crew Signature:

Weather: Sunny 60's

Time: 1256

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	230 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	0.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.3128 ft^3	(J) Filter Pack Volume (F x G)	.40875 ft^3
(D) Depth to Top of Screen	227.5 ft	(K) One Purge Volume (C + J)	.72155 ft^3
(E) Depth to Bottom of Screen	230 ft	(L) 10 Purge Volumes (K*10)	7.2155 ft^3

Static Pressure: -.71 "H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

3/14/12 Date/Time 2 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1256	0	Ø	0.12	20.65	27	
1258	2	Ø	0.44	20.42	16	
1300	4	Ø	0.46	19.93	14	
1302	6	Ø	0.44	19.68	14	
1304	8	Ø	0.44	19.61	14	

Values Prior to Sampling

1304	8	Ø	0.44	19.61	14	

Sample ID: VA1021

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny 60s°

Well ID No/Interval: SVMW-05-290

Date: 3-14-12

Time: 1320

Field Crew: DA, DN

Crew Signature:

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	290 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = (.00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.3944 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	287.5 ft	(K) One Purge Volume (C + J)	0.80315 ft³
(E) Depth to Bottom of Screen	290 ft	(L) 10 Purge Volumes (K*10)	8.0315 ft³

Static Pressure: -.73 "H₂O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time 3-14-12 2 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1320	2	Ø	0.82	19.56	41	
1322	4	Ø	0.62	19.07	71	
1324	6	Ø	0.64	19.06	72	
1326	8	Ø	0.62	19.03	73	
1327 (1 min)	9	Ø	0.62	19.18	71	

Values Prior to Sampling

1327	9	Ø	0.62	19.18	71	

Sample ID: VA1022

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-04-050

Date: 1/10/12

Time: 1024

Field Crew: AT, TN

Crew Signature: Antonio Taylor

Review Signature and Date: TNagle 1/12/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ VOC's Ø
BH VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	80 ft	(K) One Purge Volume (C + J)	.47 ft³
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: 0 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1/10/12 1024	0	0	2.82	18.56	8	
1026	2	0	2.90	18.40	9	
1028	4	0	3.00	18.42	7	
1030	6	0	3.02	18.72	8	

Values Prior to Sampling

1030	6	0	3.02	18.72	8	

Sample ID: VA-1023

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW ~~100~~ 106 - 100

Date: 1/10/12

Time: 1103

Field Crew: AT, TN

Crew Signature: Antonio Jyllo

Review Signature and Date: [signature] 1/12/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BZ VOC'S Ø
BH VOC'S Ø

CALCULATIONS

(A) Depth to Well Bottom	99.5 ~~100~~ ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.135 ft^3	(J) Filter Pack Volume (F x G)	0.40 ft^3
(D) Depth to Top of Screen	99.5 ft	(K) One Purge Volume (C + J)	.54 ft^3
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.4 ft^3

Static Pressure: 0 H_2O"

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1103	0	0	.42	20.61	3	
1105	2	0	2.16	18.42	2	
1107	4	0	3.18	17.37	2	
1109	6	0	3.14	17.38	2	

Values Prior to Sampling

1109	6	0	3.14	17.38	2	

Sample ID: VA 1024

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No/Interval: SVMW-06-252

Field Crew: MT, TN

Site / SWMU No.: 106

Date: 1/10/12

Crew Signature:

Weather: Sunny

Time: 1132

Review Signature and Date: 1/12/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ VOCs 0
BH VOCs 0 AT, 1857 ppm

CALCULATIONS

(A) Depth to Well Bottom	252 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	252 ft	(K) One Purge Volume (C + J)	.74 ft³
(E) Depth to Bottom of Screen	254.8 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: 0 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Zm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1132	0	0	2.26 ~~AT 1.72~~	13.99 ~~AT 8125~~	8790	
1134	2	0	2.18	13.84	6850	
1136	4	0	1.74	15.32	6850	
1138	6	0	1.74	15.37	6840	
1140	8	0	1.72	15.33	6870	

Values Prior to Sampling

1140	8	0	1.72	15.33	6870	

Sample ID: VA1025

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-06-302

Date: 1/10/12

Time: 1202

Field Crew: AT, JN

Crew Signature:

Review Signature and Date: T Wagner 1/12/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ VOC's Ø

BH VOC's 1320 ppm

CALCULATIONS

(A) Depth to Well Bottom	302.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.41 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	302.5 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	305 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: 0 " H2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1202	0	0	.02	20.71	250	
1204	2	0	.50	19.47	1638	
1206	4	0	.56	1934	1768	
1208	6	0	.56	19.33	18,49	
1210	8	0	.57	19.45	17,58	

Values Prior to Sampling

1210	8	0	.57	19.45	17,58	

Sample ID: VA1026

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-3FF

Well ID No/Interval: SWMU-06-302

Field Crew: AT, DA

Site / SWMU No.: 06

Date: 1/20/12

Crew Signature:

Weather: Sunny

Time: 824

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs 0
BH VOCs 2000 ppm

CALCULATIONS

(A) Depth to Well Bottom	302 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.41 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	302.5 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	305 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: +.30 " H_2O **Purge Flow Rate:** 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/20/12 824	0	0	0.94	18.08	2940	
826	2	0	.96	18.45	2970	
828	4	0	.96	18.49	2970	
830	6	0	.94	17.69	2970	
832	8	0	.94	17.51	2970	
834	10	0	.98	17.44	2989	

Values Prior to Sampling

834	10	0	.98	17.44	2989 ~~17.4~~ AT	

Sample ID: VA 1026R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-07-50

Date: 3/19/12

Time: 1324

Field Crew: AT, TD

Crew Signature:

Review Signature and Date: 03/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BZ VOCs ND

BH VOCs ND

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.068 ft³	(J) Filter Pack Volume (F x G)	.408 ~~0.068~~ ft³
(D) Depth to Top of Screen	49.5 ft	(K) One Purge Volume (C + J)	.48 ft³
(E) Depth to Bottom of Screen	52 ft	(L) 10 Purge Volumes (K*10)	4.8 ft³

Static Pressure: +2.4 " H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min

Date/Time 3/19/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1324	0	0	.92	18.04	35	
1326	2	0	1.02	17.02	45	
1328	4	0	1.04	17.76	46	
1330	6	0	1.02	17.90	45	

Values Prior to Sampling

1330	6	0	1.02	17.90	45	

Sample ID: VA1027

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: ~~TN KAFB 10~~ SVMW07-100

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/19/12

Crew Signature: Tin Nguyen

Weather: cloudy

Time: 1346

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: ~~+0.26" H2O~~ TN BH VOC's 0 BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	98 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.13 ft^3	(J) Filter Pack Volume (F x G)	.40 ft^3
(D) Depth to Top of Screen	95.5 ft	(K) One Purge Volume (C + J)	.53 ft^3
(E) Depth to Bottom of Screen	98 ft	(L) 10 Purge Volumes (K*10)	5.3 ft^3

Static Pressure: +.26" H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3/19/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1346	0	0	6.00	13.29	1279	
1348	2	0	6.18	13.54	1336	
1350	4	0	6.20	13.26	1339	
1352	6	0	6.22	12.91	1343	

Values Prior to Sampling

1352	6	0	6.22	12.91	1343	

Sample ID: VA 1028
VA 1029

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~KAFB-1~~ TNSVMW07-450

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/19/12

Crew Signature: TN Nagel

Weather: cloudy

Time: 1423

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's Ø
BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.20 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	.60 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	6.0 ft³

Static Pressure: ~~Ø~~ TN +.26 "H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3/19/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1423	0	0	5.24	14.52	21	
1425	2	0	5.46	14.24	15	
1427	4	0	5.48	14.15	13	
1429	6	0	5.56	13.94	14	

Values Prior to Sampling

1429	6	0	5.56	13.94	14	

Sample ID: VA 1030

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-08-050

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 1001

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.068 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	52 ft	(K) One Purge Volume (C + J)	.48 ft³
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.8 ft³

Static Pressure: -.24 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/14/12 1001 TN	0	Ø	14.12	6.16	13890	Inst
1003	2	Ø	14.18	6.15	13840	Inst
1005	4	Ø	14.20	5.48	13680	Inst
1007	6	Ø	14.20	4.87	13620	Inst
					1039	
					X 9 =	
					9351 By Dilution	

Values Prior to Sampling

1007	6	Ø	14.20	4.87	9351	Dilution

* *

Sample ID: VA1031

* *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-3FT

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-08-100

Date: 3/14/12

Time: 1047

Field Crew: MT, TW

Crew Signature:

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC 1500
BZ VOC 1500

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.136 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.544 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: -.14 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2mm Date/Time 3/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1047	0	0	13.92	1.11	308	
1049	2	0	14.22	0.99	311	
1052	4	0	14.20	0.99	316	
1054	6	0	14.24	1.00	320	

Values Prior to Sampling

1054	6	0	14.24	1.00	320	

Sample ID: VA1032

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-08-250

Field Crew: KT, TW

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 1111

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BH VOC's Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.75 ft³
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: -.72" H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min

Date/Time 3/14/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1117	0	0	1.60	16.51	5450	
1119	2	0	1.62	16.27	5640	
1121	4	0	1.60	16.17	5640	
1123	6	0	1.62	16.11	5640	
1125	8	0	1.62	16.09	5640	

Values Prior to Sampling

1125	8	0	1.62	16.09	5640	

Sample ID: VA1033

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-09-050

Date: 3/5/12

Time: 0838

Field Crew: AT, DM

Crew Signature: [signature]

Review Signature and Date: [signature] 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOC's Ø
BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	~~52.5~~ 50 AT ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.068 ft^3	(J) Filter Pack Volume (F x G)	0.408 ft^3
(D) Depth to Top of Screen	50 ft	(K) One Purge Volume (C + J)	.47 ft^3
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.7 ft^3

Static Pressure: ~~1.5~~ AT - .24 " H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/5/12 0832	Ø	0	11.32	4.89	33.40	
0834	2	Ø	12.22	3.71	3840	
0836	4	Ø	12.70	3.13	4220	
0838	6	0	12.80	3.01	4330	

Values Prior to Sampling

0838	6	Ø	12.80	3.0	4330	

Sample ID: VA 1035

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVMW-09-100	**Field Crew:** AT, DM
Site / SWMU No.: 106	**Date:** 3/5/12	**Crew Signature:**
Weather: Sunny	**Time:** 0911	**Review Signature and Date:**

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes (No) **Well ID Mark:** ~~Yes~~ - No

Notes: VOC's @ B17
VOC's @ B2

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.136 ft^3	(J) Filter Pack Volume (F x G)	0.408 ft^3
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.544 .54 AT ft^3
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10) 5.4	4.9 AT ft^3

Static Pressure: -.32 " H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/5/12 0911	0	0	13.83	12.19	25420	Inst Tanks
0913	2	0	13.26	11.02	24870	INST
0915	4	0	13.88	11.00	25830	INST
0917	6	0	13.84	10.51	26270	INST
					2440	
					X9 =	
					21960	By Dilution

Values Prior to Sampling

0917	6	0	13.84	10.51	21,960	By Dilution

Sample ID: VA1036

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-09-250

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/5/12

Crew Signature:

Weather: Sunny

Time: 0951

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.50 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.74 ft³
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: -1.5 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time	Volume Purged (ft^3)	Horiba Mexa -- 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/5/12 0951	Ø	Ø	2.50	14.59	8390	
0953	2	Ø	2.28	14.90	7980	
0955	4	Ø	2.28	14.99	7810	
0957	6	Ø	2.30	14.99	7820	
0959	8	Ø	2.26	14.99	7720	

Values Prior to Sampling

0959	8	Ø	2.26	14.99	7.720	

Sample ID: * VA1057 *
* VA1058 *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-09-266

Date: 3/5/12

Time: 1100

Field Crew: AT, DM

Crew Signature: [signature]

Review Signature and Date: [signature] 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOCs Ø
Bt VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	266 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.36 ft^3	(J) Filter Pack Volume (F x G)	.408 ft^3
(D) Depth to Top of Screen	266 ft	(K) One Purge Volume (C + J)	.76 ft^3
(E) Depth to Bottom of Screen	268.5 ft	(L) 10 Purge Volumes (K*10)	7.6 ft^3

Static Pressure: -1.5 " H_2O

Purge Flow Rate: 1.0 CFm

PURGE DATA

2mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/5/12 1100	Ø	Ø	2.78	14.41	16380	Inst
1102	2	Ø	2.82	14.71	16450	Inst
1104	4	Ø	2.88	14.24	16320	Inst
1106	6	Ø	2.90	13.63	16010	Inst
1108	8	Ø	2.80	15.16	16230	Inst
					1502	
					x9	=13518 By Dilution

Values Prior to Sampling

1108	8	Ø	2.80	15.16	13518	By Dilution

Sample ID: VA1039

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: VAEIP-BFF

Well ID No/Interval: SVMW-10-50

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 1310

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 344 ppm in BH

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.068 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	50 ft	(K) One Purge Volume (C + J)	.476 ft³
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.8 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.0 cfm DLO

PURGE DATA

Date/Time 3/14/12 (2 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1310	0	0	10.50	10.03	27750	First
1312	2	0	13.86	2.46	28970	inst.
1314	4	0	13.88	4.71	28440	inst.
1316	6	0	13.68	2.33	29110	inst.
					2800 x9	
					= 25920	by dilution

Values Prior to Sampling

1316	6	0	13.68	2.33	25920	by dilution

Sample ID: VA1040

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: SVMW-10-100	Field Crew: AT, TN
Site / SWMU No.: 106	Date: 3/14/12	Crew Signature: [signature]
Weather: Sunny	Time: 1400	Review Signature and Date: [signature] 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH 344ppm
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.136 ft^3	(J) Filter Pack Volume (F x G)	.408 ft^3
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.544 ft^3
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.4 ft^3

Static Pressure: 0" H_2O Purge Flow Rate: 1.0 cfm DCO

PURGE DATA

Date/Time 3/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1400	0	0	13.60	10.18	32760	Inst
1402	2	Ø	14.18	1.11	32760	Inst
1404	4	Ø	14.38	1.49	32760	Inst
1406	6	Ø	14.42	1.58	32760	Inst
					3220	
					x 9	
					28980	by dilution

Values Prior to Sampling

1406	6	0	14.42	1.58	28980	by dilution

* *

Sample ID: VA1041

* *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-10-150

Field Crew: AT, JN

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 1442

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 344 ppm in BH
VOC's 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.204 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	.612 ft³
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.1 ft³

Static Pressure: -.42" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm

Date/Time 3/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1442	0	0	1.04	20.36	1477	
1444	2	0	6.16	10.19	23540	inst.
1446	4	0	6.62	9.67	24440	inst.
1448	6	0	6.92	9.14	25870	inst.
1450	8	0	6.88	8.99	26290	
					2380 x9	
					= 21420	by dilution

Values Prior to Sampling

1450	8	0	6.88	8.99	21420	by dilution

Sample ID: VA1042

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No/Interval: SVMW-10-250

Field Crew: AT, TV

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 1514

Review Signature and Date: 3/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 344ppm in BH
VOC's 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	260 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.748 ft³
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: -.42" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2m

Date/Time 3/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1514	0	0	2.44	14.94	5580	
1516	2	0	2.60	14.61	5490	
1518	4	0	2.60	14.48	5500	
1520	6	0	2.58	14.39	5500	
1522	8	0	2.56	14.54	5420	

Values Prior to Sampling

1522	8	0	2.56	14.54	5420	

Sample ID: VA1043

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: BVMW-11-50

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-22-12

Crew Signature: [signature]

Weather: Sunny 50s

Time: 0941

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: VOCs 515.3 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.068 ft^3	(J) Filter Pack Volume (F x G)	.40875 ft^3
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	.47675 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.7675 ft^3

Static Pressure: -.17 "H_2O

Purge Flow Rate: 1.0 cFm

PURGE DATA

2 min Date/Time 3-22-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0941	0	Ø	2.36	14.02	262	
0943	2	Ø	9.36	7.93	10,930	inst.
0945	4	Ø	9.82	7.56	11,840	inst.
0946 (1 min)	5	Ø	9.96	7.45	12,290	inst.
		~~0.2~~			1,217 as dilution	
					x9	
					10,953 by dilution	

Values Prior to Sampling

0946		Ø	9.96	7.45	12,290	

Sample ID: *VA1044*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-11-100
Field Crew: DA, DM
Site / SWMU No.: 06
Date: 3-22-12
Crew Signature:
Weather: Sunny 50s
Time: 1004
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 16.7 in BH + Ø in B2

CALCULATIONS

(A) Depth to Well Bottom	100 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = (.00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.136 ft^3	(J) Filter Pack Volume (F x G)	.40875 ft^3
(D) Depth to Top of Screen	97.5 ft	(K) One Purge Volume (C + J)	.54475 ft^3
(E) Depth to Bottom of Screen	100 ft	(L) 10 Purge Volumes (K*10)	≈ 5.4475 ft^3

Static Pressure: -.30 "H_2O Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3-22-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1004	0	Ø	0.07	20.72	12	
1006	2	Ø	8.48	8.94	23,800	init.
1008	4	Ø	8.88	9.27	25,290	init.
1010	6	Ø	9.26	7.85	26,078	init.
					2910	dilution
					x 9	
					26,190	by dilution

Values Prior to Sampling

1010	6	Ø	9.26	7.85	26,078	

Sample ID: VA1045

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: SVMW-11-250	Field Crew: DA, DM
Site / SWMU No.: 106	Date: 3-22-12	Crew Signature: [signature]
Weather: Sunny 60°s	Time: 1038	Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: 10 CS 5.2 in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	247.5 ft	(K) One Purge Volume (C + J)	.74875 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft³

Static Pressure: -.74 "H_2O Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1038	0	Ø	~~12~~ 2.41	19.22	111	
1040	2	Ø	6.64	9.69	16,110	init.
1042	4	Ø	7.28	8.57	18,150	init
1044	6	Ø	7.54	7.90	19,480	init.
1046	8	Ø	7.78	7.50	20,040	init.
					2,146	dilution
					X 9	
					19,314	by dilution

Values Prior to Sampling

1046	8	Ø	7.78	7.50	21,946	

Sample ID: *VA1046*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-11-260
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-27-17
Crew Signature:
Weather: Sunny 60s
Time: 1109
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged
Locked: (Yes) No
Well ID Mark: (Yes) No
Notes: VOCs 29.3 in BH + 0 in B2

CALCULATIONS

(A) Depth to Well Bottom	260 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.3536 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	257.5 ft	(K) One Purge Volume (C + J)	.76235 ft³
(E) Depth to Bottom of Screen	260 ft	(L) 10 Purge Volumes (K*10)	7.6235 ft³

Static Pressure: -.51 "H₂O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 3-27-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1109	0	0	0.42	20.01	1901	
1111	2	0	6.98	8.22	18,450	initi.
1113	4	0	7.22	7.87	21,710	initi.
1115	6	0	7.26	7.83	22,520	initi.
1117	8	0	7.32	7.68	23,990	initi.
					2,280	dilution
					x9	
					20,520	by dilution

Values Prior to Sampling

1117	8	0	7.32	7.68	23,990	

Sample ID: *VA1047*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SWMU-12-150

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 3/5/12

Crew Signature:

Weather: Sunny

Time: 1316

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BA VOCs @
BB VOCs @

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.204 ft^3	(J) Filter Pack Volume (F x G)	.408 ft^3
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	.612 ft^3
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.1 ft^3

Static Pressure: −.43 " H_2O Purge Flow Rate: 1.0 Cfm

PURGE DATA

Date/Time 2 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1316	0	0	.18	19.81	294	
1318	2	0	.14	19.57	213	
1320	4	0	.16	19.64	168	
1322	6	0	.16	19.70	147	

Values Prior to Sampling

1322	6	0	.16	19.70	147	

Sample ID: VA1048

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-12-250

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 3/5/12

Crew Signature:

Weather: Sunny

Time: 1343

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136 ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.34 ft^3	(J) Filter Pack Volume (F x G)	.408 ft^3
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.74 ft^3
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.4 ft^3

Static Pressure: -.52 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Zone Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/5/12 1343	0	0	.24	19.56	353	
1345	2	0	.24	19.57	294	
1347	4	0	.24	19.64	271	
1349	6	0	.24	19.70	263	
1351	8	0	.28	19.79	255	

Values Prior to Sampling

1351	8	0	.28	19.79	255	

Sample ID: VA1049
VA1050

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: SVMW-32-350

Field Crew: DM, AT

Site / SWMU No.: 106

Date: 3-5-12

Crew Signature: Daniel Medina

Weather: Sunny 60's

Time: 1422

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH 0 ppm VOC's
BZ 0 ppm VOC's

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.48 ft^3	(J) Filter Pack Volume (F x G)	0.408 ft^3
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	0.89 ft^3
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.9 ft^3

Static Pressure: −.76" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-5-12/1422	0	Ø	0.20	18.46	180	
1424	2	Ø	1.04	17.47	143	
1426	4	Ø	1.02	17.52	132	
1428	6	Ø	0.98	17.63	154	
1430	8	Ø	0.96	17.64	149	
1432	10	Ø	0.94	17.68	146	

Values Prior to Sampling

1432	10	Ø	0.94	17.64	146	

Sample ID: VA1051

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: SVM-12-450

Field Crew: DM, AT

Site / SWMU No.: 106

Date: 3-5-12

Crew Signature: Daniel Medina

Weather: Sunny/60's

Time: 1504

Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH @ ppm VOC's
BZ @ ppm VOC's

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.6 ft³	(J) Filter Pack Volume (F x G)	.409 ft³
(D) Depth to Top of Screen	450 ft	(K) One Purge Volume (C + J)	1.0 ft³
(E) Depth to Bottom of Screen	~~452.5~~ 452.5 ft DM	(L) 10 Purge Volumes (K*10)	10.0 ft³

Static Pressure: -.62" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-5-12/1504	0	Ø	0.24	19.73	362	
1506	2	Ø	0.24	19.98	329	
1508	4	Ø	0.24	20.05	326	
1510	6	Ø	0.26	20.08	316	
1512	8	Ø	0.24	20.00	310	
1514	10	Ø	0.24	19.89	306	

Values Prior to Sampling

1514	10	Ø	0.24	19.89	306	

Sample ID: VA1052

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVMW-13-150	**Field Crew:** AT, TN, MH
Site / SWMU No.: 1016	**Date:** 3/22/12	**Crew Signature:** Melissa Halich
Weather: Sunny, 50s	**Time:** 0947	**Review Signature and Date:** 03/00/0012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) No

Notes: B2- VOCs Ø
BH- VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	152.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½") = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.21 ft³	(J) Filter Pack Volume (F x G)	0.41 ft³
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	0.62 ft³
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.2 ft³

Static Pressure: -.12 " H_2O **Purge Flow Rate:** 1.0 gpm

PURGE DATA

Date/Time 3/22/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 ↑ (%)	O_2 ↓ (%)	HC ↑ (ppmv)	Comments
0940	0	0.00	3.78	10.79	~~1312~~ 12910	Inst.
0942	2	0.00	3.76	10.79	13520	Inst.
0944	4	0.00	3.78	10.75	13440	Inst.
0946	6	0.00	3.76	10.80	13500	Inst.
0947	7	0.00	3.76	10.78	13350	Inst.
					1042 x 9	= 9378
						by dilution

Values Prior to Sampling

0947	7	0.00	3.76	10.78	9378	by dilution

Sample ID: * VA1053 *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-13 250

Field Crew: AT, TW, MH

Site / SWMU No.: 106

Date: 3/22/12

Crew Signature: Melissa Hulick

Weather: Sunny, 50's

Time: 1022

Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: -.26 "H_2O BZ - VOCs Ø BH - VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	252.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½") = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	0.34 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.34 ft^3	(J) Filter Pack Volume (F x G)	0.41 ft^3
(D) Depth to Top of Screen	250.0 ft	(K) One Purge Volume (C + J)	0.75 ft^3
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft^3

Static Pressure: -.26 " H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time 3/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1014	0	0.00	0.28	18.90	234	
1016	2	0.00	0.88	17.20	154	
1018	4	0.00	0.84	17.26	127	
1020	6	0.00	0.84	17.25	122	
1022	8	0.00	0.84	17.30	115	

Values Prior to Sampling

1022	8	0.00	0.84	17.30	115	

Sample ID: VA1054

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-13-350

Field Crew: AT, TW, MH

Site / SWMU No.: 106

Date: 3/22/12

Crew Signature: Melissa Haleigh

Weather: Sunny, 50s

Time: 1051

Review Signature and Date: 03/30/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: B2 - VOCs Ø

B11 - VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	352.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½") = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.48 ft³	(J) Filter Pack Volume (F x G)	0.41 ft³
(D) Depth to Top of Screen	350.0 ft	(K) One Purge Volume (C + J)	0.89 ft³
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.9 ft³

Static Pressure: -.26 " H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time 3/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1042	0	0.00	1.62	16.69	283	
1044	2	0.00	1.66	16.56	248	
1046	4	0.00	1.66	16.55	235	
1048	6	0.00	1.66	16.50	230	
1050	8	0.00	1.66	16.52	219	
1051	9	0.00	1.68	16.52	216	

Values Prior to Sampling

1051	9	0.00	1.68	16.52	216	

Sample ID: VA1055

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: SVMW-13-450

Field Crew: MT, TN, MH

Site / SWMU No.: 106

Date: 3/22/12

Crew Signature: Melissa Halick

Weather: Sunny, 50's

Time: 1111

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ - VOCs Ø

BH - VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	452.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.62 ft³	(J) Filter Pack Volume (F x G)	0.41 ft³
(D) Depth to Top of Screen	450.0 ft	(K) One Purge Volume (C + J)	1.03 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10.3 ft³

Static Pressure: -.20 " H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time 3/22/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1111	0	0	0.18	19.45	447	
1113	2	0	0.24	19.31	440	
1115	4	0	0.26	19.28	430	
1117	6	0	0.70	17.32	965	
1119	8	0	0.70	17.33	952	
1121	10	0	0.70	17.34	946	
1122	11	0	0.70	17.33	946	

Values Prior to Sampling

1122	11	0	0.70	17.33	946	

Sample ID: ~~VA1056~~ VA1056

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVMW-19-150

Date: 3/6/12

Time: 0953

Field Crew: AT, DR

Crew Signature:

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.204 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	.612 ft³
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.1 ft³

Static Pressure: +.90 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/6/12 0953	Ø	Ø	.22	19.66	22	
0955	2	Ø	.24	19.73	17	
0957	4	Ø	.24	19.47	17	
0959	6	Ø	.24	19.50	16	

Values Prior to Sampling

0959	6	Ø	.24	19.50	16	

Sample ID: VA 1057

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-14-250

Field Crew: AT, DR

Site / SWMU No.: 106

Date: 3/6/12

Crew Signature:

Weather: Sunny

Time: 1015

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.34 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	250 ft	(K) One Purge Volume (C + J)	.75 ft³
(E) Depth to Bottom of Screen	252.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: +1.4 " H_2O

Purge Flow Rate: 1.0 cFm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/6/12 1015	0	Ø	.26	19.31	23	
1017	2	Ø	.24	19.28	18	
1019	4	Ø	.24	19.25	16	
1021	6	Ø	.22	19.26	15	
1023	8	Ø	.22	19.31	14	

Values Prior to Sampling

1623	8	Ø	.22	19.31	14	

Sample ID: VA1058

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF	**Well ID No/Interval:** SVMW-14-350	**Field Crew:** VAT, DR
Site / SWMU No.: 106	**Date:** 3/6/12	**Crew Signature:**
Weather: Sunny	**Time:** 1036	**Review Signature and Date:** 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes - (No) **Well ID Mark:** (Yes) - No

Notes: BH Vocs Ø
BZ Vocs Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	25 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.476 ft^3	(J) Filter Pack Volume (F x G)	.408 ft^3
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	.88 ft^3
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.8 ft^3

Static Pressure: + 1.2 "H_2O

Purge Flow Rate: 1.0 CFm

PURGE DATA

2 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/6/12 1036	Ø	Ø	.14	19.72	43	
1038	2	Ø	.16	19.57	29	
1040	4	Ø	.16	19.56	29	
1042	6	Ø	.16	19.59	27	
1044	8	Ø	.14	19.60	26	
1046	10	Ø	.14	19.60	25	

Values Prior to Sampling

1046	10	Ø	.14	19.60	25	

Sample ID: VA1059

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-14-450

Field Crew: VAT, DR

Site / SWMU No.: 106

Date: 3/6/12

Crew Signature:

Weather: Sunny

Time: 1111

Review Signature and Date: 3/10/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BH VOC's Ø BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.612 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	450 ft	(K) One Purge Volume (C + J)	1.02 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10 ft³

Static Pressure: +1.0" H_2O **Purge Flow Rate:** 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/6/12 1111	0	Ø	2.12	11.88	107	
1113	2	Ø	2.22	11.68	105	
1115	4	Ø	2.24	11.66	101	
1117	6	Ø	2.26	11.63	97	
1119	8	Ø	2.26	11.64	94	
1121	10	Ø	2.26	11.66	92	

Values Prior to Sampling

1121	10	Ø	2.26	11.66	92	

Sample ID: VA1060 VA1061

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-15-150

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature:

Weather: Cloudy

Time: 0847

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) No

Notes: BZ VOCs (open)

BH VOCs

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	~~2.5~~ 150 ft
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.204 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	.61 ft³
(E) Depth to Bottom of Screen	1525 ft	(L) 10 Purge Volumes (K*10)	6.1 ft³

Static Pressure: −.10 H_2O"

Purge Flow Rate: 1.0 CFM

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 847	0	0	.28	19.36	2	
0849	2	0	.26	19.52	3	
0851	4	0	.26	19.58	3	
0853	6	0	.26	19.63	2	
0855	8	0	.28	19.62	2	

Values Prior to Sampling

0855	8	0	.28	19.62	2	

Sample ID: ~~VA1053~~ VA1062

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-15-250

Field Crew: DM, AT

Site / SWMU No.: 106

Date: 1-12-12

Crew Signature: Daniel Mechin

Weather: Sunny

Time: ~~.0926~~ 0936

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH 0.0 ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom		250 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906		ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):		.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	250	~~240~~ ft	(K) One Purge Volume (C + J)	.74 ft³
(E) Depth to Bottom of Screen	252.5	~~250~~ ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: −.05" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-12-12 ~~0926~~ 0936	0	0	~~.67~~ .64	~~17.43~~ 17.43	241	
~~0928~~ 0938	2	0	.64	17.76	133	
0930	4	0	.66	17.89	119	
0932	6	0	.65	18.10	101	
0934	8	0	.66	18.24	96	

Values Prior to Sampling

0934	8	0	.66	18.24	96	

VA 1063

Sample ID: ~~1054~~ VA

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-15-350

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature:

Weather: Sunny

Time: 1009

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs 0

BH VOCs 2.6 ppm

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.47 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	.87 ft³
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.7 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Zone Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1009	0	Ø	1.46	16.81	12,000	Inst.
1011	2	Ø	1.44	15.61	11,880	Inst.
1013	4	Ø	1.44	15.49	11,870	Inst.
1015	6	Ø	1.46	15.45	11,910	Inst.
1017	8	Ø	1.46	15.46	11,860	Inst.
1019	10	Ø	1.46	15.46	12,010	Inst.
					1169 * 9	
					= 10476	

Values Prior to Sampling

1019	10	Ø	1.46	15.46	~~12,010~~	~~Inst.~~

10476 by dilution

Sample ID: ~~VA1055M1~~ VA1064

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-15 450

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: Christine Jacke

Weather: Sunny

Time: 1103

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: Yes - (No)

Notes: BTEX VOC's Ø

BH VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.612 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	450 ft	(K) One Purge Volume (C + J)	1.0 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10.0 ft³

Static Pressure: −.16" H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Date/Time 1/12/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1103	0	0.03	2.42	16.24	22963	INST
1105	2	0	2.46	16.43	22640	INST
1107	4	0	2.22	16.44	22240	INST
1109	6	0	2.34	16.16	22950	INST
1111	8	0	2.44	16.48	22920	INST
1113	10	0	2.34	16.62	22960	INST
					X 9 =	19800 by deluxon

Values Prior to Sampling

1113	10	0	2.34	16.62	19800	by deluxon

Sample ID: ~~VA1056~~ VA1065

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106028-150

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 3-21-12

Crew Signature: Daniel Medina

Weather: Sunny 40's

Time: 0857

Review Signature and Date: 03/00/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's 92.1 ppm in BH.
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	151.29 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	~~.00136~~ .00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B): .462825	~~.2057~~ ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	148.75 ft	(K) One Purge Volume (C + J) 1.871575	~~.61445~~ ft³
(E) Depth to Bottom of Screen	151.25 ft	(L) 10 Purge Volumes (K*10) 8.71575	~~6.1445~~ ft³

Static Pressure: -0.69" H₂O

Purge Flow Rate: 1.0 cfm

PURGE DATA

3-21-12 Date/Time 2min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0857	0	0	.02	20.80	65	
0859	2	0	.06	20.34	12	
0901	4	0	.06	20.46	3	
0903	6	0	.06	20.06	4	
0905	8	0	.06	20.12	3	
0906 1min	9	0	.06	20.09	3	

Values Prior to Sampling

0906	~~8~~ 9	0	.06	20.09	3	

Sample ID: VA1066

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106028-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-21-12
Crew Signature:
Weather: Sunny 40's
Time: 0933
Review Signature and Date: 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 90.6 in BH4 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	251.25 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.768875 ft^3	(J) Filter Pack Volume (F x G)	0.40875 ft^3
(D) Depth to Top of Screen	248.75 ft	(K) One Purge Volume (C + J)	1.1775 ft^3
(E) Depth to Bottom of Screen	251.25 ft	(L) 10 Purge Volumes (K*10)	11.775 ft^3

Static Pressure: -0.74 "H_2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0933	0	0	.08	20.81	154	
0936	3	0	.10	20.71	5	
0939	6	0	.10	21.17	3	
0942	9	0	.12	21.08	2	
0945	12	0	.12	21.08	3	

Values Prior to Sampling

0945	12	0	.12	21.08	3	

Sample ID: VA067

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106028-350
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-21-12
Crew Signature:
Weather: Sunny 40s
Time: 1011
Review Signature and Date: 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 110.9 in BH+ Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	351.25 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.0748 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	348.75 ft	(K) One Purge Volume (C + J)	1.4835 ft³
(E) Depth to Bottom of Screen	351.25 ft	(L) 10 Purge Volumes (K*10)	14.835 ft³

Static Pressure: -0.6" H2O Purge Flow Rate: 1.0 cfm

PURGE DATA

3-21-12 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1011	0	Ø	.08	20.80	94	
1014	3	Ø	.20	20.60	67	
1017	6	Ø	.22	20.59	68	
1020	9	Ø	.22	20.14	70	
1023	12	Ø	.22	20.90	71	
1026	15	Ø	.22	20.70	71	

Values Prior to Sampling

1026	15	Ø	.22	20.70	71	

Sample ID: VA1068

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106028-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-21-17
Crew Signature:
Weather: Sunny 50s
Time: 1043
Review Signature and Date: 3/22/17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 62.7 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	451.75 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.3806 ft³	(J) Filter Pack Volume (F x G)	.40875 ft³
(D) Depth to Top of Screen	448.75 ft	(K) One Purge Volume (C + J)	1.7895 ft³
(E) Depth to Bottom of Screen	451.75 ft	(L) 10 Purge Volumes (K*10)	17.895 ft³

Static Pressure: -0.63" H₂O
Purge Flow Rate: 1.0 cfm

PURGE DATA

3-21-17 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1043	0	Ø	0	20.80	15	
1046	3	Ø	.30	20.24	858	
1049	6	Ø	.38	20.30	609	
1052	9	Ø	.38	19.91	590	
1055	12	Ø	.38	19.61	578	
1058	15	Ø	.42	19.58	579	
1101	18	Ø	.40	20.94	583	

Values Prior to Sampling

1101	18	Ø	.40	20.94	583	

Sample ID: VA1069

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-01-260

Field Crew: AT, MH, JW

Site / SWMU No.: 106

Date: 3/21/12

Crew Signature: [signature]

Weather: Sunny

Time: 0832

Review Signature and Date: [signature] 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: B4 VOCs @
B2 VOCs @

CALCULATIONS

(A) Depth to Well Bottom	260 ft	(F) Filter Pack Length (E –D)	14 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	5.7 ft³	(J) Filter Pack Volume (F x G)	2.3 ft³
(D) Depth to Top of Screen	246 ft	(K) One Purge Volume (C + J)	8.0 ft³
(E) Depth to Bottom of Screen	260 ft	(L) 10 Purge Volumes (K*10)	80 ft³

Static Pressure: -.76 "H2O

Purge Flow Rate: N/A

PURGE DATA

Date/Time (2 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0840	N/A	0	1.68	17.66	9640	
0842		0	2.92	15.46	6830	
0844		0	3.68	14.18	7430	
0846		0	4.58	12.57	8600	
0848		0	5.52	10.99	10,000	Inst
					991	
					X 9	
					8919	by deluction

Values Prior to Sampling

0850	N/A	0	6.54	9.45	8919	by deluction

Sample ID: VA1070

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVEW-02 -260	**Field Crew:** AT, MH, TW
Site / SWMU No.: 106	**Date:** 3/21/12	**Crew Signature:**
Weather: Sunny	**Time:** 0932	**Review Signature and Date:** 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes: B1 VOCs @
B2 VOCs @

CALCULATIONS

(A) Depth to Well Bottom	N/A	ft	(F) Filter Pack Length (E –D)	N/A	ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635	ft^2
(C) One Well Casing Volume (A x B):		ft^3	(J) Filter Pack Volume (F x G)		ft^3
(D) Depth to Top of Screen		ft	(K) One Purge Volume (C + J)		ft^3
(E) Depth to Bottom of Screen		ft	(L) 10 Purge Volumes (K*10)		ft^3

Static Pressure: -.16 "H_2O **Purge Flow Rate:** N/A

PURGE DATA

2 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0932 3/21/12		0	14.38	2.25	17190	Inst
0934		0	14.32	1.21	17150	Inst
0936		0	14.40	1.38	17040	Inst
				.0	1380	
					X 9	
					12420	By deduction
				(2)	~~1583~~ 1585	
					X 9 14265	By deduction

Values Prior to Sampling

0936		0	14.40	1.38	~~17040~~ 14265	by deduction

Sample ID: MA 1071
MA 1072

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW03-260

Field Crew: KAT, KHH, TN

Site / SWMU No.: 106

Date: 3/21/12

Crew Signature:

Weather: Sunny

Time: 1253

Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BZ VOCs 0
BH VOCs 0 (open)

CALCULATIONS

(A) Depth to Well Bottom	160	ft	(F) Filter Pack Length (E –D)	15	ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635	ft^2
(C) One Well Casing Volume (A x B):	3.5	ft^3	(J) Filter Pack Volume (F x G)	2.5	ft^3
(D) Depth to Top of Screen	145	ft	(K) One Purge Volume (C + J)	6.0	ft^3
(E) Depth to Bottom of Screen	160	ft	(L) 10 Purge Volumes (K*10)	60	ft^3

Static Pressure: -.9 $"H_2O$

Purge Flow Rate:

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1253	N/A	0	10.10	5.87	13480	Inst
1257	N/A	0	10.14	5.41	13420	Inst
					1031	
					X 9 =	
					9279	By dilution

Values Prior to Sampling

1257	N/A	0	10.14	5.41	9279	By dilution

Sample ID: VA1073

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVEW-04-313	**Field Crew:** MT, TN, MLH
Site / SWMU No.: 106	**Date:** 3/21/12	**Crew Signature:**
Weather: Sunny	**Time:** 1327	**Review Signature and Date:** 3/22/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes: BH rocks @
BZ rocks @

CALCULATIONS

(A) Depth to Well Bottom	N/A ft	(F) Filter Pack Length (E –D)	N/A ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	ft^3	(J) Filter Pack Volume (F x G)	ft^3
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft^3
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft^3

Static Pressure: -.70" H_2O **Purge Flow Rate:**

PURGE DATA

Date/Time 3/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1327	N/A	0	1.16	16.64	4770	
1330	↓	0	1.16	16.56	4790	

Values Prior to Sampling

1330	N/A	0	1.16	16.56	4790	

Sample ID: V1074

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVEW-05-460	**Field Crew:** AT, JR, MM
Site / SWMU No.: 106	**Date:** 3/21/12	**Crew Signature:**
Weather: Sunny	**Time:** 1349	**Review Signature and Date:** 3/30/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes: BH-VOC50
BZ-VOC50

CALCULATIONS

(A) Depth to Well Bottom	N/A ft	(F) Filter Pack Length (E –D)	N/A ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	ft³	(J) Filter Pack Volume (F x G)	ft³
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft³
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: -.60 "H2O **Purge Flow Rate:**

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1349		0	2.78	13.58	1728	
1352		0	2.84	13.63	1655	

Values Prior to Sampling

1352		0	2.84	13.63	1655	

Sample ID: VA1075

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-06-060

Field Crew: LAT, MH, TW

Site / SWMU No.: 106

Date: 3/21/12

Crew Signature:

Weather: Sunny

Time: 1412

Review Signature and Date: 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes: BH VO

CALCULATIONS

(A) Depth to Well Bottom	n/a ft	(F) Filter Pack Length (E –D)	n/a ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	ft^3	(J) Filter Pack Volume (F x G)	ft^3
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft^3
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft^3

Static Pressure: −.14 in H_2O

Purge Flow Rate:

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1412	n/a	0	10.48	5.56	3910	
1415	n/a	0	10.60	5.42	4010	

Values Prior to Sampling

1415	n/a	0	10.48	5.42	4010	

Sample ID: VA1076

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: SVE00-07-160	Field Crew: AT, TN
Site / SWMU No.: 106	Date: 3/21/12	Crew Signature: [signature]
Weather: Sunny	Time: 1433	Review Signature and Date: [signature] 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes:

CALCULATIONS

(A) Depth to Well Bottom	N/A ft	(F) Filter Pack Length (E –D)	N/A ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	ft^3	(J) Filter Pack Volume (F x G)	ft^3
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft^3
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft^3

Static Pressure: ~.88 " ~~Fm~~ H_2O **Purge Flow Rate:**

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1433		0	3.34	14.70	10970	Inst
1436		0	3.62	13.66	12020	Inst
1439		0	3.72	13.42	12510	Inst
1442		0	3.70	13.32	12830	Inst
					1100	
					x 9 9900	by deluction

Values Prior to Sampling

1442		0	3.70	13.32	~~12830~~ AT 9900	by deluction

Sample ID: VA 1077

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVEW08260

Date: 3/21/12

Time: 1515

Field Crew: AT, TN

Crew Signature: [signature]

Review Signature and Date: [signature] 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOCS Ø
BZ VOCS Ø

CALCULATIONS

(A) Depth to Well Bottom	N/A ft	(F) Filter Pack Length (E –D)	N/A ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	ft³	(J) Filter Pack Volume (F x G)	ft³
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft³
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: -.70" H_2O

Purge Flow Rate:

PURGE DATA

Date/Time 3/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1515		0	2.80	11.27	921	
1518		0	2.72	11.59	862	
1521		0	2.68	11.61	878	

Values Prior to Sampling

1521		0	2.68	11.61	878	

Sample ID: VA1078

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: LAFB

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVEW-09-4160

Date: 3/20/12

Time: 1536

Field Crew: AT, TN

Crew Signature:

Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOCs @

BZ VOCs @

CALCULATIONS

(A) Depth to Well Bottom	n/a ft	(F) Filter Pack Length (E –D)	n/a ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	ft³	(J) Filter Pack Volume (F x G)	ft³
(D) Depth to Top of Screen	ft	(K) One Purge Volume (C + J)	ft³
(E) Depth to Bottom of Screen	ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: -.68" H_2O

Purge Flow Rate:

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
static 1536		0	2.32	12.43	962	
1539		0	2.38	12.51	919	

Values Prior to Sampling

1539		0	2.38	12.51	919	

Sample ID: VA-1079

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: SVEW-10-410

Date: 3/6/12

Time: 0839

Field Crew: AT, DR

Crew Signature:

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	400 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.0218 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	8.72 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	400 ft	(K) One Purge Volume (C + J)	10.35 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	104 ft³

Static Pressure: +.30 "H_2O

Purge Flow Rate: 12 CFM

PURGE DATA

2 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/6/12 0839	Ø	Ø	.06	20.57	164	
0841	24	Ø	.10	20.66	161	
0843	48	Ø	0.04	20.32	159	
0845	72	Ø	0.06	20.63	160	
0847	96	Ø	0.08	21.22	169	
0849	120	Ø	0.08	21.22	172	

Values Prior to Sampling

0849	120	Ø	0.08	21.22	172	

Sample ID: VA1080

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny, 60s

Well ID No/Interval: SVEW-11-410-410

Date: 3/22/12

Time: 1153

Field Crew: VAT, JN, MH

Crew Signature: Melissa Halich

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BZ - VOCs Ø
BH - VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	410 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	8.94 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	ft^3	(J) Filter Pack Volume (F x G)	1.64 ft^3
(D) Depth to Top of Screen	400 ft	(K) One Purge Volume (C + J)	10.58 ft^3
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	105.8 ft^3

Static Pressure: 0.0 "H_2O

Purge Flow Rate: 12.0 cfm

PURGE DATA

3 min Date/Time 3/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1144	0	0.00	0.58	17.27	1098	
1147	36	0.00	0.58	17.43	1091	
1150	72	0.00	0.56	17.41	1082	
1153	108	0.00	0.58	17.36	1067	

Values Prior to Sampling

1153	108	0.00	0.58	17.36	1067	

Sample ID: VA1081

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-12-410

Field Crew: AT, JTN

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Sunny/windy

Time: 810

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes (No)

Well ID Mark: (Yes) No

Notes: BH VOCs 71.3 ppm (open)

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	400 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906) AT	.0218 ft² .00136 AT	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	8.72 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	400 ft	(K) One Purge Volume (C + J)	10.35 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	104 ft³

Static Pressure: +.08 " H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

3mm

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/7/12 815	0	0	.12	19.99	159	
818	36	0	.26	19.76	207	
821	72	0	.20	19.46	206	
824	108	0	.20	19.20	212	

Values Prior to Sampling

824	108	0	.20	19.20	212	

Sample ID: VA1082

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVBW-13-410 | Field Crew: AT, TN

Site / SWMU No.: 106 | Date: 1/12/12 | Crew Signature:

Weather: Sunny | Time: 1149 | Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged | Locked: Yes - No | Well ID Mark: Yes - No

Notes: BH VOCs 0
BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	410 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	8.9 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	400 ft	(K) One Purge Volume (C + J)	10.5 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	105.35 ft³

Static Pressure: 0" H20 Stg DO

Purge Flow Rate: 12 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1149	0	0	.06	20.67	178	
1151	24	0	.02	20.76	140	
1153	48	0	.02	20.72	131	
1155	96	0	.08	20.72	195	
1157	120	0	.10	20.70	335	

Values Prior to Sampling

1157	120	0	.10	20.70	335	

Sample ID: VA1083

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106108-025
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-13-17
Crew Signature:
Weather: Sunny 40's
Time: 0826
Review Signature and Date: Daniel Medina 3-13-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: -.02 "H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3-13-17 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0826	0	0.00	0.24	20.86	3	
0829	4.5	0.00	0.42	20.35	4	
0832	9	0.00	0.42	20.27	2	
0835	13.5	0.00	0.42	20.35	3	
0838	18	0.00	0.46	20.47	3	

Values Prior to Sampling

0838	18	0.00	0.46	20.47	3	

Sample ID: VA1084

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106108-050
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-13-12
Crew Signature:
Weather: Sunny 40s
Time: 0856
Review Signature and Date: Daniel Madera 3-13-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: -.13 "H_2O Purge Flow Rate: 1.5cfm

PURGE DATA

3-13-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0856	0	Ø	0.87	18.68	4	
0859	4.5	Ø	2.90	17.71	4	
0902	9	Ø	2.96	17.62	5	
0905	13.5	Ø	2.96	17.59	5	
0908	18	Ø	3.00	17.45	5	

Values Prior to Sampling

0908	18	Ø	3.00	17.45	5	

Sample ID: VA10854
VA10856

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106108-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-13-12
Crew Signature:
Weather: Sunny 50s
Time: 0936
Review Signature and Date: Daniel Medina 3-13-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: -.61 "H_2O Purge Flow Rate: 1.5cfm

PURGE DATA

3-13-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0936	Ø	Ø	~~0.00~~ 1.16	18.61	42	
0939	4.5	Ø	~~0~~ 2.08	17.78	62	
0942	9	Ø	2.00	17.85	60	
0945	13.5	Ø	2.00	17.89	60	
0948	18	Ø	1.98	17.90	60	
0950 (2 min)	21	Ø	1.96	17.91	59	

Values Prior to Sampling

0950	21	Ø	1.96	17.91	59	

Sample ID: VA1087

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106108-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-13-12
Crew Signature:
Weather: Sunny 50s
Time: 1012
Review Signature and Date: Daniel Medina 3-13-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) No
Well ID Mark: (Yes) - No
Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: -.61
Purge Flow Rate: 1.5 cfm

PURGE DATA

3-13-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1012	0	Ø	0.26	19.45	27	
1016	6	Ø	0.38	19.43	258	
1020	12	Ø	0.40	19.69	260	
1024	18	Ø	0.42	20.11	263	
1028	24	Ø	0.42	20.07	264	

Values Prior to Sampling

1028	24	Ø	0.42	20.07	264	

Sample ID: VA1088

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVE106108-350 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-13-12 | Crew Signature: [signature]

Weather: Sunny | Time: 1101 | Review Signature and Date: Daniel Medina 3-13-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) / No

Notes: VOCs 2.6 in BH4 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft³

Static Pressure: -.61 | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-13-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1101	0	0	0.06	20.52	9	
1105	6	0	0.24	19.28	772	
1109	12	0	0.30	19.29	772	
1113	18	0	0.28	19.46	775	
1117	24	0	0.28	19.51	781	
1120 (3 min)	28.5	0	0.28	19.42	783	

Values Prior to Sampling

1120	28.5	0	0.28	19.42	783	

Sample ID: VA1089

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106108-450 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-14-17 | Crew Signature:

Weather: Sunny 50s | Time: 1009 | Review Signature and Date: 3/15/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs 16.2 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = (.04906)	.04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: -.75 "H₂O | Purge Flow Rate: 12 cfm

PURGE DATA

3-14-17 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1009	0	0	0.00	20.74	18	
1013	48	0	0.26	20.52	33	
1017	96	0	0.42	20.72	171	
1021	144	0	0.44	21.04	175	
1025	192	0	0.42	19.33	184	
1029	240	0	0.44	19.17	184	

Values Prior to Sampling

1029	240	0	0.44	19.17	184	

Sample ID: VA1090

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106109-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-15-12
Crew Signature:
Weather: Sunny 50's
Time: 0856
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: -.05 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3-15-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0856	0	Ø	0.36	20.25	4	
0859	4.5	Ø	0.40	20.10	3	
0902	9	Ø	0.42	20.05	2	
0905	13.5	Ø	0.40	20.16	2	
0908	18	Ø	0.42	20.38	2	

Values Prior to Sampling

0908	18	Ø	0.42	20.38	2	

Sample ID: VA1091

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106109-50 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-15-17 | Crew Signature: DM

Weather: Sunny 50's | Time: 0919 | Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: -.42 "H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-15-17 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0919	0	Ø	0.24	19.98	6	
0922	4.5	Ø	0.66	19.80	7	
0925	9	Ø	0.72	19.77	6	
0928	13.5	Ø	0.74	19.76	8	
0931	18	Ø	0.76	19.77	7	

Values Prior to Sampling

0931	18	Ø	0.76	19.77	7	

Sample ID: VA1092

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106109-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-15-12
Crew Signature: DMA
Weather: Sunny
Time: 0954
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: −1.35 "H_2O Purge Flow Rate: 1.5cfm

PURGE DATA

3-15-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0954	Ø	Ø	0.10	19.90	5	
0957	4.5	Ø	0.12	19.92	4	
1000	9	Ø	0.14	19.91	4	
1003	13.5	Ø	0.14	19.92	3	
1006	18	Ø	0.14	19.91	3	
1008 (2 min)	21	Ø	0.14	19.91	3	

Values Prior to Sampling

1008	21	Ø	0.14	19.91	3	

Sample ID: VA1093

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106109-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-15-12
Crew Signature:
Weather: Sunny 50°s
Time: 1021
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 . ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: -1.38 "H2O Purge Flow Rate: 1.5cfm

PURGE DATA

Date/Time 3-15-12 4/min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1021	0	0	0.14	20.30	11	
1025	6	0	0.38	20.11	12	
1029	12	0	0.38	20.16	14	
1033	18	0	0.38	20.13	16	
1037	24	0	0.38	20.16	17	

Values Prior to Sampling

1037	24	0	0.38	20.16	17	

Sample ID: VA1094 + VA1095

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106109-350 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-15-12 | Crew Signature: [signature]

Weather: Sunny 60's | Time: 1127 | Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) / Damaged | Locked: (Yes) / No | Well ID Mark: (Yes) / No

Notes: VOCs Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	2706 ft^3

Static Pressure: -1.40 | Purge Flow Rate: 1.5cfm

PURGE DATA

3-15-12 Date/Time 4min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1122	Ø	Ø	0.08	20.30	8	
1126	6	Ø	0.12	19.46	8	
1130	12	Ø	0.10	19.54	6	
1134	18	Ø	0.12	19.65	5	
1138	24	Ø	0.12	19.75	5	
1141 (3min)	28.5	Ø	0.12	19.76	5	

Values Prior to Sampling

1141	28.5	Ø	0.12	19.76	5	

Sample ID: VA1096

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106109-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-15-17
Crew Signature:
Weather: Sunny 60s
Time: 1158
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs Ø in BH Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.077 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: -1.02 "H2O
Purge Flow Rate: 12cFM

PURGE DATA

3-15-17 Date/Time 4min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1158	Ø	Ø	0.00	20.69	8	
1202	48	Ø	0.86	17.65	25	
1206	96	Ø	1.48	13.84	23	
1210	144	Ø	1.50	14.17	33	
1214	192	Ø	1.48	14.33	36	
1218	240	Ø	1.48	14.36	41	

Values Prior to Sampling

1218	240	Ø	1.48	14.36	41	

Sample ID: VA1097

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106110-025 BG
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-12
Crew Signature:
Weather: Partly Cloudy 30's
Time: 0841
Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOC's Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: -.07 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3-19-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0841	Ø	Ø	0.32	19.98	Ø	
0844	4.5	Ø	0.66	19.52	1	
0847	9	Ø	0.64	19.61	1	
0850	13.5	Ø	0.66	20.01	3	
0853	18	Ø	0.66	20.12	3	

Values Prior to Sampling

0853	18	Ø	0.66	20.12	3	

Sample ID: VA1098

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106110-050 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-19-12 | Crew Signature: DMA

Weather: Partly Cloudy 30's | Time: 0914 | Review Signature and Date: 3/20/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: -.06 "H_2O | Purge Flow Rate: 1.5cfm

PURGE DATA

3-19-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0916	Ø	Ø	0.21	19.94	Ø	
0921	4.5	Ø	0.34	19.52	Ø	
0924	9	Ø	0.56	19.63	1	
0927	13.5	Ø	0.74	19.79	2	
0930	18	Ø	0.74	19.96	2	

Values Prior to Sampling

0930	18	Ø	0.74	19.96	2	

Sample ID: VA1099

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106110-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-12
Crew Signature:
Weather: Sunny 30s
Time: 0950
Review Signature and Date: 03/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: +2.41 "H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3-19-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
0950	0	Ø	0.21	20.32	2	
0953	4.5	Ø	0.22	20.54	6	
0956	9	Ø	0.22	20.60	6	
0959	13.5	Ø	0.24	20.67	7	
1001	18	Ø	0.24	20.67	7	
1004 (2 min)	21	Ø	0.24	20.68	8	

Values Prior to Sampling

1004	21	Ø	0.24	20.68	8	

Sample ID: VA1100

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106110-250 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-19-12 | Crew Signature:

Weather: Sunny 30s | Time: 1026 | Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: +2.49 "H2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-19-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1026	0	0	0.12	20.53	4	
1030	6	0	0.20	20.52	10	
1034	12	0	0.22	20.71	11	
1038	18	0	0.22	20.83	11	
1042	24	0	0.22	20.89	11	

Values Prior to Sampling

1042	24	0	0.22	20.89	11	

Sample ID: VA1101

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106110 -350 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-19-12 | Crew Signature: [signature]

Weather: Sunny 30's | Time: 1110 | Review Signature and Date: [signature] 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) No

Notes: VOCs 10.7 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft³

Static Pressure: +2.90 "H₂O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-19-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1110	0	0	0.04	20.89	32	
1114	6	0	0.08	20.86	70	
1118	12	0	0.08	20.84	68	
1122	18	0	0.10	20.86	71	
1126	24	0	0.12	20.56	72	
1129 (3 min)	28.5	0	0.12	20.51	72	

Values Prior to Sampling

1129	28.5	0	0.12	20.51	72	

Sample ID: VA1102

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106110-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-12
Crew Signature:
Weather: Partly cloudy Sunny 30s
Time: 1212
Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs 352 in BHH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: +3.10 "H2O
Purge Flow Rate: 12 cfm

PURGE DATA

3-19-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1212	0	0	0.18	19.85	6	
1216	48	0	0.42	19.04	150	
1220	96	0	0.44	18.98	274	
1224	144	0	0.44	18.92	282	
1228	192	0	0.44	19.52	282	
1232	240	0	0.40	19.89	281	

Values Prior to Sampling

1232	240	0	0.40	19.89	281	

Sample ID: VA 1103

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-73FF	Well ID No/Interval: KAFB-106111-025	Field Crew: HT, TN
Site / SWMU No.: 106	Date: 3/15/12	Crew Signature:
Weather: Sunny	Time: 0857	Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged Locked: (Yes) No Well ID Mark: (Yes) - No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.711 ft³
(E) Depth to Bottom of Screen	28 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0" H_2O Purge Flow Rate: 1.5 CFm

PURGE DATA

3mm

Date/Time 3/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0857	0	0	.88	20.08	101	
0900	4.5	0	.78	19.77	82	
0903	9	0	.76	20.10	71	
0906	13.5	0	.74	20.94	63	
0909	18	0	.74	20.71	61	

Values Prior to Sampling

0909	18	0	.74	20.71	61	

Sample ID: VA 1104

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106111-050

Field Crew: AT, TW

Site / SWMU No.: 106

Date: 3/15/12

Crew Signature:

Weather: Sunny

Time: 3/15/12 / 0934

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: BH VOCs ✓

BZ VOCs ✓

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: −.22 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min

Date/Time 3/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
0934	0	0	2.45	17.04	28	
0937	4.5	0	2.60	17.13	26	
0940	9	0	2.66	17.24	25	
0943	13.5	0	2.68	17.33	24	
0946	18	0	2.70	17.31	22	

Values Prior to Sampling

0946	18	0	2.70	17.31	22	

Sample ID: VA1105
VA1106

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: KAFB-106111-150

Date: 3/15/12

Time: 1018

Field Crew: TN, AT

Crew Signature: T. Nolan

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: -1.00 "H₂O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 3/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1018	0	0	2.14	17.66	120	
1021	4.5	0	2.02	17.91	30	
1024	9	0	2.02	17.95	32	
1027	13.5	0	2.04	17.57	32	
1030	18	0	2.06	17.50	33	
1033	22.5	0	2.06	17.29	34	

Values Prior to Sampling

1033	22.5	0	2.06	17.29	34	

Sample ID: VA1107

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB-106111-250

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/15/12

Crew Signature: TN

Weather: sunny 60's

Time: 1055

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: TV + VOC's @ in BH
VOC's @ in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: -1.00 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6mm

Date/Time 3/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1055	0	0	0.96	18.18	160	
1101	9	0	0.98	17.98	157	
1107	18	0	0.98	18.11	157	
1113	27	0	0.98	19.02	155	

Values Prior to Sampling

1113	27	0	0.98	19.02	155	

Sample ID: VA1108

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB106111-350

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/19/12

Crew Signature: [signature]

Weather: cold

Time: 940

Review Signature and Date: [signature] 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 15.8 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: + 2.2 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 3/19/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
940	0	0	0.28	17.57	577	
946	9	0	0.28	17.48	592	
952	18	0	0.26	17.53	586	
958	27	0	0.26	17.52	584	

Values Prior to Sampling

958	27	0	0.26	17.52	584	

Sample ID: VA 1109

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: cold

Well ID No/Interval: KAFB 106 111-450

Date: 3/19/12

Time: 1016

Field Crew: TN, AT

Crew Signature: TN Nap

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BH VOC's 89.4 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft^3

Static Pressure: +2.6" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1016	0	0	3.06	9.92	3430	
1020	48	0	3.30	9.10	4060	
1024	96	0	3.36	8.94	4130	
1028	144	0	3.36	8.94	4150	
1032	192	0	3.38	8.94	4170	
1036	240	0	3.38	8.73	4200	

Values Prior to Sampling

1036	240	0	3.38	8.73	4200	

Sample ID: VA 1110X

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106112-025

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: T Nolan

Weather: sunny

Time: 1122

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1122	0	0	.36	20.09	22	
1125	4.5	0	.40	20.07	13	
1128	9	0	.40	20.20	13	
1131	13.5	0	.42	20.28	12	
1134	18	0	.44	20.26	10	

Values Prior to Sampling

1134	18	0	.44	20.26	10	

Sample ID: VA1111

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106112-050

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: TN Nagra

Weather: sunny

Time: 1157

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1/12/12 1157	0	0	.68	18.61	~~18.6~~ TN 0	
TN 1200	4.5	0	.72	18.54	5	
1203	9	0	.76	18.27	5	
1206	13.5	0	.82	17.90	10	
1209	18	0	.84	17.83	11	
1212	22.5	0	.86	17.79	12	

Values Prior to Sampling

TN ~~1209~~ 1212	22.5	0	.86	17.79	12	

Sample ID: VA 1112

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106112-150

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: T Nogle

Weather: sunny

Time: 1227

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes:

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: NR

Purge Flow Rate: 1.5CFM

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/12/12 1227	0	0	.72	17.12	27	
1230	4.5	0	.78	17.14	31	
1233	9	0	.78	17.37	27	
1236	13.5	0	.78	17.37	30	
1239	18	0	.78	17.32	29	
1242	22.5	0	.78	17.21	29	

Values Prior to Sampling

1242	22.5	0	.78	17.21	29	

Sample ID: VA1113

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB -BFF

Well ID No/Interval: 106112 - 250

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: T. Nagra

Weather: sunny

Time: 1257

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's @
BZ VOC's @

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +.06" H_2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

1 Gmin Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1257	0	0	1.24	15.96	7310	
1303	9	0	1.24	15.98	6990	
1309	18	0	1.24	16.23	6480	
1315	27	0	1.26	16.35	6290	

Values Prior to Sampling

1315	27	0	1.26	16.35	6290	

Sample ID: VA1114

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BH#

Well ID No/Interval: 106112 - 350

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: T Nagy

Weather: sunny

Time: 1330

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: 0 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1330	0	0	.86	18.34	5830	
1336	9	0	.86	17.68	6010	
1342	18	0	.86	17.73	6030	
1348	27	0	.86	17.87	5980	

Values Prior to Sampling

1348	27	0	.86	17.87	5980	

Sample ID: VA1115

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106112 - 450

Field Crew: TN

Site / SWMU No.: 106

Date: 11/12/12

Crew Signature: TN Nogen

Weather: Sunny

Time: 1410

Review Signature and Date: 11/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's TN @ 3380ppm (open)
BZ VOC's @

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	163 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: -.26" H 20

Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1410	0	0	1.34	17.95	10820	inst.
1414	48	0	1.32	17.59	10630	inst.
1418	96	0	1.36	17.30	10870	inst.
1422	144	0	1.32	17.41	10560	inst.
1426	192	0	1.34	17.72	10530	inst.
1430	240	0	1.34	17.74	10460	
					919 * 9	
					= 8271	

Values Prior to Sampling

1430	240	0	1.34	17.74	8271	

Sample ID: VA 1116

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106113-020

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 0910

~~Review~~ Signature and Date: T Nagler 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	20 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.06 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	10 ft	(K) One Purge Volume (C + J)	1.69 ft³
(E) Depth to Bottom of Screen	20 ft	(L) 10 Purge Volumes (K*10)	16.9 ft³

Static Pressure: -.01" H_2O

PURGE DATA

Purge Flow Rate: 1.5cfm

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/0910	0	0	.22	20.46	3	
0913	4.5	0	.22	20.54	3	
0916	9	0	.20	20.30	4	
0919	13.5	0	.24	19.88	5	
0922	18	0	.24	19.64	6	

Values Prior to Sampling

0922	18	0	.24	19.64	6	

Sample ID: VA1117

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: 106113-050

Date: 1-19-12

Time: 0943

Field Crew: DM, TN

Crew Signature: Daniel Medina

Review Signature and Date: [illegible] 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH @ ppm VOC's
BZ @

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: -.02" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1-19-12/0943	0	0	.26	19.67	7	
0946	4.5	0	.30	19.81	5	
0949	9	0	.30	19.87	6	
0952	13.5	0	.30	19.87	5	
0955	18	0	.32	19.91	7	

Values Prior to Sampling

0955	18	0	.32	19.91	7	

Sample ID: VA1118
VA1119

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106113-150

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1032

Review Signature and Date: [illegible] Nagar 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: + 0.46" H_2O

PURGE DATA

Purge Flow Rate: 1.5 cfm

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1032	0	0	.32	19.18	11	
1036	4.5	0	.34	19.04	11	
1040	9.	0	.38	18.92	12	
1044	13.5	0	.42	18.91	12	
1048	18	0	.42	18.99	12	
1052	22.5	0	.42	19.22	9	

Values Prior to Sampling

1052	22.5	0	.42	19.22	9	

Sample ID: VA1120

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106113-250	**Field Crew:** DM, TN
Site / SWMU No.: 106	**Date:** 1-19-12	**Crew Signature:** Daniel Medina
Weather: Sunny	**Time:** 1109	**Review Signature and Date:** 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306,) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.77 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.40 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft³

Static Pressure: +0.56" H_2O **PURGE DATA** **Purge Flow Rate:** 1.5 cfm

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1109	0	0	1.74	15.53	45	
1115	9	0	1.66	16.30	43	
1121	18	0	1.62	16.49	43	
1127	27	0	1.56	17.09	37	

Values Prior to Sampling

1127	27	0	1.56	17.09	37	

Sample ID: VA1121

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: 106113-350

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1156

Review Signature and Date: Tim Nagel 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH 12.8 ppm VOC's open
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +.70" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1156	0	0	.44	18.43	1110	
1202	9	0	.46	17.91	1165	
1208	18	0	.46	17.81	1168	
1214	27	0	.44	1755	1168	

Values Prior to Sampling

1214	27	0	.44	17.55	1168	

Sample ID: VA1102

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF	**Well ID No/Interval:** 106113-450	**Field Crew:** DM, TN
Site / SWMU No.: 106	**Date:** 1-19-12	**Crew Signature:** Daniel Medina
Weather: Sunny	**Time:** 1240	**Review Signature and Date:** TNagar 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: BH 1,819 ppm VOCs
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +0.64" H_2O ~~-.10" H_2O ppm~~ **Purge Flow Rate:** 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1240	0	0	.40	18.13	4,580	
1244	48	0	.44	17.79	4650	
1248	96	0	.42	17.77	4640	
1252	144	0	.44	17.70	4620	
1256	192	0	.44	17.58	4630	
1300	240	0	.46	17.71	4670	

Values Prior to Sampling

1300	240	0	.46	17.71	4670	

Sample ID: VA1123

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106/14-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-12
Crew Signature:
Weather: Sunny 30's
Time: 1354
Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs 77.5 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: +0.39 "H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3-19-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1354	0	0	0.24	19.55	3	
1357	4.5	0	0.44	19.62	2	
1400	9	0	0.46	19.63	2	
1403	13.5	0	0.46	19.15	3	
1406	18	0	0.50	19.05	4	

Values Prior to Sampling

1406	18	0	0.50	19.05	4	

Sample ID: VA1174

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106114-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-17
Crew Signature:
Weather: Sunny 30s
Time: 1450
Review Signature and Date: 3/22/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs 56.4 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: +.50 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

Date/Time 3-19-17 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1438	0	0	0.21	20.07	2	
1441	4.5	0	0.44	19.47	4	
1444	9	0	0.46	19.52	4	
1447	13.5	0	0.48	19.81	5	
1450	18	0	0.48	20.10	5	

Values Prior to Sampling

1450	18	0	0.48	20.10	5	

Sample ID: VA1125

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106114-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-19-17
Crew Signature:
Weather: Sunny 30's
Time: 1512
Review Signature and Date: 3/28/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs 23.1 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: +2.97 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3-19-17 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1512	Ø	Ø	0.21	19.76	1	
1515	4.5	Ø	0.48	19.82	0	
1518	9	Ø	048	19.91	1	
1521	13.5	Ø	0.52	20.02	2	
1524	18	Ø	0.50	20.00	1	
1526 (2 min)	21	Ø	0.54	20.03	1	

Values Prior to Sampling

1526	21	Ø	0.54	20.03	1	

Sample ID: VA1126

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106114 - 250

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel Medina

Weather: Sunny 30's

Time: 0858

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ 2nd VOC's 77. in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: + 0.74" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 4min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-20-12/0858	0	Ø	2.34	18.54	67	
0902	6	Ø	2.40	16.21	72	
0906	12	Ø	2.40	16.22	70	
0910	18	Ø	2.38	16.26	68	
0914	24	Ø	2.34	16.32	67	

Values Prior to Sampling

0914	24	Ø	2.34	16.32	67	

Sample ID: VA1127

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106114-350

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel Medina

Weather: Sunny 30's

Time: 0932

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's 266 in BH and Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: + 1.23" ~~H2O~~ DM

Purge Flow Rate: 1.5cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
4min 3-20-12/0932	0	Ø	0.28	20.76	386	
0936	6	Ø	0.30	19.55	418	
0940	12	Ø	0.32	19.44	438	
0944	18	Ø	0.32	19.44	445	
0948	24	Ø	0.32	19.55	445	
0952 3min	28.5	Ø	0.34	19.57	446	

Values Prior to Sampling

0952	28.5	Ø	0.34	19.57	446	

Sample ID: VA1128
VA1129

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF | Well ID No/Interval: 106114-450 | Field Crew: DM, DA

Site / SWMU No.: 106 | Date: 3-20-12 | Crew Signature: Daniel Medina

Weather: Sunny 30's | Time: 1019 | Review Signature and Date: [signature] 3/20/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's 639 in BH and Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	~~350~~ 450 ft DM	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ~~¼" = .00306~~, 2" = .0218, (3" = .04906)	~~.0306~~ .04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B): 22.07 ~~17.171~~ ft³ DM		(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen 440	~~340~~ DM ft	(K) One Purge Volume (C + J) 23.712	~~18.3345~~ ft³ DM
(E) Depth to Bottom of Screen 450	~~350~~ DM ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: + 0.95 ~~Hg~~ H₂O DM **Purge Flow Rate:** 12 cfm

PURGE DATA

Date/Time (4 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-20-12/1019	0	Ø	0.36	20.79	8000	
1023	48	Ø	0.42	19.39	8930	
1027	96	Ø	0.46	19.27	9400	
1031	144	Ø	0.46	19.26	9480	
1035	192	Ø	0.48	19.25	9620	
1039	240	Ø	0.46	19.21	9730	

Values Prior to Sampling

1039	240	Ø	0.48	19.21	9730	

Sample ID: * VA1130 *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106115-025

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: Dennis Medina

Weather: Sunny

Time: 1347

Review Signature and Date: [illegible] 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.30" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-19-12/1347	0	0	.58	20.99	25	
1350	4.5	0	.56	20.51	20	
1353	9	0	.56	19.21	22	
1356	13.5	0	.58	19.68	17	
1359	18	0	.58	19.54	17	

Values Prior to Sampling

1359	18	0	.58	19.54	17	

Sample ID: VA1131

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106115-050

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1415

Review Signature and Date: TM Nufer 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH 2.8 ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1415	0	0	.70	19.50	17	
1418	4.5	0	.70	19.69	14	
1421	9	0	.72	19.27	11	
1424	13.5	0	.70	19.24	12	
1427	18	0	.72	19.48	10	

Values Prior to Sampling

1427	18	0	.72	19.48	10	

Sample ID: VA1132

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: 106115-150	Field Crew: DM, TN
Site / SWMU No.: 106	Date: 1-19-12	Crew Signature: Daniel Medina
Weather: Sunny	Time: 1445	Review Signature and Date: Tim Nagler 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH 1.1 ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.46 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft^3

Static Pressure: + 1.60 Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12/1445	0	0	.28	18.94	11	
1448	4.5	0	.28	18.47	8	
1451	9	0	.28	18.49	8	
1454	13.5	0	.30	18.58	7	
1457	18	0	.28	19.08	8	
1500	22.5	0	.30	19.10	8	

Values Prior to Sampling

1500	22.5	0	.30	19.10	8	

Sample ID: VA1133

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BTF

Well ID No/Interval: 106115 - 250

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/19/12

Crew Signature: Tim Nagel

Weather: sunny

Time: 1516

Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's ~~505 ppm~~ 0 TN open

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.77 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.40 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft³

Static Pressure: +1.75" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/19/12 1516	0	0	.28	18.29	14	
1522	9	0	.30	18.08	7	
1528	18	0	.32	18.11	8	
1534	27	0	.30	18.18	7	

Values Prior to Sampling

1534	27	0	.30	18.18	7	

Sample ID: VA1134

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106115 - 350

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/19/12

Crew Signature:

Weather: sunny

Time: 1552

Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 505ppm open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306,) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +1.84" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1/19/12 1552	0	0	.36	19.17	1465	
1558	9	0	.38	19.14	1490	
1604 TN	18	0	.38	19.19	1491	
1610	27	0	.38	19.28	1486	

Values Prior to Sampling

1610	27	0	.38	19.28	1486	

Sample ID: VA1135

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106115 - 450

Date: 1/20/12

Time: 930

Field Crew: TN, DM

Crew Signature: [signature]

Review Signature and Date: [signature] 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 911.0 ppm (open)
BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +1.32" H20

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
930	0	0	1.22	16.10	4050	
934	48	0	1.24	15.96	4230	
938	96	0	1.28	16.06	4300	
942	144	0	1.28	16.25	4320	
946	192	0	1.28	15.61	4410	
950	240	0	1.28	15.54	4390	

Values Prior to Sampling

950	240	0	1.28	15.54	4390	

Sample ID: VA1136

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB -13FF

Well ID No/Interval: KAFB106116-~~450~~ TN 025

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/19/12

Crew Signature: TN Nagra

Weather: Cold

Time: 1130

Review Signature and Date: 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH VOC's 186.2 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.08 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

5 min Date/Time 3/19/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1130	0	0	.42	19.44	57	
1133	4.5	0	.40	19.31	42	
1136	9	0	.40	19.81	24	
1139	13.5	0	.40	19.83	23	
1142	18	0	.38	19.21	20	

Values Prior to Sampling

1142	18	0	.38	19.21	20	

Sample ID: VA1137

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 116-050

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/19/12

Crew Signature: TN Nagy

Weather: cloudy

Time: 1210

Review Signature and Date: 3/23/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) - No

Notes: BHVOC's 186.2 ppm (open)
BZVOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.20" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 3/19/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1210	0	0	1.10	17.06	12	
1213	4.5	0	1.16	17.17	11	
1216	9	0	1.16	17.24	10	
1219	13.5	0	1.16	17.33	10	
1222	18	0	1.16	17.36	11	

Values Prior to Sampling

1222	18	0	1.16	17.36	11	

Sample ID: VA1138
VA1139

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Site / SWMU No.: 106

Weather: cloudy

Well ID No/Interval: 106116 - 150

Date: 3/20/12

Time: 915

Field Crew: TN

Crew Signature: Tim Nagy

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 124.3 (open)

BZ VOC's 7.8 ppm

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: + .40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 3/20/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
915	0	0	.60	17.96	14	
918	4.5	0	.64	17.88	15	
921	9	0	.66	17.79	7	
924	13.5	0	.66	18.01	7	
927	18	0	.66	18.08	7	
930	22.5	0	.66	18.10	7	

Values Prior to Sampling

930	22.5	0	.66	18.10	7	

Sample ID: VA 1140

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106116-250

Field Crew: TN

Site / SWMU No.: 106

Date: 3/20/12

Crew Signature: Tim Nagel

Weather: cloudy

Time: 957

Review Signature and Date: 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 833.6 ppm (green)
BZ VOC's 7.8 ppm

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306,) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +.68" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 3/20/12 (6 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
957	0	0	1.34	16.10	6940	
1003	9	0	1.18	16.24	5480	
1009	18	0	1.10	16.42	4560	
1015	27	0	1.10	16.45	4290	

Values Prior to Sampling

1015	27	0	1.10	16.45	4290	

Sample ID: X VA 1141 X

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877

Site / SWMU No.: 106

Weather: cloudy

Well ID No/Interval: 106116-350

Date: 3/20/12

Time: 1036

Field Crew: TN

Crew Signature: Tim Nagy

Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 251.4ppm (open)
BZ VOC's 7.8 ppm

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +.98" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 3/20/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1036	0	0	.98	17.27	5020	
1042	9	0	1.12	17.48	4880	
1048	18	0	1.12	17.45	4890	
1054	27	0	1.12	17.41	4880	

Values Prior to Sampling

1054	27	0	1.12	17.41	4880	

Sample ID: VA1142

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	**Well ID No/Interval:** 106 116 - 450	**Field Crew:** TN
Site / SWMU No.: 106	**Date:** 3/20/12	**Crew Signature:** Tim Nagel
Weather: cloudy	**Time:** 1111	**Review Signature and Date:** 3/20/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOC's 1522.8 ppm (open)
BZ VOC's 7.8 ppm

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +.76" H_2O **Purge Flow Rate:** TN ~~15~~ 12 cfm

PURGE DATA

4 min Date/Time 3/20/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1113	0	0	2.06	16.85	23820	inst
1117	48	0	2.14	16.28	24540	inst.
1121	96	0	2.14	16.36	24370	inst.
1125	144	0	2.20	16.46	24750	inst.
1129	192	0	2.18	16.21	24960	inst.
1133	240	0	2.18	16.12	25020	inst
					2170 x 9	
					= 19530	by dilution

Values Prior to Sampling

1133	240	0	2.18	16.12	19530	by dilution

Sample ID: X VA 1143 X

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106117-025

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: Ty Nap

Weather: cloudy

Time: 1509

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 74.7ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.17" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1509	0	0	1.68	18.71	59	
1512	4.5	0	1.50	18.89	44	
1515	9	0	1.48	18.98	43	
1518	13.5	0	1.46	19.01	43	
1521	18	0	1.44	19.07	45	

Values Prior to Sampling

1521	18	0	1.44	19.07	45	

Sample ID: VA1144

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106117-050

Field Crew: TN

Site / SWMU No.: 106

Date: 1/12/12

Crew Signature: Tim Nagy

Weather: cloudy

Time: 1535

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 87.1 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.33" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1538	0	0	2.52	17.09	285	
1541	4.5	0	2.56	17.11	337	
1544	9	0	2.56	17.10	376	
1547	13.5	0	2.58	17.04	407	
1550	18	0	2.58	17.03	419	

Values Prior to Sampling

1550	18	0	2.58	17.03	419	

Sample ID: VA1145

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106117-150

Date: 1/18/12

Time: 1206

Field Crew: TN, DM

Crew Signature: [signature]

Review Signature and Date: [signature]

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BA VOC's 5.9 ppm open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.46 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft^3

Static Pressure: -.12" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/18/12 1206	0	0	1.36	18.57	95	
1209	4.5	0	1.24	18.87	132	
1212	9	0	1.30	18.85	134	
1215	13.5	0	1.34	18.78	134	
1218	18	0	1.38	18.80	133	
1221	22.5	0	1.34	18.36	132	

Values Prior to Sampling

1221	22.5	0	1.34	18.36	132	

Sample ID: VA1146

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106117 - 250

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-18-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1238

Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306,) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: -.21" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1-18-12/1238	0	0	2.52	15.91	4720	
1244	9	0	2.56	15.81	4640	
1250	18	0	2.56	15.79	4630	
1256	27	0	2.58	15.51	4590	

Values Prior to Sampling

1256	27	0	2.58	15.51	4590	

Sample ID: VA1147

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106117-350
Field Crew: DM, TN
Site / SWMU No.: 106
Date: 1-18-12
Crew Signature: Daniel Molina
Weather: Sunny
Time: 1312
Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH 0 ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: -.31" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-18-12/1312	0	0	6.08	11.35	1400	Inst.
1318	9	0	5.80	11.49	14910	Inst.
1324	18	0	5.82	11.48	14620	Inst.
1330	27	0	5.76	11.59	~~44790~~ DM 14790	Inst.
					1160 x 9	~~Inst.~~ DM
					= 10,440	DM

Values Prior to Sampling

1330	27	0	5.76	11.59	10,440 ~~44790~~	By Dilution

Sample ID: VA1148
VA1149

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	Well ID No/Interval: 106117 - 450	Field Crew: DM, TN
Site / SWMU No.: 106	Date: 1-18-12	Crew Signature: [signature]
Weather: Sunny	Time: 1448	Review Signature and Date: [signature] 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH ~~0~~ 7,360 ppm VOCs
BZ ~~0~~ DM 10.3 ppm

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft^3

Static Pressure: + .16" H_2O Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-18-12/1448	0	0	2.46	14.32	25250	Inst.
1452	48	0	2.52	14.72	24620	Inst.
1456	96	0	2.50	14.77	24870	Inst.
1500	144	0	2.54	14.62	25350	Inst.
1504	192	0	2.50	14.67	24730	Inst.
1508	240	0	2.50	14.82	25480	Inst.
					2540 x 9	
				=	22,860	

Values Prior to Sampling

1508	240	0	2.50	14.82	22,860	By Dilution

Sample ID: VA1150

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106118-025

Field Crew: DM, [redacted]

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel Medina

Weather: Sunny 30's

Time: 1330

Review Signature and Date: [redacted] 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: ~~Yes~~ - No

Notes: VOC's Ø ppm in BH and Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: Ø

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1330	0	Ø	1.64	18.05	87	
1333	4.5	Ø	1.66	17.67	86	
1336	9	Ø	1.68	17.82	78	
1339	13.5	Ø	1.70	18.00	68	
1342	18	Ø	1.66	17.49	64	

Values Prior to Sampling

1342	18	Ø	1.66	17.49	64	

Sample ID: VA1151

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: 106118-050

Field Crew: DM

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel Medina

Weather: Sunny 40's

Time: 1418

Review Signature and Date: 5/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's Ø ppm in BH and Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: Ø

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1418	0	Ø	2.52	16.78	92	
1421	4.5	Ø	2.56	16.64	66	
1424	9	Ø	2.58	16.67	55	
1427	13.5	Ø	2.58	17.07	44	
1430	18	Ø	2.60	17.22	41	

Values Prior to Sampling

1430	18	Ø	2.60	17.22	41	

Sample ID: VA1152

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106118-160

Field Crew: DM

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel Medina

Weather: Sunny 40's

Time: 1507

Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's 25.1 in BH.
Bz Ø

CALCULATIONS

(A) Depth to Well Bottom	160 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.4896 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	2.1246 ft^3
(E) Depth to Bottom of Screen	160 ft	(L) 10 Purge Volumes (K*10)	21.246 ft^3

Static Pressure: + 0.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1507	0	Ø	0.78	17.06	131	
1510	4.5	Ø	0.78	17.08	102	
1513	9	Ø	0.78	17.23	97	
1516	13.5	Ø	0.78	17.52	94	
1519	18	Ø	0.78	17.46	94	
1522	22.5	Ø	0.78	17.65	90	

Values Prior to Sampling

1522	22.5	Ø	0.78	17.65	90	

Sample ID: VA1153

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106118-265

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 3-20-12

Crew Signature: Daniel J Medina

Weather: Sunny 40's

Time: 1546

Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 1,842 ppm in BH
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	265 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.8109 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	255 ft	(K) One Purge Volume (C + J)	2.4459 ft^3
(E) Depth to Bottom of Screen	265 ft	(L) 10 Purge Volumes (K*10)	24.459 ft^3

Static Pressure: +0.60

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 5 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1546	0	Ø	0.70	18.00	1389	
1552	9	Ø	0.70	16.30	1393	
1558	18	Ø	0.68	15.94	1386	
1604	27	Ø	0.68	16.32	1378	

Values Prior to Sampling

1604	27	Ø	0.68	16.32	1378	

Sample ID: VA1154

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106118-350

Field Crew: AT, TN, MH

Site / SWMU No.: 106

Date: 3/22/12

Crew Signature:

Weather: Sunny + clear mid 40's

Time: 0805

Review Signature and Date: 3/22/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark** (Yes) No

Notes: BT - Ø VOCs
BH - Ø VOCs

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾") = .00306, 2" = .0218, 3" = .04906	1.041 ft² mH	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.04 ft³	(J) Filter Pack Volume (F x G)	1.64 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.71 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.1 ft³

Static Pressure: -.14 " H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

10 min Date/Time 3/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0805	0	0.00	0.40	18.12	310	
0811	9	0.00	0.40	18.00	310	
0817	18	0.00	0.38	18.19	301	
0823	27	0.00	0.40	18.30	300	

Values Prior to Sampling

0823	27	0.00	0.40	18.30	300	

Sample ID: VA1155

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106118-450
Field Crew: MH, TW, AT
Site / SWMU No.: 106
Date: 3/22/12
Crew Signature: Melissa Harlich
Weather: sunny, clear mid 40's
Time: 0900
Review Signature and Date: 3/28/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: BZ - VOC's Ø
BH - VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3") = .04906	~~22.08~~ mH ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	~~22.08~~ ft³	(J) Filter Pack Volume (F x G)	1.64 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: -.11 " H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0840	mH ~~48~~ 0	0.00	1.46	17.07	146	
0844	mH ~~96~~ 48	0.00	1.22	17.62	274	
0848	mH ~~144~~ 96	0.00	1.18	17.75	289	
0852	mH ~~192~~ 144	0.00	1.16	17.78	300	
0856	mH ~~240~~ 192	0.00	1.14	17.88	302	
0900	240	0.00	1.16	18.01	305	

Values Prior to Sampling

0900	240	0.00	1.16	18.01	305	

Sample ID: VA1156

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106119-025
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 3-20-12
Crew Signature: Daniel Medina
Weather: Partly Cloudy 50's
Time: 1158
Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOC's 2.1 ppm in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: −.02" H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3-20-12 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1158	0	Ø	0.62	20.11	243	
1201	4.5	Ø	0.66	20.34	244	
1204	9.	Ø	0.72	19.75	126	
1207	13.5	Ø	0.80	19.84	130	
1210	18	Ø	0.84	19.93	127	

Values Prior to Sampling

1210	18	Ø	0.84	19.93	127	

Sample ID: VA1167

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106119-050 | Field Crew: DM, DA

Site / SWMU No.: 106 | Date: 3-20-12 | Crew Signature: Daniel Medina

Weather: Partly cloudy 30's | Time: 1233 | Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's 2.3 ppm in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: ~ .06" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1233	0	Ø	1.80	18.19	2	
1236	4.5	Ø	4.62	14.72	17	
1239	9	Ø	4.90	14.15	14	
1242	13.5	Ø	4.92	14.23	14	
1245	18	Ø	4.94	14.23	14	

Values Prior to Sampling

1245	18	Ø	4.94	14.23	14	

Sample ID: VA1158

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: 106119 - 150
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 3-20-12
Crew Signature: Daniel Medina
Weather: Partly Cloudy 30's
Time: 1306
Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 15.6ppm in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft³

Static Pressure: ~~+15.6~~ DM +0.28" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 4min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1306	0	Ø	2.20	16.36	37	
1310	6	Ø	2.32	16.15	39	
1314	12	Ø	2.36	16.56	40	
1318	18	Ø	2.38	16.84	38	
1322 3min	22.5	Ø	2.38	16.95	39	

Values Prior to Sampling

1322	22.5	Ø	2.38	16.95	39	

Sample ID: VA1159
VA1160

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106119-250 | Field Crew: DM, DA

Site / SWMU No.: 106 | Date: 3-20-12 | Crew Signature: Daniel Medina

Weather: Partly Cloudy 30's | Time: 1403 | Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's 635.1 ppm in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: +.33 **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3-20-12 Date/Time 4min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1403	0	Ø	0.42	18.12	159	
1407	6	Ø	1.50	16.95	2,290	
1411	12	Ø	1.58	16.86	2,350	
1415	18	Ø	1.60	16.68	2,352	
1419	24	Ø	1.64	16.74	2,348	

Values Prior to Sampling

1419	24	Ø	1.64	16.74	2348	

Sample ID: *VA1161*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106119-350
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 3-20-12
Crew Signature: Daniel Medina
Weather: Sunny 30's
Time: 1439
Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOC's 102.7ppm in BH and 0 in BZ.

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: + 0.63" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3-20-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1439	0	0	0.21	19.82	236	
1443	6	0	0.70	18.72	3720	
1447	12	0	0.72	18.87	3900	
1451	18	0	0.72	18.96	3940	
1455	24	0	0.72	18.91	3970	
1458	3min 28.5	0	0.76	18.87	4070	

Values Prior to Sampling

1458	28.5	0	0.76	18.87	4070	

Sample ID: VA1162

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB · BFF | Well ID No/Interval: 106119 - 450 | Field Crew: DM, DA

Site / SWMU No.: 106 | Date: 3-20-12 | Crew Signature: Daniel Medina

Weather: Sunny 30's | Time: 1513 | Review Signature and Date: 3/21/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's 769.9 ppm in BH and Ø in BZ.

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	0.4906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	~~22.077~~ ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: +0.56 | Purge Flow Rate: 12 cfm

PURGE DATA

3-20-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1513	0	Ø	2.12	16.90	470	
1517	48	Ø	4.26	11.54	9040	
1521	96	Ø	4.30	11.55	9220	
1525	144	Ø	4.34	11.45	9320	
1529	192	Ø	4.52	10.85	9640	
1533	240	Ø	4.52	10.94	9930	

Values Prior to Sampling

1533	240	Ø	4.52	10.94	9930	

Sample ID: VA1165

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106020-025

Field Crew: MT, DA

Site / SWMU No.: 106

Date: 1/20/12

Crew Signature:

Weather: Sunny

Time: 1002

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs 0
BH VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 "H_2O Purge Flow Rate: 1.5 CFm

PURGE DATA

3mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/20/12 1002	0	0	0.94	19.72	62	
1005	4.5	0	0.84	19.90	61	
1008	9	0	0.82	19.62	50	
1011	13.5	0	0.84	19.89	38	
1014	18	0	0.88	20.01	36	

Values Prior to Sampling

1014	18	0	0.88	20.01	36	

Sample ID: VA 1164

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFT

Well ID No/Interval: KAFB-106120-050

Field Crew: AT, DA

Site / SWMU No.: 106

Date: 1/20/12

Crew Signature: [signature]

Weather: Sunny

Time: 1033

Review Signature and Date: [signature] 1-30-1

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: -.12 "H_2O

Purge Flow Rate: 1.5 cFm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/20/12 1033	0	0	1.08	19.52	12	
1036	4.5	0	1.14	19.46	6	
1039	9	0	1.10	19.43	4	
1042	13.5	0	1.06	19.48	4	
1045	18	0	1.12	19.28	5	

Values Prior to Sampling

1045	18	0	1.12	19.28	5	

Sample ID: VA1165

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: KAFB-106120-150

Date: 11/20/12

Time: 1101

Field Crew: AT, DB

Crew Signature:

Review Signature and Date: 1-30-13

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs @

BH VOCs @

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.0 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20 ft³

Static Pressure: +.88 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 mins Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/20/12 1101	0	0	0.28	20.20	7	
1104	4.5	0	0.28	20.20	4	
1107	9	0	0.28	20.34	4	
1110	13.5	0	0.28	20.37	6	
1113	18	0	0.30	20.35	5	
1116	22.5	0	0.30	20.36	4	

Values Prior to Sampling

1116	22.5	0	0.30	20.36	4	

Sample ID: VA1166

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: KAFB-106120-250

Date: 1/20/12

Time: 1130

Field Crew: AT, DA

Crew Signature:

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: Yes (No)

Well ID Mark: (Yes) No

Notes: BH Vocs 0

B2 Vocs 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: +1.60 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/20/12 1130	0	0	0.54	19.00	2	
1136	9	0	0.52	19.08	5	
1142	18	0	0.50	19.20	3	
1148	27	0	0.50	19.23	4	

Values Prior to Sampling

1148	27	0	0.50	19.23	4	

Sample ID: VA1162

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106120--350

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/20/12

Crew Signature: TN Nagy

Weather: sunny 40's

Time: 1113

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 130.9 ppm open
BZ VOC's ✓

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E --D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +1.79 in H2O TN

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/20/13 1113	0	0	.22	19.19	523	
1119	9	0	.30	18.54	631	
1125	18	0	.34	18.52	649	
1131	27	0	.30	18.59	653	

Values Prior to Sampling

1131	27	0	.30	18.59	653	

Sample ID: VA1168

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106120-450 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 1/20/12 | Crew Signature: TN

Weather: sunny | Time: 1200 | Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged | Locked: (Yes) No | Well ID Mark: (Yes) No

Notes: BH VOC's @ 515.0 ppm brpen)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +1.30 "H2O

Purge Flow Rate: 15 DLO cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-20-12/1200	0	0	0.08	18.87	1018	
1204	48	0	.16	18.79	1037	
1208	96	0	.16	18.90	1050	
1212	144	0	.16	19.04	1057	
1216	192	0	.18	19.00	1069	
1220	240	0	.16	18.92	1084	

Values Prior to Sampling

1220	240	0	.16	18.92	1084	

Sample ID: VA1169

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106121-025

Date: 1/10/12

Time: 1113

Field Crew: TN

Crew Signature: Tim Nagel

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes: BH VOC's @
B2 VOC's @

CALCULATIONS

A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, (¼" = .00306) 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.15" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/10/12 1113	0	0	1.06	20.28	3	
1116	4.5	0	1.16	20.21	3	
1119	9	0	1.22	20.14	2	
1122	13.5	0	1.24	20.31	2	
1125	18	0	1.24	20.48	1	

Values Prior to Sampling

1125	18	0	1.24	20.48	1	

Sample ID: VA 1170
VA 1171

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 101

Weather: Sunny

Well ID No/Interval: 106121-050

Date: 1/10/12

Time: 1200

Field Crew: TN

Crew Signature: Tim Nagle

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes BH VOC's 0
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: + .11" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/10/12 1200	0	0	1.16	19.33	0	
1203	4.5	0	1.24	19.64	0	
1206	9	0	1.24	19.74	0	
1209	13.5	0	1.26	19.94	0	
1212	18	0	1.26	19.92	0	

Values Prior to Sampling

1212	18	0	1.26	19.92	0	

Sample ID: VA 1172

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106121 - 150

Field Crew: TN

Site / SWMU No.: 106

Date: 1/10/12

Crew Signature: T Nagra

Weather: sunny

Time: 1230

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes BH VOC's 0

BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, (¼" = .00306) 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: +.22" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1230	0	0	.14	19.68	0	
1233	4.5	0	.18	19.92	1	
1236	9	0	.20	19.94	2	
1239	13.5	0	.20	19.94	1	
1242	18	0	.22	19.95	2	
1245	22.5	0	.22	19.96	2	

Values Prior to Sampling

1245	22.5	0	.22	19.96	2	

Sample ID: VA1173

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB -BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: 106121-250

Date: 1/10/12

Time: 1306

Field Crew: TN

Crew Signature: Tim Nagy

Review Signature and Date: [signature] 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes: B1t VOC's 0
B2 VOC's 0

CALCULATIONS

A) Depth to Well Bottom	250	ft	(F) Filter Pack Length (E –D)	10	ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = 04906		ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635	ft²
C) One Well Casing Volume (A x B):	.76	ft³	(J) Filter Pack Volume (F x G)	1.63	ft³
D) Depth to Top of Screen	240	ft	(K) One Purge Volume (C + J)	2.39	ft³
E) Depth to Bottom of Screen	250	ft	(L) 10 Purge Volumes (K*10)	23.9	ft³

Static Pressure: +.25" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1306	0	0	.26	19.72	0	
1312	9	0	.26	19.87	0	
1318	18	0	.26	19.88	0	
1324	27	0	.26	19.86	0	

Values Prior to Sampling

1324	27	0	.26	19.86	0	

Sample ID: VA 1174

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny 50's

Well ID No/Interval: 106121-350

Date: 1/10/12

Time: 1342

Field Crew: TN

Crew Signature: [signature]

Review Signature and Date: [signature] 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact Damaged

Locked: Yes No

Well ID Mark: Yes No

Notes: BHVOC's 0
BZVOC's 0

CALCULATIONS

A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +.33" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (Gmin)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1342	0	0	.26	18.63	718	
1348	9	0	.26	18.70	739	
1354	18	0	.26	18.72	735	
1400	27	0	.24	18.73	731	

Values Prior to Sampling

1400	27	0	.24	18.73	731	

Sample ID: VA1175

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106121-450 | Field Crew: TN

Site / SWMU No.: 106 | Date: 1/10/12 | Crew Signature: TN Nagra

Weather: sunny 50's | Time: 1430 | Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged | Locked: (Yes) · No | Well ID Mark: (Yes) · No

Notes BH VOC's 0
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft³
C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +.31" H20

Purge Flow Rate: 12cfm

PURGE DATA

4mi Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1430	0	0	.10	19.70	613	
1434	48	0	.10	19.82	631	
1438	96	0	.12	19.84	637	
1442	144	0	.12	19.84	654	
1446	192	0	.14	19.85	658	
1450	240	0	.12	19.87	662	

Values Prior to Sampling

1450	240	0	.12	19.87	662	

Sample ID: VA1176

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106122-025

Field Crew: TN

Site / SWMU No.: 106

Date: 1/10/12

Crew Signature: Tin Ngan

Weather: sunny

Time: 1535

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes BH VOC's @
BZ VOC's @

CALCULATIONS

A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.25" H_2O

Purge Flow Rate: 1.5 afm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1535	0	0	1.04	19.31	0	
1538	4.5	0	1.02	19.34	0	
1541	9	0	1.04	19.33	0	
1544	13.5	0	1.06	19.28	0	
1547	18	0	1.06	19.32	0	

Values Prior to Sampling

1547	18	0	1.06	19.32	0	

Sample ID: VA1177

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106122-050

Date: 1/10/12

Time: 1601

Field Crew: TN

Crew Signature: Tim Vogen

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes BH VOC's @
BZ VOC's @

CALCULATIONS

A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.39" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1601	0	0	1.26	19.10	0	
1604	4.5	0	1.28	19.04	0	
1607	9	0	1.30	19.03	0	
1610	13.5	0	1.24	19.04	0	
1613	18	0	1.26	19.11	0	

Values Prior to Sampling

1613	18	0	1.26	19.11	0	

Sample ID: VA 1178

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106122-150

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/11/12

Crew Signature: T. Nagy

Weather: Sunny

Time: 927

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Ye) · No

Notes BH 5.6 ppm VOCs (open)
BZ 0 VOCs

CALCULATIONS

A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: +1.82" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/11/12 927	0	0	.20	20.27	3	
930	4.5	0	.20	19.89	2	
933	9	0	.20	19.94	2	
936	13.5	0	.24	20.01	3	
939	18	0	.26	20.18	3	
942	22.5	0	.28	20.53	4	

Values Prior to Sampling

942	22.5	0	.28	20.53	4	

Sample ID: VA1179

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: 106122-250

Date: 1-11-12

Time: 1004

Field Crew: TN, DM

Crew Signature: Daniel Medina

Review Signature and Date: 1/11/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes: BH 16.0 ppm VOC's (open) BZ 0

CALCULATIONS

A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136 (¼" = .00306) 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +2.02" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1-11-12/1004	0	0	.42	19.52	0	
1010	9	0	.46	19.64	3	
1016	18	0	.46	19.70	4	
1022	27	0	.48	19.70	1	

Values Prior to Sampling

1022	27	0	.48	19.70	1	

Sample ID: VA1180 VA1181

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: 106122-350

Date: 1/11/12

Time: 1102

Field Crew: TN, DM

Crew Signature: Tim Nagel

Review Signature and Date: [illegible] 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes BH 163.2 ppm VOC's Capens

BZ 0

CALCULATIONS

A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: + 2.35" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1/11/12 1102	0	0	.18	19.34	595	
1108	9	0	.22	19.26	671	
1114	18	0	.22	18.71	678	
1120	27	0	.24	18.71	685	

Values Prior to Sampling

1120	27	0	.24	18.71	685	

Sample ID: VA1182

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106122-450
Field Crew: DM, TN
Site / SWMU No.: 106
Date: 1-11-12
Crew Signature: Daniel Medina
Weather: Sunny
Time: 1141
Review Signature and Date: 1/11/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged
Locked: (Yes) · No
Well ID Mark (Yes) · No

Notes BH 195 ppm VOC's (open)
BZ 0

CALCULATIONS

A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218. (3" = 04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
E) Depth to Bottom of Screen	456 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +2.24" H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

4/min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-11-12/1144	0	0	.16	19.88	459	
1148	48	0	.16	19.84	485	
1152	96	0	.18	19.76	510	
1156	144	0	.16	19.76	515	
1200	192	0	.18	19.79	533	
1204	240	0	.18	19.91	549	

Values Prior to Sampling

1204	240	0	.18	19.91	549	

Sample ID: VA 1183

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106123-025	**Field Crew:** AT, DM, TN
Site / SWMU No.: 106	**Date:** 1/11/12	**Crew Signature:**
Weather: Sunny, windy	**Time:** 1315	**Review Signature and Date:** 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BZ VOCs 0

BH VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	TN 25 10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.06" H20

Purge Flow Rate: 1.5 CFM

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/11/12 1318	0	0	1.26	19.53	3	
1321	4.5	0	1.20	19.80	14	
1324	9	0	1.20	19.83	14	
1327	13.5	0	1.20	19.83	15	
1330	18	0	1.20	19.82	16	

Values Prior to Sampling

1330	18	0	1.20	19.82	16	

Sample ID: VA 1184

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106123-050

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/11/12

Crew Signature: [signature]

Weather: windy

Time: 1349

Review Signature and Date: [signature] 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.14" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1349	0	0	1.60	18.66	39	
1352	4.5	0	1.64	18.63	41	
1355	9	0	1.68	18.57	100	
1358	13.5	0	1.68	18.56	85	
1401	18	0	1.70	18.54	99	

Values Prior to Sampling

1401	18	0	1.70	18.54	99	

Sample ID: VA 1185

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: 106123-150

Field Crew: DM, TM

Site / SWMU No.: 106

Date: 1-11-12

Crew Signature: Daniel Martinez

Weather: Sunny

Time: ~~PM~~ 1425

Review Signature and Date: [illegible] 1/19/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH 0.0 ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: +2.32" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-11-12/1425	0	0	.16	19.92	0	
1428	4.5	0	.20	19.88	0	
1431	9	0	.20	19.87	0	
1434	13.5	0	.20	19.84	0	
1437	18	0	.21	19.89	0	
1440	22.5	0	.22	19.93	0	

Values Prior to Sampling

1440	22.5	0	.22	19.93	0	

Sample ID: VA1186

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106123 - 250

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/11/12

Crew Signature: TC Nagra

Weather: sunny

Time: 1456

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 0

B2 VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	239 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: + 2.53" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/11/12 1456	0	0	.38	19.35	0	
1502	9	0	.44	19.47	3	
1508	18	0	.44	19.49	3	
1514	27	0	.44	19.51	3	

Values Prior to Sampling

1514	27	0	.44	19.51	3	

Sample ID: VA1187

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106123-350

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/11/12

Crew Signature: Tim Nagy

Weather: sunny

Time: 1530

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306,) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: + 2.84" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/11/12 1530	0	0	.42	18.70	0	
1536	9	0	.44	18.73	12	
1542	18	0	.44	18.71	16	
1548	27	0	.46	18.69	19	

Values Prior to Sampling

1548	27	0	.46	18.69	19	

Sample ID: VA1188

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106123-450

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/11/12

Crew Signature: Tim Nagle

Weather: sunny

Time: 1604

Review Signature and Date: 1/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 565ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom TN	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	2207 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +2.83" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time (4 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/11/12 1604	0	0	.42	18.04	3080	
1608	48	0	.42	18.12	3060	
1612	96	0	.40	18.13	3070	
1616	144	0	.40	18.17	3040	
1620	192	0	.40	18.18	3040	
1624	240	0	.38	18.25	3010	

Values Prior to Sampling

1624	240	0	.38	18.25	3010	

Sample ID: UA1189

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106124-025

Field Crew: DA, AT

Site / SWMU No.: 106

Date: 1-17-12

Crew Signature:

Weather: Sunny 40s

Time: 0850

Review Signature and Date: 1/17/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: VOCs 0 in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: -.08 in H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-17-12 0850	0	0.00	0.54	20.37	34	
0853	4.5	0.00	1.07	20.13	55	
0856	9	0.00	1.24	20.17	47	
0859	13.5	0.00	1.32	20.28	41	
0902	18	0.00	1.32	19.34	34	

Values Prior to Sampling

0902	18	0.00	1.32	19.34	34	

Sample ID: VA1190

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Site / SWMU No.: 106
Weather: Sunny 40s
Well ID No/Interval: KAFB-106124-050
Date: 1-17-12
Time: 0924
Field Crew: DA, AT
Crew Signature:
Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0 in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: -.16 in H20
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-17-12 0924	0	0.00	1.42	19.19	12	
0927	4.5	0.00	1.46	19.31	4	
0930	9	0.00	1.46	19.29	5	
0933	13.5	0.00	1.46	19.31	5	
0936	18	0.00	1.44	19.31	4	

Values Prior to Sampling

0936	18	0.00	1.44	19.31	4	

Sample ID: VA1191-F
VA1192

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106124-150
Field Crew: DA, AT
Site / SWMU No.: 106
Date: 1-17-17
Crew Signature:
Weather: Sunny 40s
Time: 1008
Review Signature and Date: 1-17-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0 in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = (.00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.204 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	1.839 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	18.39 ft^3

Static Pressure: -0.36
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-17-17 1008	0	0.00	0.00	4	20.84	
1011	4.5	0.00	0.08	5	21.05	
1014	9	0.00	0.08	6	21.10	
1017	13.5	0.00	0.08	6	21.16	
1020	18	0.00	0.08	8	20.93	
1023	~~22.5~~ 22.5	0.00	0.10	9	20.79	

Values Prior to Sampling

1023	22.5	0.00	0.10	9	20.79	

Sample ID: VA1193

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106124-250

Field Crew: DA, AT

Site / SWMU No.: 106

Date: 1-17-12

Crew Signature: [signature]

Weather: Sunny 40's

Time: 1045

Review Signature and Date: [signature] 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: ~~Intact~~ - Damaged Locked: ~~Yes~~ - No Well ID Mark: ~~Yes~~ - No

Notes: VOC's Ø in BH4 BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft^3

Static Pressure: -.30 Purge Flow Rate: 1.5 lpm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-17-12 1045	Ø	0.00	0.10	20.37	2	
1049	6	0.00	0.14	21.10	2	
1053	12	0.00	0.14	21.34	3	
1057	18	0.00	0.14	21.28	2	
1101	24	0.00	0.16	21.32	2	

Values Prior to Sampling

1101	24	0.00	0.16	21.32	2	

Sample ID: VA1194

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106124-350
Field Crew: DA, AT
Site / SWMU No.: 106
Date: 1-17-12
Crew Signature: DAJA
Weather: Sunny 40s
Time: 1121
Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: -.04 in H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-17-12 1121	0	0.00	0.12	19.99	672	
1127	9	0.00	0.20	21.55	761	
1133	18	0.00	0.20	21.97	766	
1139	27	0.00	0.20	21.88	765	
1145	31.5	0.00	0.22	21.40	770	

Values Prior to Sampling

1145	31.5	0.00	0.22	21.40	770	

Sample ID: VA1195

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB 106124-350	**Field Crew:** AT, TN
Site / SWMU No.: 106	**Date:** 3/15/12	**Crew Signature:** TN
Weather: sunny	**Time:** 1200	**Review Signature and Date:**

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: -1.4" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time 3/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1200	0	0	.02	20.91	61	
1206	9	0	.20	19.80	433	
1212	18	0	.26	19.53	875	
1218	27	0	.22	19.36	954	
1221	31.5	0	.22	19.24	1033	

Values Prior to Sampling

~~1218~~ TN 1221	~~27~~ TN 31.5	0	.22	19.24	1033	

Sample ID: VA1195-R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106124-450
Field Crew: DA, AT
Site / SWMU No.: 106
Date: 1-19-12
Crew Signature:
Weather: Sunny 40s
Time: 12:15
Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOC's 0 in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	.04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: -.22 in. H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-17-12 12:15	~~DA~~ 48 0	0.00	0.38	19.25	2,150	
1219	~~DA~~ ~~96~~ 48	0.00	0.36	18.99	2,200	
1223	~~DA~~ ~~144~~ 96	0.00	0.38	18.72	2,220	
1227	~~DA~~ ~~192~~ 144	0.00	0.38	18.31	2,230	
1231	~~DA~~ ~~240~~ 192	0.00	0.38	19.23	2,230	
1235	~~DA~~ 240	0.00	0.38	19.00	2,260	

Values Prior to Sampling

1235	240	0.00	0.38	19.00	2,260	

Sample ID: VA1196

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB106 124-150	**Field Crew:** TN, DA
Site / SWMU No.: 106	**Date:** 3/5/12	**Crew Signature:** TC Nal
Weather: sunny	**Time:** 0835	**Review Signature and Date:** TN adh 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) No

Notes: BH & VOC's
BZ & VOC's

CALCULATIONS

(A) Depth to Well Bottom	150	ft	(F) Filter Pack Length (E –D)	10	ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906		ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635	ft^2
(C) One Well Casing Volume (A x B):	.46	ft^3	(J) Filter Pack Volume (F x G)	1.63	ft^3
(D) Depth to Top of Screen	140	ft	(K) One Purge Volume (C + J)	2.09	ft^3
(E) Depth to Bottom of Screen	150	ft	(L) 10 Purge Volumes (K*10)	20.9	ft^3

Static Pressure: — 1.68" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/5/12 835	0	0	.14	20.10	17	
838	4.5	0	.12	20.31	15	
841	9	0	.14	20.48	17	
844	13.5	0	.14	20.56	17	
847	18	0	.20	20.43	19	
850	22.5	0	.16	20.51	19	

Values Prior to Sampling

850	22.5	0	.16	20.51	19	

Sample ID: VA1193-R

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106125-025

Field Crew: AT, FW DA

Site / SWMU No.: 106

Date: 1/18/12

Crew Signature:

Weather: Sunny

Time: 1205

Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ VOCs 4p
BH VOC's 3.7ppm

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/18/12 1205	0	0	1.72	19.20	7	
1208	4.5	0	1.80	19.50	3	
1211	9	0	1.72	19.09	3	
1214	13.5	0	1.76	19.17	4	
1217	18	0	1.76	19.26	3	

Values Prior to Sampling

1217	18	0	1.76	19.26	3	

Sample ID: VA1197

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106025-050	**Field Crew:** AT, DH
Site / SWMU No.: 106	**Date:** 1/18/12	**Crew Signature:**
Weather: Sunny	**Time:** 1230	**Review Signature and Date:** 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes - (No) **Well ID Mark:** (Yes) - No

Notes: BZ VOCs 0
BH VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: +.06 " H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3 mins Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/18/12 1230	0	0	1.94	18.89	5	
1233	4.5	0	1.96	18.91	6	
1236	9	0	1.94	18.93	1	
1239	13.5	0	1.96	18.73	1	
1242	18	0	1.98	18.77	2	

Values Prior to Sampling

1242	18	0	1.98	18.77	2	

Sample ID: VA1198

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106/25-150

Field Crew: HT, DH

Site / SWMU No.: 106

Date: 1/18/12

Crew Signature:

Weather: Sunny

Time: 1301

Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs = 0

BH VOCs 3.7 ppm

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.0 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20 ft³

Static Pressure: 0" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3am Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/18/12 1301	0	0	.20	19.85	2	
1304	4.5	0	.28	19.80	2	
1307	9	0	.24	19.90	2	
1310	13.5	0	.24	19.93	1	
1313	18	0	.28	19.91	2	
1316	22.5	0	0.20	19.47	2	

Values Prior to Sampling

1316	22.5	0	0.20	19.47	2	

Sample ID: VA1199

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106/25-250

Field Crew: AT, DA

Site / SWMU No.: 106

Date: 1/18/12

Crew Signature:

Weather: Sunny

Time: 1336

Review Signature and Date: 01-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes BH VOC's @

BZ VOCs @

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	~~250~~ ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: -.02 " H_2O **Purge Flow Rate:** 1.5 CFM

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/18/12 1336	0	0	.02	21.08	3	
1342	9	0	.04	21.62	4	
1348	18	0	.04	21.39	3	
1354	27	0	.04	21.17	3	

Values Prior to Sampling

1354	27	0	.04	21.17	3	

Sample ID: VA1200

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106125-350

Field Crew: AT, PA

Site / SWMU No.: 106

Date: 1/18/12

Crew Signature:

Weather: Sunny

Time: 1413

Review Signature and Date: 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) No

Notes: BH VOCs 0
BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: 0" H_2O Purge Flow Rate: 1.5 CFm

PURGE DATA

Comm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/18/12 1413	0	0	0	20.41	528	
1419	9	0	.14	20.25	646	
1425	18	0	.12	19.86	650	
1431	27	0	.12	19.80	649	

Values Prior to Sampling

1431	27	0	.12	19.80	649	

Sample ID: VA1201
VA1202

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny

Well ID No/Interval: KAFB-106125-450

Date: 1/18/12

Time: 1528

Field Crew: AT, DA

Crew Signature: Anton Jude

Review Signature and Date: [signature] 1-19-12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes No

Notes: BZ VOCs Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306 AT, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B): 22.07 AT ~~18.27~~ ~~37.7~~	ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ~~34.9~~ ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ~~199~~ ft³

Static Pressure: .04" H_2O

Purge Flow Rate: 12 CFm

PURGE DATA

4 mm
3

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/18/12 1528	0	0	.32	18.74	4490	
1532	48	0	.32	18.82	4520	
1536	96	0	.32	18.68	4530	
1540	144	0	.30	18.72	4490	
1544	192	0	.30	18.60	4480	
1548	240	0	.34	18.54	4570	

Values Prior to Sampling

1548	240	0	.34	18.54	4570	

Sample ID: VA 1203

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106176-25
Field Crew: DA
Site / SWMU No.: 106
Date: 1-19-12
Crew Signature: DA
Weather: Sunny 40°s
Time: 0918
Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs 3.0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: -.02 in H2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-19-12 0918	0	0.00	0.0	20.84	1.0	
0921	4.5	0.00	0.00	21.56	2.0	
0924	9	0.00	0.00	21.71	1.0	
0927	13.5	0.00	0.00	20.80	1.0	
0930	18	0.00	0.00	20.89	1.0	

Values Prior to Sampling

0930	18	0.00	0.00	20.89	1.0	

Sample ID: VA1204

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106126-50	**Field Crew:** DA
Site / SWMU No.: 106	**Date:** 1-19-12	**Crew Signature:**
Weather: Sunny 40s	**Time:** 0945	**Review Signature and Date:** 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: VOCs ~~11.7~~ 5.0 ppm in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: ~~+.50~~ +.04 in H₂O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12 0945	0	0.00	0.00	20.97	0	
0948	4.5	0.00	0.00	21.19	2	
0951	9	0.00	0.00	21.20	2	
0954	13.5	0.00	0.00	21.18	2	
0957	18.0	0.00	0.00	20.99	2	

Values Prior to Sampling

0957	18.0	0.00	0.00	20.99	2	

Sample ID: VA1205

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106126-150
Field Crew: DA
Site / SWMU No.: 106
Date: 1-19-12
Crew Signature: [signature]
Weather: Sunny 40s
Time: 1014
Review Signature and Date: [signature] 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs 1.5 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: +.39 in H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1014	0	0.00	0.02	20.75	2	
1017	4.5	0.00	0.04	20.88	5	
1020	9	0.00	0.00	20.98	2	
1023	13.5	0.00	0.02	20.99	2	
1026	18	0.00	0.00	20.96	2	
1029	22.5	0.00	0.02	21.01	3	

Values Prior to Sampling

1029	22.5	0.00	0.02	21.01	3	

Sample ID: VA1206

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106176-750

Field Crew: DA

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: [signature]

Weather: Sunny 40s

Time: 1040

Review Signature and Date: [signature] 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 0.0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft^3

Static Pressure: +.46 in H_2O Purge Flow Rate: 1.5 lpm

PURGE DATA

4/min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-19-12 1032	0	0.00	0.06	20.83	4	
1036	6	0.00	0.06	20.97	3	
1040	12	0.00	0.04	20.83	7	
1044	18	0.00	0.08	20.38	6	
1048	24	0.00	0.08	20.12	7	

Values Prior to Sampling

1058	24	0.00	0.08	20.12	7	

Sample ID: VA1207

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106126-350	**Field Crew:** DA
Site / SWMU No.: 106	**Date:** 1-19-12	**Crew Signature:**
Weather: Sunny 50°	**Time:** 1114	**Review Signature and Date:** 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) No

Notes: VOCs 112.8 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: +.50 in H_2O **Purge Flow Rate:** 1.5 lpm

PURGE DATA

Date/Time 1/19/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1114	0	0.00	0.10	20.49	335	
1118	6	0.00	0.12	20.30	340	
1122	12	0.00	0.06	20.31	339	
1126	18	0.00	0.08	20.29	341	
1130	24	0.00	0.08	20.28	339	
1134	30	0.00	0.08	21.14	339	

Values Prior to Sampling

1134	30	0.00	0.08	21.14	339	

Sample ID: VA1708

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF | **Well ID No/Interval:** KAFB-106126-450 | **Field Crew:** DA

Site / SWMU No.: 106 | **Date:** 1-19-17 | **Crew Signature:**

Weather: Sunny 50s | **Time:** 1152 | **Review Signature and Date:** 1-20-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs 277 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = (.04906)	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.077 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: +.58 in H_2O **Purge Flow Rate:** 12 cfm

PURGE DATA

4/min Date/Time 1-19-17	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1152	0	0.00	0.06	20.97	494	
1156	48	0.00	0.10	20.22	501	
1200	96	0.00	0.10	20.23	525	
1204	144	0.00	0.10	20.22	537	
1208	192	0.00	0.12	20.41	549	
1212	240	0.00	0.12	21.01	568	

Values Prior to Sampling

1212	240	0.00	0.12	21.01	568	

Sample ID: VA1209

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106127-25
Field Crew: DA
Site / SWMU No.: 106
Date: 1-19-12
Crew Signature: DA
Weather: Sunny 50s
Time: 1310
Review Signature and Date: [signature] 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 78.3 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: +.11 in H_2O
Purge Flow Rate: 1.5 lpm

PURGE DATA

Date/Time 3 min 1-19-12	Volume Purged (ft^3)	Horiba Mexa – 584 L (DO) (DO) CO (%)	CO_2 (%)	~~O_2~~ ~~HC~~ (%) ppm	~~HC~~ ~~O_2~~ (ppmv) %	Comments
1310	0	0.00	0.20	312	20.27	
1313	4.5	0.00	0.24	295	20.13	
1316	9	0.00	0.24	275	19.86	
1319	13.5	0.00	0.26	267	20.17	
1321	18	0.00	0.24	263	20.13	

Values Prior to Sampling (DO)

1321	18	0.00	0.24	263	20.13	

(DO)

Sample ID: VA1210

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106127-50

Field Crew: DA

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature:

Weather: Sunny 50s

Time: 1342

Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: VOCs 129.4 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: +.19 in H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 1-19-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1342	0	0.00	0.36	20.13	8	
1345	4.5	0.00	0.30	20.22	7	
1348	9	0.00	0.34	20.40	5	
1351	13.5	0.00	0.36	20.24	7	
1354	18	0.00	0.36	20.22	7	

Values Prior to Sampling

1354	18	0.00	0.36	20.22	7	

Sample ID: VA1211 + VA1212

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106127-150

Field Crew: PA

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature:

Weather: Sunny 50s

Time:

Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft³

Static Pressure: +1.10 in H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1423	0	0.00	0.18	19.75	6	
1426	4.5	0.00	0.18	19.92	5	
1429	9	0.00	0.18	20.44	5	
1432	13.5	0.00	0.18	20.89	6	
1435	18	0.00	0.18	20.74	6	
1438	22.5	0.00	0.18	19.95	5	

Values Prior to Sampling

1438	22.5	0.00	0.18	19.95	5	

Sample ID: VA1213

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106127-250

Field Crew: DA

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature:

Weather: Sunny 50°s

Time: 1458

Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 11.5 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft^3

Static Pressure: +1.5 in H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 4 min 1-19-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1458	0	0.00	0.08	20.76	9	
1502	6	0.00	0.08	20.79	8	
1506	12	0.00	0.08	20.13	5	
1510	18	0.00	0.08	19.70	6	
1514	24	0.00	0.08	19.76	5	

Values Prior to Sampling

1514	24	0.00	0.08	19.76	5	

Sample ID: DA 1214

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106/27-350

Field Crew: DA

Site / SWMU No.: 106

Date: 1-19-12

Crew Signature: [signature]

Weather: Sunny 50°

Time: 1528

Review Signature and Date: [signature] 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 136.8 in BH 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: +1.8 in. H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1528	0	0.00	0.12	19.23	371	
1532	6	0.00	0.12	19.22	387	
1536	12	0.00	0.12	20.15	387	
1540	18	0.00	0.20	20.06	387	
1544	24	0.00	0.18	20.26	391	
1548	30	0.00	0.20	20.30	394	

Values Prior to Sampling

1548	30	0.00	0.20	20.30	394	

Sample ID: VA1215

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106127 -450

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/20/12

Crew Signature: Tim Nagle

Weather: Sunny

Time: 0836

Review Signature and Date: 1-30-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 817 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +1.61" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/20/12 836	0	0	.22	19.69	1560	
840	48	0	.26	19.41	1853	
844	96	0	.34	19.40	2080	
848	144	0	.34	19.41	2090	
852	192	0	.30	19.27	2160	
856	240	0	.32	19.35	2210	

Values Prior to Sampling

856	240	0	.32	19.35	2210	

Sample ID: VA 1216

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106128-25
Field Crew: DA, TN
Site / SWMU No.: 106
Date: 3-6-12
Crew Signature:
Weather: Sunny 40s
Time: 0813
Review Signature and Date: JNagar 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH + 0 in BZ (well port open)

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: +.26" H_2O **Purge Flow Rate:** 1.5

PURGE DATA

3-6-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0813	0	0	0.67	19.05	1	
0816	4.5	0	1.02	18.65	2	
0819	9	0	1.00	18.96	5	
0822	13.5	0	0.96	18.50	9	
0825	18	0	1.00	18.69	13	

Values Prior to Sampling

0825	18	0	1.00	18.69	13	

Sample ID: VA12/17

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106168-50
Field Crew: DA, TN
Site / SWMU No.: 106
Date: 3-6-12
Crew Signature:
Weather: Sunny 40s
Time: 0839
Review Signature and Date: 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: VOCs 14.9 in BH + 0 in BZ (well pad open)

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: +.44 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3-6-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0839	0	0	.52	18.39	65	
0842	4.5	0	2.00	17.22	201	
0845	9	0	2.04	17.11	197	
0848	13.5	0	2.10	17.02	197	
0851	18	0	2.14	16.98	192	

Values Prior to Sampling

0851	18	0	2.14	16.98	192	

Sample ID: VA1218

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106128-150
Field Crew: DA, TN
Site / SWMU No.: 106
Date: 3-6-12
Crew Signature:
Weather: Sunny 50s
Time: 0907
Review Signature and Date: 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 1.1 in BH+0 in BZ (well port open)

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: +1.28" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3-6-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0907	0	0	0.54	19.45	8	
0910	4.5	0	1.64	18.45	297	
0913	9	0	1.70	18.31	307	
0916	13.5	0	1.72	18.12	311	
0919	18	0	1.74	18.14	312	
0922	22.5	0	1.78	18.12	314	

Values Prior to Sampling

0922	22.5	0	1.78	18.12	314	

Sample ID: VA 1219

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106126-250 | Field Crew: DA, TN

Site / SWMU No.: 106 | Date: 3-6-12 | Crew Signature: [signature]

Weather: Sunny 50's | Time: 0930 | Review Signature and Date: [signature] 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs 6.2 in BH Ø in BZ (well port open)

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: +1.41 "H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-6-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0937	Ø	Ø	1.52	17.61	4	
0941	6	Ø	3.68	13.72	172	
0945	12	Ø	3.67	13.75	186	
0949	18	Ø	3.64	13.48	259	
0953	24	Ø	3.66	13.46	278	

Values Prior to Sampling

0953	24	Ø	3.66	13.46	278	

Sample ID: VA1220

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106128-350	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-6-12	**Crew Signature:**
Weather: Sunny 50s	**Time:** 1000	**Review Signature and Date:** 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs 131.6 in BH 0 in BZ (well pot open)

CALCULATIONS

(A) Depth to Well Bottom 350	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft³

Static Pressure: +1.46 "H₂O **Purge Flow Rate:** 1.5cfm

PURGE DATA

3-6-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1007	0	0	0.32	19.56	22	
1011	6	0	0.56	18.84	5770	
1015	12	0	0.56	18.78	5900	
1019	18	0	0.56	18.47	5890	
1023	24	0	0.56	18.57	5886	
1026 (3 min)	28.5 30	0	0.56	18.62	5880	

Values Prior to Sampling

1026	28.5 30	0	0.56	18.62	5880	

Sample ID: * VA1271 * * VA1272 *

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106128-450	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-6-12	**Crew Signature:**
Weather: Sunny 60's	**Time:** 1050	**Review Signature and Date:** 3/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs 57.2 in BH 0 in BZ (well pad open)

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: +1.14 "H₂O **Purge Flow Rate:** 12 cfm

PURGE DATA

3-6-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1056	0	0	1.78	16.53	28,530	instantaneous
1100	48	0	1.80	15.62	27,840	inst.
1104	96	0	1.82	15.71	29,060	inst.
1108	144	0	1.82	15.79	29,320	inst.
1112	192	0	1.88	15.76	29,560	inst.
1116	240	0	1.86	15.79	29,390	inst.
					2,370	X9 =
					21,330	by dilution

Values Prior to Sampling

1116	240	0	1.86	15.79	21,330	

Sample ID: *VA1223*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106029-25	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-5-12	**Crew Signature:**
Weather: Sunny 50s	**Time:** 0924	**Review Signature and Date:** TN Dsgn 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) No

Notes: VOCs Ø in BH + BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = ~~.00136~~, ¾" = .00306, 2" = .0218, 3" = .04906	~~.00136~~ .00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: -.19 "H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-5-12 0924	Ø	Ø	.08	20.43	151	
0927	4.5	Ø	0.12	20.21	136	
0930	9.0	Ø	0.14	20.16	120	
0933	13.5	Ø	0.24	20.03	113	
0936	18.0	Ø	0.18	19.97	110	

Values Prior to Sampling

0936	18.0	Ø	0.18	19.97	110	

Sample ID: ~~VA1217~~ VA1224 DA

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106129-50	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-5-12	**Crew Signature:**
Weather: Sunny 50s	**Time:** 0951	**Review Signature and Date:** Nager 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: −.23 $"H_2O$ **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3-5-12 0951	Ø	Ø	0.16	20.30	76	
0954	4.5	Ø	0.14	20.03	77	
0957	9	Ø	0.12	20.14	78	
1000	13.5	Ø	0.12	20.34	80	
1003	18.0	Ø	0.12	20.46	83	

Values Prior to Sampling

1003	18.0	Ø	0.12	20.46	83	

Sample ID: ~~VA1718~~ VA1725

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106129 ~~140~~ 150	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-5-12 09	**Crew Signature:**
Weather: Sunny 50s	**Time:** 1018	**Review Signature and Date:** T Nagar 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft³

Static Pressure: -1.56" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1018	Ø	Ø	0.16	20.06	4	
1021	4.5	Ø	0.16	20.09	2	
1024	9.0	Ø	0.15	20.11	~~Ø~~ 2	
~~10~~27	13.5	Ø	0.12	19:07	1	
1030	18.0	Ø	0.14	18.97	Ø	
1033	22.5	Ø	0.14	19.04	Ø	

Values Prior to Sampling

~~10~~33 09	22.5	Ø	0.14	19.04	Ø	

Sample ID: ~~VA1219~~ VA1226

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106129-250	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-5-12	**Crew Signature:**
Weather: Sunny 50s	**Time:** 1046	**Review Signature and Date:** 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs ø in BH + ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: -1.85 in H2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

6 min Date/Time 3-5-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1046	0	ø	0.24	18.98	1117	
1052	9	ø	0.40	18.26	688	
1058	18	ø	0.40	18.15	691	
1104	27	ø	0.42	18.06	696	

Values Prior to Sampling

1104	27	ø	0.42	18.06	696	

Sample ID: ~~VA1220~~ VA1227 DA

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: 106129-350	Field Crew: DA, TN
Site / SWMU No.: 106	Date: 3-5-12	Crew Signature: [signature]
Weather: Sunny 50s	Time: 1116	Review Signature and Date: T Nagar 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: -1.93" H_2O Purge Flow Rate: 1.5

PURGE DATA

6min Date/Time 3-5-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1116	Ø	Ø	0.38 ~~469~~	19.13	469	
1122	9	Ø	0.52	17.40	1542	
1128	18	Ø	0.52	17.43	1539	
1134	27	Ø	0.52	17:58	1540	
1135 (1min)	29.5	Ø	0.52	17.58	1542	

Values Prior to Sampling

1135	29.5	Ø	0.52	17.58	15.42	

Sample ID: VA1228 ~~VA1221~~ ~~VASV1222~~

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106129-450	**Field Crew:** DA, TN
Site / SWMU No.: 106	**Date:** 3-5-12	**Crew Signature:**
Weather: Sunny 50s	**Time:** 1159	**Review Signature and Date:** TNagra 3/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: VOCs 100in BH + 50in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.077 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: -2.36" H_2O **Purge Flow Rate:** 12 cfm

PURGE DATA

3-5-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1159	0	0	0.10	20.42	597	
1203	48	0	0.52	17.57	6740	
1207	96	0	0.52	17.48	6810	
1211	144	0	0.52	17.29	6770	
1214	192	0	0.52	17.34	6740	
1218	240	0	0.52	17.77	6700	

Values Prior to Sampling

1218	240	0	0.52	17.77	6700	

Sample ID: *VA1229* ~~VA1223~~ 29

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106130-025

Field Crew: DM, AT

Site / SWMU No.: 106

Date: 1-12-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1327

Review Signature and Date: 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOCs
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.705 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-12-12/1327	0	Ø	.20	20.07	47	
1330	4.5	Ø	.18	19.86	42	
1333	9	Ø	.18	19.86	43	
1336	13.5	Ø	.18	19.87	42	
1339	18	Ø	.22	19.90	36	

Values Prior to Sampling

1339	18	Ø	.22	19.90	36	

Sample ID: VA1230

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-151F	**Well ID No/Interval:** KAFB-106130-050	**Field Crew:** AT, TN
Site / SWMU No.: 106	**Date:** 1/12/12	**Crew Signature:**
Weather: Sunny	**Time:** 1338	**Review Signature and Date:** 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: BZ VOC's 0
BH VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 " H_2O **Purge Flow Rate:** 1.5 CFM

PURGE DATA

3mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1338	0	0	.16	19.87	27	
1402 1433	4.5	0	.14	20.01	25	
1405	9	0	.16	20.06	23	
1408	13.5	0	.14	20.17	21	
1411	17	0	.16	20.13	23	

Values Prior to Sampling

1411	17	0	.17	20.13	23	

Sample ID: VA 1231
VA 1232

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: KAFB-106130-150	Field Crew: AT, DM
Site / SWMU No.: 106	Date: 1/12/12	Crew Signature: Daniel Medina
Weather: Sunny	Time: 1450	Review Signature and Date: [signature] 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	~~.91~~ 2.0 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20 ft³

Static Pressure: +.10 " H_2O Purge Flow Rate: 1.5 CFM

PURGE DATA

3 mm Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/12/12 1450	0	0	.60	17.90	14	
1453	4.5	0	.62	17.90	14	
1456	9	0	.60	18.04	10	
1459	13.5	0	.58	18.07	10	
1502	18	0	.58	18.05	9	
1505	22.5	0	.58	18.04	10	

Values Prior to Sampling

1505	22.5	0	.58	18.04	10	

Sample ID: VA 1233

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB - 106130-250

Field Crew: AT, DM

Site / SWMU No.: 106

Date: 11/12/12

Crew Signature:

Weather: Sunny

Time: 1531

Review Signature and Date: 11/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BZ VOCs 0

BH VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: +.50 " H2O **Purge Flow Rate:** 1.5 cFm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11-14-12/1531	0	0	1.50	17.22	13	
1534	4.5	0	1.48	17.39	11	
1537	9	0	1.49	17.40	11	
1540	13.5	0	1.48	17.46	10	
1543	18	0	1.50	17.45	10	
1546	22.5	0	1.50	17.45	10	
1549	27	0	1.48	17.42	12	

Values Prior to Sampling

1549	27	0	1.48	17.42	12	

Sample ID: VA1234

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106130-350	**Field Crew:** MT, DM
Site / SWMU No.: 106	**Date:** 11/13/12	**Crew Signature:** Daniel Medina
Weather: Sunny	**Time:** 0857	**Review Signature and Date:** 1/8/13

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH Voc's Ø
BZ Voc's Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: -.5 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/13/12 0857	0	0	1.10	16.55	2060	
0903	9	0	1.48	15.89	2370	
0909	18	0	1.50	15.97	2360	
0915	27	0	1.48	15.89	2360	

Values Prior to Sampling

0915	27	0	1.48	15.89	2360	

* * * *

Sample ID: VA1235

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106130-450

Field Crew: MT, DM

Site / SWMU No.: 106

Date: 1/13/12

Crew Signature: [signature]

Weather: Sunny

Time: 0958

Review Signature and Date: [signature] 1/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: BTEX VOCs Ø

BH Voc's Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft² 22.07	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	~~1577~~ ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -1.0 "H₂O

Purge Flow Rate: 12cfs

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/13/12 0958	Ø	0	1.04	17.00	8890	
1002	48	0	1.04	17.12	9050	
1006	96	0	1.04	17.17	9060	
1010	144	0	1.06	17.21	9070	
1014	192	0	1.04	17.24	9060	
1018	240	0	1.04	17.20	9070	
					763 x 9	= 6897 by calculation

Values Prior to Sampling

1018	240	0	1.04	17.20	6897	by calculation

Sample ID: VA1236

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

DUP

Project Name: KAFB-BFF | Well ID No/Interval: SVP06137-25 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-12-17 | Crew Signature: [signature]

Weather: Sunny 60s | Time: 1353 | Review Signature and Date: Daniel Medina 3-12-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) No

Notes: VOCs 30.3 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: .13 "H₂O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-12-17 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1353	0	0	0.02	20.86	67	
1356	4.5	0	0.10	20.31	55	
1359	9	0	0.08	20.23	56	
1402	13.5	0	0.08	20.28	54	
1405	18	0	0.10	20.41	53	

Values Prior to Sampling

1405	18	0	0.10	20.41	53	

Sample ID: VA1237

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~SVE06131-55~~ DW

Field Crew: VA, DM

Site / SWMU No.: 106

Date: 3-12-17

Crew Signature:

Weather: Sunny 60's

Time: 1421

Review Signature and Date: Daniel Muchina 3-12-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark (Yes) - No

Notes: VOCs 24.1 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	55 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.1683 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	45 ft	(K) One Purge Volume (C + J)	1.8033 ft³
(E) Depth to Bottom of Screen	55 ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: .16 "H2O Purge Flow Rate: 1.5cfm

PURGE DATA

3-12-17 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1421	0	Ø	0.04	20.46	42	
1424	4.5	Ø	0.08	20.11	63	
1427	9	Ø	0.08	20.01	61	
1430	13.5	Ø	0.10	19.66	63	
1433	18	Ø	0.08	19.74	63	
1434 (1 min)	19.5	Ø	0.10	19.58	63	

Values Prior to Sampling

1434	19.5	Ø	0.10	19.58	63	

Sample ID: VA1738

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~SD~~ DP106131-150

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-12-12

Crew Signature:

Weather: Sunny 60s

Time: 1512

Review Signature and Date: Daniel Mucina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 1.9 in BH+ 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.459 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft^3

Static Pressure: -.36 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3-12-12 Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
3 min DA						
1502 DA	0	Ø	0.04	20.54	22	
1505 DA	4.5	Ø	0.10	20.22	21	
1518	9	Ø	0.16	20.28	18	
1521	13.5	Ø	0.20	21.10	15	
1524	18	Ø	0.18	21.24	14	
1526 (2 min)	21	Ø	0.20	20.31	14	

Values Prior to Sampling

1526	21	Ø	0.20	20.31	14	

Sample ID: VA1239

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~SV~~ 106131-245

Field Crew: DA

Site / SWMU No.: 106

Date: 3-13-12

Crew Signature: DA

Weather: Sunny 60s

Time: 1318

Review Signature and Date: 3/14/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	245 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.0306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.7497 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	235 ft	(K) One Purge Volume (C + J)	2.3847 ft^3
(E) Depth to Bottom of Screen	245 ft	(L) 10 Purge Volumes (K*10)	23.847 ft^3

Static Pressure: -.18 "H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3-13-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1312	0	0	0.00	20.64	8	
1316	6	0	0.62	19.29	13	
1320	12	0	0.58	19.32	12	
1324	18	0	0.56	19.34	10	
1328	24	0	0.54	19.32	8	

Values Prior to Sampling

1328	24	0	0.54	19.32	8	

Sample ID: VA1240

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: ~~SV106131~~-350
Field Crew: DA
Site / SWMU No.: 106
Date: 3-13-17
Crew Signature:
Weather: Sunny 60's
Time: 1349
Review Signature and Date: 3/14/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs .5 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: -.36 "H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

3-13-17 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1349	Ø	Ø	0.07	20.46	24	
1353	6	Ø	0.10	19.23	237	
1357	12	Ø	0.10	18.25	252	
1401	18	Ø	0.12	18.44	261	
1405	24	Ø	0.12	18.39	262	
1408 (3 min)	28.5	Ø	0.14	19.33	267	

Values Prior to Sampling

1408	28.5	Ø	0.14	19.33	267	

Sample ID: VA12417 1242

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~SV~~ 106131-450

Field Crew: DA

Site / SWMU No.: 106

Date: 3-13-17

Crew Signature:

Weather: Sunny 60s

Time: 1443

Review Signature and Date: 3/14/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs 43.8 in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.077 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: -.65" H_2O Purge Flow Rate: 12 cfm

PURGE DATA

3-13-17 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1443	0	Ø	0.10	19.23	173	
1447	48	Ø	0.48	17.66	5290	
1451	96	Ø	0.48	17.20	5060	
1455	144	Ø	0.46	17.58	4920	
1459	192	Ø	0.46	17.83	4890	
1503	240	Ø	0.46	17.89	4860	

Values Prior to Sampling

1503	240	Ø	0.46	17.89	4860	

Sample ID: *VA1243*

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106132-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-12-12
Crew Signature:
Weather: Sunny 40s
Time: 0909
Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: -.18 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3-12-12 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
0909	0	Ø	0.24	20.36	6	
0912	4.5	Ø	0.44	20.59	6	
0915	9	Ø	0.52	20.90	5	
0918	13.5	Ø	0.50	20.98	4	
0921	18	Ø	0.52	21.09	4	

Values Prior to Sampling

0921	18	Ø	0.52	21.09	4	

Sample ID: VA1744

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 51106132-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-12-12
Crew Signature:
Weather: Sunny 50s
Time: 0936
Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: -.28 "H₂O Purge Flow Rate: 1.5cfm

PURGE DATA

3-12-12 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0936	0	Ø	0.76	22.16	5	
0939	4.5	Ø	0.70	21.75	4	
0942	9	Ø	0.70	21.88	5	
0945	13.5	Ø	0.72	21.93	5	
0948	18	Ø	0.74	21.84	6	

Values Prior to Sampling

0948	18	Ø	0.74	21.84	6	

Sample ID: VA1245

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106132-175
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-12-12
Crew Signature:
Weather: Sunny 50s
Time: 1012
Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	175 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.5355 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	165 ft	(K) One Purge Volume (C + J)	2.1705 ft^3
(E) Depth to Bottom of Screen	175 ft	(L) 10 Purge Volumes (K*10)	21.705 ft^3

Static Pressure: -.60 "H2O Purge Flow Rate: 1.5cfm

PURGE DATA

3-12-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1012	0	Ø	0.04	19.78	7	
1015	4.5	Ø	0.16	19.83	4	
1018	9	Ø	0.16	20.08**	4	
1021	13.5	Ø	0.16	20.14	4	
1024	18.	Ø	0.16	19.93	5	
1027	22.5	Ø	0.16	19.88	5	

Values Prior to Sampling

1027	22.5	Ø	0.16	19.88	5	

Sample ID: VA1246

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SV106132-250 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-12-12 | Crew Signature: [signature]

Weather: Sunny 60s | Time: 1041 | Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: -0.56 | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-12-12 Date/Time 4/min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1041	0	Ø	0.02	20.30	9	
1045	6	Ø	0.16	19.97	6	
1049	12	Ø	0.18	19.85	5	
1053	18	Ø	0.18	19.69	6	
1057	24	Ø	0.18	19.72	6	

Values Prior to Sampling

1057	24	Ø	0.18	19.72	6	

Sample ID: VA1247

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SV106132-350

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-12-12

Crew Signature: DMA

Weather: Sunny 60s

Time: 1111

Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft³

Static Pressure: -.46 "H₂O Purge Flow Rate: 1.5 cfm

PURGE DATA

3-12-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1111	0	Ø	0.08	20.67	5	
1115	6	Ø	0.32	20.21	19	
1119	12	Ø	0.68	19.70	24	
1123	18	Ø	0.68	19.41	26	
1127	24	Ø	0.68	19.37	27	
1130 (3 min)	28.5	Ø	0.68	19.16	27	

Values Prior to Sampling

1130	28.5	Ø	0.68	19.16	27	

Sample ID: VA1248

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVE106132-450

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 3-12-12

Crew Signature:

Weather: Sunny 60's

Time: 1149

Review Signature and Date: Daniel Medina 3-12-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: NA "H2O

Purge Flow Rate: 12 cfm

PURGE DATA

3-12-12 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1149	Ø	Ø	0.00	20.73	2	
1153	48	Ø	0.24	20.00	226	
1157	96	Ø	0.30	19.80	294	
1201	144	Ø	0.34	20.19	319	
1205	192	Ø	0.36	20.34	345	
1209	240	Ø	0.38	20.55	369	

Values Prior to Sampling

1209	240	Ø	0.38	20.55	369	

Sample ID: VA1249

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	**Well ID No/Interval:** KAFB-106133-025	**Field Crew:** DR, DA
Site / SWMU No.: KAFB-106133	**Date:** 1-16-2012	**Crew Signature:**
Weather: Cold, Cloudy, rainy	**Time:** 0920	**Review Signature and Date:** 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes - (No) **Well ID Mark:** (Yes) - No

Notes: Static Pressure +.05 in H20

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: +.05 in H20 **Purge Flow Rate:** 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 0908	0	0.00	1.06	19.38	6	
0910	3	0.00	1.04	19.50	6	
0912	6	0.00	1.06	19.52	5	
0914	9	0.00	1.04	19.53	5	
0916	12	0.00	1.04	19.24	4	
0918	15	0.00	1.04	19.27	3	
0920	18	0.00	1.02	19.27	4	

Values Prior to Sampling

0920	18	0.00	1.02	19.27	4	

Sample ID: VA1250

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	Well ID No/Interval: KAFB-106133-050	Field Crew: DR, DA
Site / SWMU No.: KAFB-106133	Date: 1-16-2012	Crew Signature:
Weather: Cold, Cloudy, rainy	Time: 1002	Review Signature and Date: 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) - No

Notes: BZ VOCs Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: +.04 in H2O Purge Flow Rate: 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 0950	0	0.00	1.00	19.32	2	
0952	~~3~~ 3	0.00	1.02	19.51	2	
0954	6	0.00	1.04	19.58	3	
0956	9	0.00	1.04	19.61	2	
0958	12	0.00	1.04	19.66	3	
1000	15	0.00	1.04	19.65	2	
1002	18	0.00	1.06	19.67	2	

Values Prior to Sampling

1002	18	0.00	1.06	19.67	2	

Sample ID: VA1251 reg
VA1252 FD

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	**Well ID No/Interval:** KAFB-106133-170	**Field Crew:** DR, DA
Site / SWMU No.: KAFB-106133	**Date:** 1-16-2012	**Crew Signature:**
Weather: Cold, cloudy, rainy	**Time:** 1053	**Review Signature and Date:** 1-20-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged **Locked:** Yes (No) **Well ID Mark:** (Yes) No

Notes: BH Vocs Ø
BZ Vocs Ø

CALCULATIONS

(A) Depth to Well Bottom	170 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136 (¾" = .00306) 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.5202 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	160 ft	(K) One Purge Volume (C + J)	2.1552 ft^3
(E) Depth to Bottom of Screen	170 ft	(L) 10 Purge Volumes (K*10)	21.552 ft^3

Static Pressure: +2.0 in H_2O **Purge Flow Rate:** 1.5

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1038	0	0.00	.46	18.29	8	
1041	4.5	0.00	.48	18.54	7	
1044	9	0.00	.48	18.66	7	
1047	13.5	0.00	.48	18.74	7	
1050	18	0.00	.48	18.83	8	
1053	22.5	0.00	.50	18.89	7	

Values Prior to Sampling

1053	22.5	0.00	.50	18.89	7	

Sample ID: VA-1253

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	**Well ID No/Interval:** KAFB-106133-250	**Field Crew:** DR, DA
Site / SWMU No.: KAFB-106133	**Date:** 1-16-2012	**Crew Signature:**
Weather: Sunny, Cold	**Time:** 1131	**Review Signature and Date:** 1/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes - (No) **Well ID Mark:** (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.00 ft³

Static Pressure: +2.4 in H²O **Purge Flow Rate:** 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1115	0	0.00	.88	17.64	11	
1119	6	0.00	.90	17.67	12	
1123	12	0.00	.90	17.68	10	
1127	18	0.00	.90	17.72	10	
1131	24	0.00	.88	17.81	7	

Values Prior to Sampling

1131	24	0	.88	17.81	7	

Sample ID: VAV254

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	**Well ID No/Interval:** KAFB-106133-350	**Field Crew:** DR, DA
Site / SWMU No.: KAFB-106133	**Date:** 1-16-2012	**Crew Signature:**
Weather: Cold, cloudy	**Time:** 1211	**Review Signature and Date:** 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** Yes - (No) **Well ID Mark:** (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.655 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: +3.2 in H^2O **Purge Flow Rate:** 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1152	0	0.00	.86	16.98	454	
1155	4.5	0.00	.92	17.19	457	
1158	9	0.00	.90	17.22	455	
1201	13.5	0.00	.92	17.23	456	
1204	18	0.00	.90	17.22	455	
1207	22.5	0.00	.92	17.23	455	
1210	27	0.00	.90	17.26	454	
1211	28.5	0.00	.92	17.26	451	

Values Prior to Sampling

1211	28.5	0.00	.92	17.26	451	

Sample ID: VA1255

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB

Well ID No/Interval: KAFB-106133-450

Field Crew: DR, DA

Site / SWMU No.: KAFB-106133-c

Date: 1-16-2012

Crew Signature: [signature]

Weather: Cold Cloudy

Time: 1251

Review Signature and Date: [signature] 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: Yes - (No) Well ID Mark: (Yes) No

Notes: BH vocs Ø
BZ vocs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +3.2 in H2O Purge Flow Rate: 12 scfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1231	0	0.00	.08	20.68	14	
1235	48	0.00	.34	19.54	288	
1239	96	0.00	.36	19.46	291	
1243	144	0.00	.36	19.49	293	
1247	192	0.00	.38	19.35	294	
1251	240	0.00	.38	19.49	298	

Values Prior to Sampling

1251	240	0.00	.38	19.49	298	

Sample ID: VA1256

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB	Well ID No/Interval: KAFB-106134-25	Field Crew: DR, DA
Site / SWMU No.: KAFB-106134	Date: 1-16-2012	Crew Signature:
Weather: cold, cloudy	Time: 1422	Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) / Damaged Locked: (Yes) - No Well ID Mark: (Yes) No

Notes: BHVOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: +.05 **Purge Flow Rate:** 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1410	0	0.00	.18	20.35	7	
14 12	3	0.00	.20	20.74	6	
14 14	6	0.00	.18	20.93	5	
14 16	9	0.00	.18	21.07	6	
14 18	12	0.00	.20	21.21	7	
14 20	15	0.00	.22	21.33	5	
14 22	18	0.00	.18	20.26	5	

Values Prior to Sampling

1422	18	0.00	.18	20.26	5	

Sample ID: VA1257

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB

Well ID No/Interval: KAFB-106134-50

Field Crew: DR, DA

Site / SWMU No.: KAFB-106134

Date: 1-16-2012

Crew Signature:

Weather: Cold, Cloudy

Time: 1452

Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH vocs 0
BZ vocs 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: +.05 in H_2O Purge Flow Rate: 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1440	0	0.00	.02	20.79	4	
1442	3	0.00	.00	20.83	1	
1444	6	0.00	.00	20.83	1	
1446	9	0.00	.00	20.82	0	
1448	12	0.00	.00	20.78	0	
1450	15	0.00	.00	20.81	1	
1452	18	0.00	.00	20.82	0	

Values Prior to Sampling

1452	18	0.00	.00	20.82	0	

Sample ID: VA-12578

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB

Site / SWMU No.: KAFB-106134

Weather: Cold, Cloudy

Well ID No/Interval: KAFB-106134-170

Date: 1-16-2012

Time: 1527

Field Crew: DR, DA

Crew Signature:

Review Signature and Date: 1/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOCs Ø

BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	170 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136 (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.5202 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	160 ft	(K) One Purge Volume (C + J)	2.1552 ft³
(E) Depth to Bottom of Screen	170 ft	(L) 10 Purge Volumes (K*10)	21.552 ft³

Static Pressure: +.10 in H2O

Purge Flow Rate:

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-2012 1512	0	0.00	0.00	20.78	3	
1515	4.5	0.00	0.00	20.65	3	
1518	9	0.00	0.00	20.67	2	
1521	13.5	0.00	0.00	20.64	2	
1524	18	0.00	0.00	20.67	2	
1527	22.5	0.00	0.00	20.66	2	

Values Prior to Sampling

1527	22.5	0.00	0.00	20.66	2	

Sample ID: VA1259

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB

Well ID No/Interval: KAFB-106134-250

Field Crew: DA, DR

Site / SWMU No.: KAFB-106134

Date: 1-16-17

Crew Signature:

Weather: cold cloudy

Time: 1600

Review Signature and Date: 1-17-17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH vocs Ø

BZ vocs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306, 2") = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.40 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24.0 ft³

Static Pressure: -0.18 in. H_2O Purge Flow Rate: 1.5 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-17 1544	0	0.00	.38	18.54	20	
1548	6	0.00	.38	18.56	19	
1552	12	0.00	.38	18.60	20	
1556	18	0.00	.39	18.61	19	
1600	24	0.00	.38	18.65	19	

Values Prior to Sampling

1600	24	0.00	.38	18.65	19	

Sample ID: VA1760

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	Well ID No/Interval: 106 134-350	Field Crew: TN, DM
Site / SWMU No.: 106	Date: 1/17/12	Crew Signature: [signature]
Weather: sunny	Time: 820	Review Signature and Date: [signature] 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged Locked: Yes - No Well ID Mark: Yes - No

Notes: BH VOC's Ø
BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: -.12" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/17/12 820	0	0	.32	19.48	50	
826	9	0	.22	19.61	63	
832	18	0	.26	19.81	64	
838	27	0	.06	19.74	67	

Values Prior to Sampling

838	27	0	.06	19.74	67	

Sample ID: VA 1261
VA 1262

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106134-450

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 11/17/12

Crew Signature: TN Nagem

Weather: sunny

Time: 910

Review Signature and Date: [illegible] 1-17-13

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0
B2 VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: –.10" H20

Purge Flow Rate: TN ~~#8 cfm~~ 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/17/12 910	0	0	.18	19.73	316	
914	48	0	.24	19.88	386	
918	96	0	.26	19.88	407	
922	144	0	.28	19.87	423	
926	192	0	.30	19.89	434	
930	240	0	.32	19.88	444	

Values Prior to Sampling

930	240	0	.32	19.88	444	

Sample ID: VA 1263

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106135-025	**Field Crew:** TN, DM
Site / SWMU No.: 106	**Date:** 1/16/11	**Crew Signature:** TC Nga
Weather: windy	**Time:** 1343	**Review Signature and Date:** [illegible] 1-17-D

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOC's 1.7 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft^3

Static Pressure: +1.7" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/16/12 1343	0	0	.08	20.21	2	
1346	4.5	0	.12	20.17	1	
1349	9	0	.14	20.17	1	
1352	13.5	0	.14	20.17	1	
1355	18	0	.16	20.18	1	

Values Prior to Sampling

1355	18	0	.16	20.18	1	

Sample ID: VA1264

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106135-050

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/16/12

Crew Signature: Tim Nagy

Weather: windy

Time: 1423

Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 2.0 ppm (open)
BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.32" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-16-12/1423	0	Ø	.10	20.21	Ø	
1425	4.5	Ø	.12	20.40	Ø	
1428	9	Ø	.12	20.41	Ø	
1431	13.5	Ø	.12	20.43	Ø	
1434	18	Ø	.14	20.44	Ø	

Values Prior to Sampling

1423	18	Ø	.14	20.44	Ø	

Sample ID: VA1265

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	Well ID No/Interval: 106135 - 150	Field Crew: DM, TN
Site / SWMU No.: 106	Date: 1-16-12	Crew Signature: Daniel Medina
Weather: Cloudy	Time: 1456	Review Signature and Date: Roger 1/16/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: Bkt Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: +2.51" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1-16-12/1456	Ø	Ø	0.06	20.04	Ø	
1459	4.5	Ø	.08	20.03	1	
1502	9	Ø	.08	19.99	1	
1505	13.5	Ø	.10	19.97	1	
1508	18	Ø	.10	19.97	0	
1511	22.5	Ø	.10	19.95	1	

Values Prior to Sampling

1511	22.5	Ø	.10	19.95	1	

Sample ID: VA1266

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106135-250

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/16/12

Crew Signature: T Nagen

Weather: windy

Time: 1527

Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: + 3.98 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/16/12 1527	0	0	.10	20.12	0	
1533	9	0	.14	19.99	2	
1539	18	0	.14	19.95	2	
1545	27	0	.16	19.90	1	

Values Prior to Sampling

1545	27	0	.16	19.90	1	

Sample ID: VA1267

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106135-350

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-16-12

Crew Signature: Daniel Medina

Weather: Cloudy

Time: 1503

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: ~~Yes~~ - No

Notes: BH 45.1 ppm (open)
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +3.99" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-16-12/1503	0	Ø	.10	20.45	39	
1609	9	Ø	.12	20.59	43	
1615	18	Ø	.12	20.60	44	
1621	27	Ø	.12	20.62	46	

Values Prior to Sampling

1621	27	Ø	.12	20.62	46	

Sample ID: VA1268

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106135-450

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-17-12

Crew Signature: Daniel Medina

Weather: Sunny

Time: 1012

Review Signature and Date: TCM Roger 1/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.68 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: -.22" H_2O

Purge Flow Rate: 12 cfm ~~1.5 cfm DM~~

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-17-12/1012	0	Ø	Ø	~~20.03~~ ~~23.82~~	25	
1016	48	Ø	.26	20.04	271	
1020	96	Ø	.20	19.86	277	
1024	144	Ø	.22	19.83	291	
1028	192	Ø	.24	19.81	298	
1032	240	Ø	.26	19.80	301	

Values Prior to Sampling

1032	240	Ø	.26	19.80	301	

Sample ID: VA1269

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106136-025

Field Crew: AT, JN

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Sunny/windy

Time: 0927

Review Signature and Date: 3/8/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: BH VOCs 0

B2 VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2 1.635
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft^3

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/7/12 0927	0	0	.10	20.49	9	
0930	4.5	0	.18	21.10	AS ~~18~~ 8	
0933	9	0	.20	21.40	9	
0936	13.5	0	.16	20.24	7	
0939	18	0	.16	20.26	7	

Values Prior to Sampling

0939	18	0	.16	20.26	7	

Sample ID: VA1270

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106136-050

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Sunny/Windy

Time: 1003

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BH VOCs Ø
BB VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ~~50~~ ~~48~~ ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm ~~1.5 cfm~~

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/7/12 1003	0	Ø	.08	20.60	11	
1006	4.5	Ø	.18	20.77	8	
1009	9	Ø	.18	20.69	7	
1011	13.5	Ø	.20	20.61	7	
1013	18	Ø	.20	20.57	8	

Values Prior to Sampling

1013	18	Ø	.20	20.57	8	

Sample ID: VA 1271 ~~VA 1271~~ VA 1272

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: ~~KAFB-BFF~~

Well ID No/Interval: ~~KAFB-106136-150~~

Field Crew: MT, TD

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Sunny/windy

Time: 1057

Review Signature and Date: 3/10/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BHVOC IS CO

BZ VOCS CO

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.1 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5CFm

PURGE DATA

3mm Date/Time 3/7/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1057	Ø	0	.02	20.37	7	
1100	4.5	0	.14	20.32	8	
1103	9	0	.14	20.37	7	
1106	13.5	0	.14	20.34	5	
1109	18	0	.14	20.34	6	
1112	22.5	0	.14	20.33	6	

Values Prior to Sampling

1112	22.5	Ø	.14	20.33	6	

Sample ID: VA1273

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106136-250

Field Crew: AT, JN

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Windy

Time: 1146

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BHVOCs Ø

Bz VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: + 2.8 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/7/12 1146	0	Ø	.14	20.47	8	
1152	9	Ø	.14	20.53	8	
1158	18	Ø	.14	20.53	7	
1204	27	Ø	.14	20.67	7	

Values Prior to Sampling

1204	27	Ø	.14	20.67	7	

Sample ID: VA1274

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106136-350

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: Windy

Time: 1305

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOCs 0
BE VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: T 3.2" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (6 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/7/12 1305	0	0	.10	20.31	7	
1311 ~~1300 Hr~~	9	0	.16	20.22	6	
1317 ~~1314 Hr~~	18	0	.16	20.21	7	
1323 ~~1314 Hr~~	27	0	.16	20.27	7	

Values Prior to Sampling

1323	27	0	.16	20.27	7	

Sample ID: VA 1225

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106136-450

Field Crew: AT JR

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature:

Weather: windy

Time: 1343

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: BH VOCs ✓
BZ VOCs ✓

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218 (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: NR

Purge Flow Rate: 12 CFm

PURGE DATA

4 min

Date/Time 3/7/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1343	0	0	.18	20.32	13	
1347	48	0	.18	20.36	13	
1351	96	0	.18	20.24	13	
1355	144	0	.18	20.28	13	
1359	192	0	.16	20.68	12	
1403	240	0	.16	20.39	12	

Values Prior to Sampling

1403	240	0	.16	20.39	12	

Sample ID: VA 1276

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106137-25	**Field Crew:** DM, TN
Site / SWMU No.: 106	**Date:** 1-16-12	**Crew Signature:** Daniel Medina
Weather: Cloudy, Rainy	**Time:** 0834	**Review Signature and Date:** Roger 1/16/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH Ø ppm VOC's
BZ Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: +.04" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-16-12/0834	0	0	.26	20.64	1	
0837	4.5	0	.28	20.76	3	
0840	9	0	.30	21.01	5	
0843	13.5	0	.32	21.28	9	
0846	18	0	.32	21.32	10	

Values Prior to Sampling

0846	18	0	.32	21.32	10	

Sample ID: [redacted]VA1277

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106137-050
Field Crew: TN, DM
Site / SWMU No.: 106
Date: 1/16/12
Crew Signature: TN Nagar
Weather: rain
Time: 900
Review Signature and Date: 1/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¼" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.15 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.14" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
900	0	0	.12	20.37	0	
903	4.5	0	.14	20.54	0	
906	9	0	.16	20.61	0	
909	13.5	0	.16	20.66	0	
912	18	0	.18	20.72	0	

Values Prior to Sampling

912	18	0	.18	20.72	0	

Sample ID: VA1278

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-150

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-16-12

Crew Signature: Daniel Medina

Weather: Cloudy, Rainy

Time: 932

Review Signature and Date: [illegible] 1/16/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) No Well ID Mark: (Yes) - No

Notes: BH 0 ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.46 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.9 ft³

Static Pressure: + 2.30" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-16-12/0932	0	0	.20	20.80	0	
0935	4.5	0	.22	20.79	0	
0938	9	0	.24	20.79	0	
0941	13.5	0	.24	20.80	0	
0944	18	0	.26	20.80	0	
0947	22.5	0	.26	20.81	0	

Values Prior to Sampling

0947	22.5	0	.26	20.81	0	

Sample ID: VA1279

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-250

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/16/11

Crew Signature: Tim Nagel

Weather: rain

Time:

Review Signature and Date: 2/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's @ 16.0 ppm TN

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +2.35" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1/16/12 1006	0	0	0	20.14	1	
1012	9	0	.02	20.02	1	
1018	18	0	.06	19.94	1	
1024	27	0	.06	19.93	1	

Values Prior to Sampling

1024	27	0	.06	19.93	1	

Sample ID: VA1280

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-350

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 1-16-12

Crew Signature: Daniel Medina

Weather: Partly Cloudy

Time: 1044

Review Signature and Date: T Nolan 1/16/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: ~~Yes~~ - No

Notes: BH 1632ppm VOC's
BZ 0

CALCULATIONS

(A) Depth to Well Bottom	350	ft	(F) Filter Pack Length (E –D)	10	ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906		ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635	ft^2
(C) One Well Casing Volume (A x B):	1.07	ft^3	(J) Filter Pack Volume (F x G)	1.63	ft^3
(D) Depth to Top of Screen	340	ft	(K) One Purge Volume (C + J)	2.70	ft^3
(E) Depth to Bottom of Screen	350	ft	(L) 10 Purge Volumes (K*10)	27.0	ft^3

Static Pressure: +2.35

Purge Flow Rate: 1.5 scfm

PURGE DATA

6 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1-16-12/1044	0	Ø	0	20.36	121	
1050	9	~~Ø~~	.10	19.98	140	
1056	18	Ø	.10	19.95	141	
1102	27	Ø	0.06	19.99	148	

Values Prior to Sampling

1102	27	Ø	0.06	19.99	148	

Sample ID: VA1281

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106187-450

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 1/16/12

Crew Signature: T Nga

Weather: rain

Time: 1126

Review Signature and Date: 1-17-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 195.0 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	TN	450	ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906			ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):		22.07	ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen		440	ft	(K) One Purge Volume (C + J)	23.70 ft^3
(E) Depth to Bottom of Screen		450	ft	(L) 10 Purge Volumes (K*10)	237.0 ft^3

Static Pressure: +2.24 "H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1/16/12 1126	0	0	.76	18.96	1660	
1130	48	0	.68	19.00	1585	
1134	96	0	.66	19.02	1543	
1138	144	0	.64	19.03	1510	
1142	192	0	.62	19.05	1470	
1146	240	0	.60	19.05	1466	

Values Prior to Sampling

1146	240	0	.60	19.05	1466	

Sample ID: VA1282

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 138 -025

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature: T Napier

Weather: sunny

Time: 1538

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.5 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.02" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1538	0	0	2.72	17.97	10	
1541	4.5	0	2.74	18.06	4	
1544	9	0	2.76	18.15	3	
1547	13.5	0	2.76	18.20	4	
1550	18	0	2.76	18.21	4	

Values Prior to Sampling

1550	18	0	2.76	18.21	4	

Sample ID: ~~VA1284~~ TN VA1283

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB106138_050

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 3/7/12

Crew Signature: TC Nagy

Weather: sunny

Time: 1500

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	~~50~~ ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	~~.1527~~ ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	~~40~~ 45 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50 ~~35~~ ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: +.10" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1500	0	0	1.96	17.43	10	
1503	4.5	0	2.10	17.60	8	
1506	9	0	2.20	17.37	6	
1509	13.5	0	2.20	17.38	5	
1512	18	0	2.22	17.35	5	

Values Prior to Sampling

1512	18	0	2.22	17.35	5	

Sample ID: VA128 TN

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BF

Well ID No/Interval: KAFB-106138-150

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/8/12

Crew Signature:

Weather: Cloudy/windy

Time: 0908

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOCs 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.1 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21 ft³

Static Pressure: −.90 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
3/8/12 0908	0	0	.06	20.65	4	
0911	4.5	0	.14	20.48	4	
0914	9	0	.16	20.42	4	
0917	13.5	0	.18	20.40	5	
0920	18	0	.16	20.21	1	
0923	22.5	0	.16	20.18	2	

Values Prior to Sampling

0923	22.5	0	.16	20.18	2	

Sample ID: VA 1285

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106138-250

Field Crew: AT, TP

Site / SWMU No.: 106

Date: 3/6/12

Crew Signature:

Weather: Windy

Time: 0942

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH Vols Ø
BZ Vols Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: -.96 "H_2O **Purge Flow Rate:** 1.5 CFM

6 mm

PURGE DATA

Date/Time 3/6/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0942	Ø	Ø	.04	20.73	4	
0948	9	Ø	.06	20.81	2	
0954	18	Ø	.08	20.96	2	
1000	27	Ø	.10	21.11	1	

Values Prior to Sampling

1000	27	Ø	.10	21.11	1	

Sample ID: MA1286
MA1287

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106138-350

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/8/12

Crew Signature:

Weather: windy

Time: 1040

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BZ VOCs 0
BH VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: -.82" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Bmm

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/8/12 1040	0	0	.02	20.75	2	
1046	9	0	.14	20.51	3	
1052	18	0	.16	20.48	3	
1058	27	0	.18	20.39	2	

Values Prior to Sampling

1058	27	0	.18	20.39	2	

Sample ID: VA 1288

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Cloudy / Sunny

Well ID No/Interval: KAFB-106138-450

Date: 3/12/12 AT ~~3/8/12~~

Time: 0831

Field Crew: AT, TV

Crew Signature: ~~AT, TV~~ AT

Review Signature and Date: 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: BH VOC's Ø

BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: 0 ~~-.02~~ AT "H₂O

Purge Flow Rate: 12CFM

PURGE DATA

4 min

Date/Time ~~3/8/12~~ 3/12/12 AT	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
0831	0	0	.06	20.73	4	
0835	48	0	.14	20.68	3	
0839	96	0	.12	20.56	1	
0843	144	0	.12	20.58	0	
0847	192	0	.12	20.58	1	
0851	240	0	.12	20.57	2	

Values Prior to Sampling

0851	240	0	.12	20.57	2	

Sample ID: ~~VA-1288~~ AT VA-1289

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106139-25
Field Crew: AT, CL
Site / SWMU No.: 106
Date: 3/12/12
Crew Signature:
Weather: Sunny
Time: 1022
Review Signature and Date: 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: VOCs @ B1
VOCs @ B2

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.0306 ~~.0765~~ ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft³

Static Pressure: 0 " H_2O **Purge Flow Rate:** 1.5-12 CFM

PURGE DATA

3min. Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/12 10:22	0	0	.22	20.70	4	
10:25	4.5	0	.44	21.40	5	
10:28	9	0	.46	21.48	4	
1031	13.5	0	.46	21.60	4	
1034	18	0	.48	21.69	4	

Values Prior to Sampling

1034	18	0	.48	21.69	4	

Sample ID: VA1290

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB-106139-50
Field Crew: AT, CL
Site / SWMU No.: 106
Date: 3/12/12
Crew Signature: [signature]
Weather: Sunny
Time: 1057
Review Signature and Date: [signature] 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306), 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft³

Static Pressure: -.04 " H_2O
Purge Flow Rate: 1.5 ± cfm

PURGE DATA

3 min Date/Time 3/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1057	0	0	.34	20.28	7	
1100	4.5	0	.36	20.41	5	
1103	9	0	.34	20.34	6	
1106	13.5	0	.34	20.29	6	
1109	18	0	.36	20.27	4	

Values Prior to Sampling

1109	18	0	.36	20.27	4	

Sample ID: VA1291

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB-106139-150
Field Crew: AT, CL
Site / SWMU No.: 106
Date: 3/12/12
Crew Signature:
Weather: Sunny
Time: 1131
Review Signature and Date: 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged **Locked:** Yes - No **Well ID Mark:** Yes - No

Notes:

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.094 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.94 ft³

Static Pressure: -.72 in H_2O

Purge Flow Rate: 1.5 ~~1.2~~ CFM

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
3/12 1131	0	0	.58	19.70	10	
3/12 1134	4.5	0	.60	19.98	6	
3/12 1137	9	0	.62	19.64	8	
" ~~1140~~	13.5	0	.62	19.48	6	
" ~~1143~~	18	0	.62	19.66	6	
" ~~1146~~	22.5	0	.62	19.64	6	

Values Prior to Sampling

1146	22.5	0	.62	19.64	6	

Sample ID: VA1292

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF	**Well ID No/Interval:** KAFB-104139-250	**Field Crew:** AT, CL
Site / SWMU No.: 104	**Date:** 3/12/12	**Crew Signature:**
Weather: Sunny	**Time:** 1203	**Review Signature and Date:** 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOCs @
BZ VOCs @

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft.	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: -.72 " H_2O **Purge Flow Rate:** 1.5-12 CFM

PURGE DATA

3 min Date/Time 3/12/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1203	0	0	.64	19.40	5	
1206	4.5	0	.64	19.46	5	
1209	9	0	.64	19.48	4	
1212	13.5	0	.64	19.55	4	
1215	18	0	.64	19.71	5	
1218	22.5	6	.64	19.62	6	
1221	27	0	.64	19.46	5	

Values Prior to Sampling

1221	27	0	.64	19.46	5	

Sample ID: VA1293

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB-106B39-350
Field Crew: AT, CL
Site / SWMU No.: 106
Date: 3/12/12
Crew Signature:
Weather: Sunny
Time: 1238
Review Signature and Date 03/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOC's @
B2 VOC's @

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft³

Static Pressure: -.68 "H2O **Purge Flow Rate:** 1.5 ~~12~~ CFM

PURGE DATA

L/min Date/Time 3/12/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1238	0	0	.76	19.35	11	
1244	9	0	.78	19.40	10	
1250	18	0	.78	19.33	10	
1256	27	0	.78	19.45	12	

Values Prior to Sampling

1256	27	0	.78	19.45	12	

Sample ID: VA1294

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF	**Well ID No/Interval:** KAFB-106139-450	**Field Crew:** AT, CL
Site / SWMU No.: 106	**Date:** 3/12/12	**Crew Signature:**
Weather: Sunny	**Time:** 1316	**Review Signature and Date:** 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft² .04906	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.077 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.71 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.1 ft³

Static Pressure: -3.7 "H2O **Purge Flow Rate:** 12 CFM

PURGE DATA

4 min Date/Time 3/12/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1316	0	0	.88	18.97	5	
1320	48	0	.92	18.91	3	
1324	96	0	.94	18.85	4	
1328	144	0	.96	18.86	3	
1332	192	0	.98	18.82	3	
1336	240	0	.98	18.81	2	

Values Prior to Sampling

1336	240	0	.98	18.81	2	

Sample ID: VA1295

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FT
Well ID No/Interval: KAFB-106140-025
Field Crew: AT, CL
Site / SWMU No.: 106
Date: 3/12/12
Crew Signature:
Weather: Sunny
Time: 1431
Review Signature and Date: 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BZ VOC's Ø
BH VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.711 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.11 ft³

Static Pressure: +.021 H_2O

Purge Flow Rate: 1.5 CFm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
3/12/12 1431	0	Ø	.14 ~~0~~	20.83	2.6	
1434	4.5	0	.12	20.92	5	
1437	9	0	.14	20.32	5	
1440	13.5	0	.10	20.29	4	
1443	18	0	.08	20.32	4	

Values Prior to Sampling

1443	18	Ø	.08	20.32	4	

Sample ID: VA1296

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FT	**Well ID No/Interval:** KAFB-106410-050	**Field Crew:** AT, CL
Site / SWMU No.: 106	**Date:** 3/12/12	**Crew Signature:**
Weather: Sunny	**Time:** 1510	**Review Signature and Date:** 3/13/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) - No **Well ID Mark:** (Yes) - No

Notes: BH VOCs Ø
B2 VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft² ~~1.635~~
(C) One Well Casing Volume (A x B):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: +.1 " H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3pm

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
3/12/12 1510	0	Ø	.18	20.41	5	
1513	4.5	Ø	.16	20.51	4	
1516	9	Ø	.16	20.52	4	
1519	13.5	Ø	.18	20.53	4	
1522	18	Ø	.18	20.53	3	

Values Prior to Sampling

1522	18	Ø	.18	20.53	3	

Sample ID: VA1297

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | **Well ID No/Interval:** KAFB-106 0-150 | **Field Crew:** MT, TN

Site / SWMU No.: 106 | **Date:** 3/13/12 | **Crew Signature:**

Weather: Sunny | **Time:** 1340 | **Review Signature and Date:** 3/14/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged | **Locked:** (Yes) No | **Well ID Mark:** (Yes) No

Notes: BH VOCs 0

B2 VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.459 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21 ft³

Static Pressure: 0" H_2O | **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3 min Date/Time 3/13/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1340	0	0	.02	19.78	17	
1343	4.5	0	0.12	19.75	16	
1346	9	0	0.12	20.11	13	
1349	13.5	0	0.12	20.26	11	
1352	18	0	0.14	20.33	12	
1355	22.5	0	0.14	19.61	11	

Values Prior to Sampling

1355	22.5	0	0.14	19.61	10	

Sample ID: VA1298

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106140-250
Field Crew: AT, TD
Site / SWMU No.: 106
Date: 3/13/12
Crew Signature:
Weather: Sunny
Time: 1410
Review Signature and Date: 3/14/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged **Locked:** (Yes) No **Well ID Mark:** (Yes) - No

Notes: ~~OH~~

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.1765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: 0" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
3/13/12 1410	0	0	.16	19.74	20	
1416	9	0	.18	19.98	18	
1422	18	0	.19	20.01	18	
1428	27	0	.18	19.94	16	

Values Prior to Sampling

1428	27	0	.18	19.94	16	

Sample ID: VA1299

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106140-~~450~~ 350

Field Crew: IAT, TN

Site / SWMU No.: 106

Date: 3/13/12

Crew Signature: [signature]

Weather: Sunny

Time: 1446

Review Signature and Date: [signature] 3/14/2012

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH vocs Ø
BZ vocs Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6mm

Date/Time 3/13/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1446	0	Ø	0.30	19.07	968	
1452	9	0	0.32	19.10	971	
1458	18	0	0.30	19.23	973	
1504	27	0	0.32	19.22	975	

Values Prior to Sampling

1504	27	0	.32	19.22	975	

Sample ID: VA1300
VA 1301

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106140-450

Field Crew: AT, TN

Site / SWMU No.: 106

Date: 3/14/12

Crew Signature:

Weather: Sunny

Time: 0830

Review Signature and Date: 5/15/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) No Well ID Mark (Yes) No

Notes: BH Vocs 0
BZ Vocs 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	237.1 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -.16 " H_2O

Purge Flow Rate: 1.5 cfm 12 CSM

PURGE DATA

4 min Date/Time 3/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0830	0	0	0	20.92	8	
0834	48	0	.02	21.37	12	
0838	96	0	0	21.12	4	
0842	144	0	0	21.73	2	
0846	192	0	.02	21.78	1	
0850	240	0	0	20.84	3	

Values Prior to Sampling

0850	240	0	0	20.84	3	

Sample ID: VA-1302

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106411-25 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature:

Weather: Windy Sunny 50s | Time: 1430 | Review Signature and Date: Daniel Medina 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) No | Well ID Mark: (Yes) - No

Notes: VOCs 0 in B11 + 0 in B2

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7115 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.115 ft^3

Static Pressure: +.29 "H2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-7-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1430	0	0	0.07	20.62	8	
1433	4.5	0	0.10	20.62	7	
1436	9	0	0.10	20.31	8	
1439	13.5	0	0.10	20.36	7	
1442	18	0	0.12	20.40	7	

Values Prior to Sampling

1442	18	0	0.12	20.40	7	

Sample ID: VA1303

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SV106141-5ft 60 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature: [signature]

Weather: Windy Sunny 50s | Time: 1501 | Review Signature and Date: Daniel Medina 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs 0 in Bth + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	17.88 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: .48 "H_2O | Purge Flow Rate: 1.5

PURGE DATA

3-7-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1501	0	0	0.06	20.65	6	
1504	4.5	0	0.10	20.52	3	
1507	9	0	0.10	20.64	3	
1510	13.5	0	0.10	20.72	3	
1513	18	0	0.10	20.75	4	

Values Prior to Sampling

1513	18	0	0.10	20.75	4	

Sample ID: VA1304

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVE06141-170 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature:

Weather: Windy Sunny 50s | Time: 1534 | Review Signature and Date: Daniel Medina 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) No | Well ID Mark: (Yes) No

Notes: VOCs 0 in BH / 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	170 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.5202 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	160 ft	(K) One Purge Volume (C + J)	2.1552 ft^3
(E) Depth to Bottom of Screen	170 ft	(L) 10 Purge Volumes (K*10)	21.552 ft^3

Static Pressure: +4.69 | Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 3-7-12 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1534	0	0.00	0.10	20.86	3	
1537	4.5	0.00	0.10	20.84	3	
1540	9	0.00	0.10	20.82	4	
1543	13.5	0.00	0.10	20.77	4	
1546	18	0.00	0.10	20.74	4	
1549	22.5	0.00	0.12	20.70	4	

Values Prior to Sampling

1549	22.5	0.00	0.12	20.70	4	

Sample ID: VA1305

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106141-250 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-8-17 | Crew Signature:

Weather: Windy & snow 30° | Time: 0918 | Review Signature and Date: 3/12/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOC's Ø in BH & Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: NR "H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-8-17 Date/Time 4 min.	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0918	Ø	Ø	0.00	20.72	4	
0922	6	Ø	0.08	20.80	2	
0926	12	Ø	0.10	21.11	1	
0930	18	Ø	0.10	20.42	2	
0934	24	Ø	0.10	20.27	2	

Values Prior to Sampling

0934	24	Ø	0.10	20.27	2	

Sample ID: VA1306

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106141-350
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-8-12
Crew Signature:
Weather: Windy 30s
Time: 1020
Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: -0.99 $"H_2O$ Purge Flow Rate: 1.5 cfm

PURGE DATA

3-8-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1020	0	Ø	0.07	20.71	2	
1024	6	Ø	0.06	20.75	1	
1028	12	Ø	0.10	20.88	2	
1032	18	Ø	0.10	20.98	2	
1036	24	Ø	0.10	21.10	2	
1040 3 min	28.5	Ø	0.10	21.08	2	

Values Prior to Sampling

1040	28.5	Ø	0.10	21.08	2	

Sample ID: VA1307

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Windy 30s

Well ID No/Interval: 106141-450

Date: 3-8-12

Time: 1131

Field Crew: DA, DM

Crew Signature:

Review Signature and Date: 3/12/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.08 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: -1.83" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 3-8-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1131	0	Ø	0.10	20.59	6	
1135	48	Ø	0.12	20.47	4	
1139	96	Ø	0.16	20.53	4	
1143	144	Ø	0.16	20.53	4	
1147	192	Ø	0.14	20.57	5	
1151	240	Ø	0.16	20.55	4	

Values Prior to Sampling

1151	240	Ø	0.16	20.55	4	

Sample ID: VA1308

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SV106142-30 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature: DMA

Weather: Sunny 50's Windy | Time: 0916 | Review Signature and Date: Daniel Medina 3.7.12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	30 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.0918 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	20 ft	(K) One Purge Volume (C + J)	17.268 ft^3
(E) Depth to Bottom of Screen	30 ft	(L) 10 Purge Volumes (K*10)	17.268 ft^3

Static Pressure: .05 "H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-7-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0916	Ø	Ø	0.02	20.67	16	
0919	4.5	Ø	0.22	20.96	15	
0922	9.0	Ø	0.20	20.56	10	
0925	13.5	Ø	0.22	20.70	9	
0928	18.0	Ø	0.22	20.72	10	

Values Prior to Sampling

0928	18.0	Ø	0.22	20.72	10	

Sample ID: VA1309

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVE106042-50 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature: [signature]

Weather: Windy Sunny 50's | Time: 0946 | Review Signature and Date: Daniel Medina 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs in BH+ in BZ

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.153 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.88 ft^3

Static Pressure: .06 "H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-7-12 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0946	0	0	0.14	20.33	12	
0949	4.5	0	0.18	20.55	10	
0952	9.0	0	0.18	20.55	12	
0955	13.5	0	0.20	20.40	11	
0958	18.0	0	0.20	20.41	10	

Values Prior to Sampling

0958	18.0	0	0.20	20.41	10	

Sample ID: VA1310

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SV106142-170 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature:

Weather: Windy & sunny 50's | Time: 1018 | Review Signature and Date: Daniel Madrid 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged | Locked: (Yes) - No | Well ID Mark: (Yes) - No

Notes: VOCs @ in BH + @ in BZ

CALCULATIONS

(A) Depth to Well Bottom	170 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.5202 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	160 ft	(K) One Purge Volume (C + J)	2.1552 ft^3
(E) Depth to Bottom of Screen	170 ft	(L) 10 Purge Volumes (K*10)	21.552 ft^3

Static Pressure: 3.66" H20 | Purge Flow Rate: 1.5 cfm

PURGE DATA

3-7-12 Date/Time ~~3~~ 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1018	0	0	0.08	20.44	12	
1021	4.5	0	0.10	20.27	11	
1024	9.0	0	0.10	20.15	12	
1027	13.5	0	0.10	20.13	11	
1030	18.0	0	0.10	20.11	10	
1033	22.5	0	0.10	20.04	10	

Values Prior to Sampling

1033	~~18.0~~ 22.5	0	0.10	20.04	10	

Sample ID: VA1311

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVI06142 -250 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 3-7-12 | Crew Signature:

Weather: Sunny 50s Windy | Time: 1107 | Review Signature and Date: Daniel Medina 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged | Locked: (Yes) No | Well ID Mark: (Yes) No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = (.00306) 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	0.765 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.4 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: 3.68" H2O | Purge Flow Rate: 1.5cfm

PURGE DATA

3-7-12 Date/Time 4/min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1107	0	Ø	0.10	20.42	11	
1111	6.0	Ø	0.10	20.64	10	
1115	12.0	Ø	0.10	20.61	9	
1119	18.0	Ø	0.10	20.45	11	
1123	24.0	Ø	0.12	20.61	11	

Values Prior to Sampling

1123	24.0	Ø	0.12	20.61	11	

Sample ID: VA1312 + 1313

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106142 - 350
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-7-12
Crew Signature:
Weather: Windy Sunny 50s
Time: 1216
Review Signature and Date: Daniel Mechura 3-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged Locked: (Yes) - No Well ID Mark: (Yes) - No

Notes: VOCs Ø in BH + Ø in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00306 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.071 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.706 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.06 ft^3

Static Pressure: 3.85" H_2O Purge Flow Rate: 1.5

PURGE DATA

3-7-12 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1216	0	Ø	0.02	20.68 ~~20.68~~	8	
1220	6.0	Ø	0.10	20.42	9	
1224	12.0	Ø	0.12	20.34	12	
1228	18.0	Ø	0.12	20.51	9	
1232	24.0	Ø	0.10	20.24	9	
1235 (3 min)	28.5	Ø	0.14	20.24	9	

Values Prior to Sampling

1235	28.5	Ø	0.14	20.24	9	

Sample ID: VA1314

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SV106/42-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 3-7-17
Crew Signature:
Weather: Windy Sunny 50s
Time: 1258
Review Signature and Date: 3.7.17

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged
Locked: Yes - No
Well ID Mark: Yes - No
Notes: VOCs 32.5 in BH + 0 in BZ

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.04906 ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	22.007 ft^3	(J) Filter Pack Volume (F x G)	1.635 ft^3
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.712 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: 3.18" H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

3-7-17 Date/Time 4 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1258	0	0	0.08	20.65	8	
1302	48	0	0.16	20.16	51	
1306	96	0	0.16	20.10	54	
1310	144	0	0.16	20.08	56	
1314	192	0	0.18	20.04	57	
1318	240	0	0.18	20.01	57	

Values Prior to Sampling

1318	240	0	0.18	20.01	57	

Sample ID: VA1315