Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106025-025	**Field Crew:** TN
Site / SWMU No.: 106	**Date:** 5/14/12	**Crew Signature:** TN
Weather: sunny	**Time:** 920	**Review Signature and Date:** 5/15/2012

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	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):	.976 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) 5/14/12 TN	~~2.38~~ 2.70 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 lpm

PURGE DATA

Date/Time 5/14/12 (3 sum)	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
926	0	0	.38	21.08	3	
929	4.5	0	1.92	19.57	3	
932	9	0	2.08	19.34	3	
935	13.5	0	2.16	19.30	3	
938	18	0	2.18	19.47	3	

Values Prior to Sampling

938	18	0	2.18	19.47	3	

Sample ID: VA 151

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106125-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: TNoga

Weather: sunny

Time: 1006

Review Signature and Date: [signature] 5/15/2012

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: 0" H_2O

Purge Flow Rate: 1.5 gpm

PURGE DATA

Date/Time 5/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1006	0	0	3.46	17.12	2	
1009	4.5	0	3.54	16.95	3	
1012	9	0	3.62	16.91	2	
1015	13.5	0	3.66	16.73	2	
1018	18	0	3.66	16.55	4	

Values Prior to Sampling

1018	18	0	3.66	16.55	4	

Sample ID: VA1512

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: TN

Site / SWMU No.: 106 | Date: 5/22/12 | Crew Signature: T Nogen

Weather: sunny | Time: 908 | Review Signature and Date: 5/23/12

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	151.25 ft	(F) Filter Pack Length (E –D)	2.50 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)	.40 ft³
(D) Depth to Top of Screen	148.75 ft	(K) One Purge Volume (C + J)	.86 ft³
(E) Depth to Bottom of Screen	151.25 ft	(L) 10 Purge Volumes (K*10)	8.6 ft³

Static Pressure: -.64" H_2O | **Purge Flow Rate:** 1.0 afm

PURGE DATA

2 min Date/Time 5/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
908	0	0	.02	21.06	5	
910	2	0	.06	20.90	14	
912	4	0	.08	20.33	13	
914	6	0	.12	20.17	16	
916	8	0	.16	19.95	29	
918	10	0	.14	19.69	24	
920	12	0	.16	19.72	11	

Values Prior to Sampling

TN 5/22/12 TN 5/22/12

918	~~10~~	0	.16	19.72	11	
920	12					

Sample ID: VA 1380

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: TN

Site / SWMU No.: 106 | Date: 5/22/12 | Crew Signature: TNager

Weather: sunny | Time: 944 | Review Signature and Date: 6/23/12

WELL OBSERVATIONS

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

Notes: BHVOC's 0
BZVOC's 0

CALCULATIONS TN 5/22/12

(A) Depth to Well Bottom	~~250.5~~ ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	~~2.51.25~~ 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)	.40 ft³
(D) Depth to Top of Screen	248.75 ft	(K) One Purge Volume (C + J)	1.17 ft³
(E) Depth to Bottom of Screen	251.25 ft	(L) 10 Purge Volumes (K*10)	11.7 ft³

Static Pressure: -.74" H 20

Purge Flow Rate: 1.0 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
944	0	0	0	20.94	9	
947	3	0	.12	20.65	12	
950	6	0	.16	20.59	13	
953	9	0	.18	20.55	14	
956	12	0	.20	20.55	13	

Values Prior to Sampling

956	12	0	.20	20.55	13	

Sample ID: VA 1381

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: TN

Site / SWMU No.: 106 | Date: 5/22/12 | Crew Signature: T Nage

Weather: sunny | Time: 1018 | Review Signature and Date: 5/23/12

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	351.25 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):	1.07 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	348.75 ft	(K) One Purge Volume (C + J)	1.47 ft³
(E) Depth to Bottom of Screen	351.25 ft	(L) 10 Purge Volumes (K*10)	14.7 ft³

Static Pressure: -.92" H20 **Purge Flow Rate:** 1.0 cfm

PURGE DATA

5 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
1018	0	0	.38	19.80	91	
1023	5	0	.38	19.70	104	
1028	10	0	.38	19.65	106	
1033	15	0	.40	19.63	108	

Values Prior to Sampling

1033	15	0	.40	19.63	108	

Sample ID: VA 1382

Shaw 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: TN

Site / SWMU No.: 106

Date: 5/22/12

Crew Signature:

Weather: sunny

Time: 1053

Review Signature and Date: 05/23/12

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	451.25 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):	1.38 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	448.75 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	451.25 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: −.96" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/22/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1053	0	0	.02	20.15	68	
1056	4.5	0	.76	19.07	648	
1059	9	0	.80	19.00	685	
1102	13.5	0	.80	19.07	696	
1105	18	0	.82	19.04	733	

Values Prior to Sampling

1105	18	0	.82	19.04	733	

Sample ID: VA 1383

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106108-025 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 5/15/12 | Crew Signature: TNagel

Weather: sunny | Time: 1440 | Review Signature and Date: 5/16/2012

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	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 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1440	0	0	1.12	18.20	6	–
1443	4.5	0	0.80	19.20	4	
1446	9	0	0.70	19.67	2	
1449	13.5	0	0.68	19.75	2	
1452	18	0	0.68	19.87	2	

Values Prior to Sampling

1452	18	0	0.68	19.87	2	

Sample ID: VA 1398

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: 106108-050
Field Crew: TN, DM
Site / SWMU No.: 106
Date: 5/15/12
Crew Signature: TNager
Weather: sunny
Time: 1522
Review Signature and Date: 5/16/2012

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):	.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: +.10" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1522	0	0	3.28	16.92	2	
1525	4.5	0	3.46	16.88	2	
1528	9	0	3.48	16.86	3	
1531	13.5	0	3.54	16.90	1	
1534	18	0	3.54	16.91	1	

Values Prior to Sampling

1534	18	0	3.54	16.91	1	

Sample ID: VA 1399
VA 1400

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106108-150
Field Crew: TN
Site / SWMU No.: 106
Date: 5/16/12
Crew Signature: T Nagy
Weather: Sunny
Time: 815
Review Signature and Date: 5/17/12

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	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):	.15 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: -1.0" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/16/12	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
815	0	0	2.38	17.59	63	
818	4.5	0	2.88	17.21	68	
821	9	0	3.08	17.03	71	
824	13.5	0	3.34	16.71	77	
827	18	0	3.46	16.28	81	
830	22.5	0	3.64	16.09	91	

Values Prior to Sampling

830	22.5	0	3.64	16.09	91	

Sample ID: VA 1401

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106108-250
Field Crew: TN
Site / SWMU No.: 106
Date: 5/16/12
Crew Signature: T Nogen
Weather: sunny
Time: 850
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

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

Notes: 13 1 VOC's 0
13 2 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: -1.5" H2O

PURGE DATA

Purge Flow Rate: 1.5 cfm

6min Date/Time 5/16/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
850	0	0	.32	19.73	98	
856	9	0	.52	19.38	212	
902	18	0	.52	19.39	215	
908	27	0	.52	19.38	219	

Values Prior to Sampling

908	27	0	.52	19.38	219	

Sample ID: VA1402

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: TN

Site / SWMU No.: 106 | Date: 5/16/12 | Crew Signature: [signature]

Weather: sunny | Time: 1002 | Review Signature and Date: [signature] 5/17/2012

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	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: -1.5" H20 | Purge Flow Rate: 12 cfm

PURGE DATA

4mm Date/Time 5/16/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1002	0	0	0.16	20.36	126	
1006	48	0	0.18	20.22	179	
1010	96	0	0.20	20.22	182	
1014	144	0	0.20	20.15	184	
1018	192	0	0.22	20.11	185	
1022	240	0	0.22	20.10	184	

Values Prior to Sampling

1022	240	0	0.22	20.10	184	

Sample ID: VA1404

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106109-025

Field Crew: TN

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: T Dapen

Weather: sunny

Time: 1033

Review Signature and Date: 5/15/12

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	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 gpm

PURGE DATA

Date/Time 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1033	0	0	0.56	20.49	4	
1036	4.5	0	0.60	19.92	4	
1039	9	0	0.62	20.02	4	
1042	13.5	0	0.62	20.20	5	
1045	18	0	0.58	19.89	0	

Values Prior to Sampling

1045	18	0	0.58	19.89	0	

Sample ID: VA 1405

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106109-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: T Nguyen

Weather: sunny

Time: 1100

Review Signature and Date: 5/15/12

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

TDS 5/15/12

(A) Depth to Well Bottom	50 ~~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):	.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 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1100	0	0	0.84	19.47	3	
1103	4.5	0	0.94	19.33	4	
1106	9	0	0.94	19.19	3	
1109	13.5	0	0.94	19.01	3	
1112	18	0	0.96	18.99	3	

Values Prior to Sampling

1112	18	0	0.96	18.99	3	

Sample ID: VA 1406

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: TN

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: T Nagle

Weather: sunny

Time: 1127

Review Signature and Date: 5/15/12

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, 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: -1.6 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1127	0	0	0.04	20.21	4	
1130	4.5	0	0.16	19.49	1	
1133	9	0	0.16	19.48	3	
1136	13.5	0	0.16	19.44	3	
1139	18	0	0.18	19.75	3	
1142	22.5	0	0.18	19.90	3	

Values Prior to Sampling

1142	22.5	0	0.18	19.90	3	

Sample ID: VA1407

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: TN, DM

Site / SWMU No.: 106 | Date: 5/15/12 | Crew Signature: T Nagy

Weather: sunny | Time: 1204 | Review Signature and Date: 5/16/2012

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	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: ~ 1.9" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1204	0	Ø	0.26	19.40	9	
1210	9	Ø	0.40	19.18	9	
1216	18	Ø	0.42	19.41	7	
1222	27	Ø	0.46	19.51	9	

Values Prior to Sampling

1222	27	Ø	0.46	19.51	9	

Sample ID: VA1408

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106 109-350

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: T Nagel

Weather: sunny

Time: 1242

Review Signature and Date: 5/16/2012

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	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: −2.0 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6-15-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1242	0	Ø	0.02	20.56	7	
1248	9	Ø	0.22	19.94	114	
1254	18	Ø	0.22	19.86	117	
1300	27	Ø	0.24	19.89	118	

Values Prior to Sampling

1300	27	Ø	0.24	19.89	118	

Sample ID: VA1409
VA14-10

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: DM
Site / SWMU No.: 106
Date: 5-15-12
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 1335
Review Signature and Date: 5/16/2012

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	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	4 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: −2.0 "H2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 5/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1355	0	0	0	20.61	5	
1339	48	0	1.52	14.33	261	
1343	96	0	1.70	13.64	183	
1347	144	0	1.72	13.36	155	
1351	192	0	1.74	13.22	141	
1355	240	0	1.74	13.10	129	

Values Prior to Sampling

1355	240	0	1.74	13.10	129	

Sample ID: VA1411

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

DUP 5/15/12

Project Name: KAFB-BFF

Well ID No./Interval: 106MW-25

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 5-15-12

Crew Signature:

Weather: Sunny 60s

Time: 0920

Review Signature and Date: 5/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 in

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	0.00306 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: −.10 in H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/15/12	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
0920	0	0.00	0.46	20.10	1	
0923	4.5	0.00	0.56	20.08	0	
0926	9	0.00	0.54	19.77	0	
0929	13.5	0.00	0.58	19.74	0	
0932	18	0.00	0.62	19.70	0	

Values Prior to Sampling

0932	18	0.00	0.62	19.70	0	

Sample ID: VA1412

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106110-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-15-12
Crew Signature:
Weather: Sunny 60°
Time: 0957
Review Signature and Date: 5/15/12

WELL OBSERVATIONS

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

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: −.10 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-15-12	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
0957	0	0.00	0.84	19.21	0	
0955	4.5	0.00	0.86	19.21	5	
0958	9	0.00	0.90	19.75	4	
1001	13.5	0.00	0.90	19.50	4	
1004	18	0.00	0.90	19.64	6	

Values Prior to Sampling

1004	18	0.00	0.90	19.64	6	

Sample ID: VA1413

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: 5-15-12
Crew Signature:
Weather: Sunny 60s
Time: 1023
Review Signature and Date: 5/15/12

WELL OBSERVATIONS

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

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	0.00306 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: −2.0 "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-15-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1023	0	0.00	0.52	19.81	12	
1026	4.5	0.00	1.16	18.44	75	
1029	9	0.00	1.18	18.62	78	
1032	13.5	0.00	1.18	18.64	79	
1035	18	0.00	1.16	18.41	78	
1038	21	0.00	1.14	18.19	77	2 min

Values Prior to Sampling

1038	21	0.00	1.14	18.19	77	

Sample ID: VA1414

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: 5-15-12
Crew Signature:
Weather: Sunny 70°s
Time: 1057
Review Signature and Date: 5/15/12

WELL OBSERVATIONS

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

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: −2.0 "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 5-15-12	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
1057	0	0.00	0.26	20.01	4	
1101	6	0.00	0.38	19.82	7	
1105	12	0.00	0.44	19.71	9	
1109	18	0.00	0.44	19.60	9	
1113	24	0.00	0.44	19.45	9	

Values Prior to Sampling

1113	24	0.00	0.44	19.45	9	

Sample ID: VA1415

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: 5-15-17
Crew Signature:
Weather: Sunny 70s
Time: 1131
Review Signature and Date: 5/15/17

WELL OBSERVATIONS

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

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: -.5 in H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

5-15-17 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1131	0	0.00	0.18	19.92	61	
1135	6	0.00	0.20	19.79	113	
1139	12	0.00	0.20	19.90	118	
1143	18	0.00	0.22	20.06	122	
1147	24	0.00	0.20	20.44	122	
1151	28.5	0.00	0.22	20.03	124	3 min

Values Prior to Sampling

1151	28.5	0.00	0.22	20.03	124	

Sample ID: VA1416

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, DN

Site / SWMU No.: 106 | Date: 5-15-17 | Crew Signature: DNJR

Weather: Sunny 70s | Time: 1206 | Review Signature and Date: 5/16/2017

WELL OBSERVATIONS

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

Notes: VOCs 0 in BH

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	0.04906 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: -3.0 "H₂O | Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1206	0	0.00	0.00	20.74	3	
1210	48	0.00	0.26	19.56	1154	
1214	96	0.00	0.38	18.26	1691	
1218	144	0.00	0.47	17.83	1684	
1222	192	0.00	0.46	17.74	1668	
1226	240	0.00	0.48	18.03	1614	

Values Prior to Sampling

1226	240	0.00	0.48	18.03	1614	

Sample ID: VA1417

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF
Well ID No/Interval: KAFB-106111-025
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 90's
Time: 1307
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 2.3 ppm in BH
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):	.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 min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1307	0	Ø	0.04	20.74	65	
1310	4.5	Ø	0.02	21.23	31	
1313	9	Ø	0.04	21.56	18	
1316	13.5	Ø	0.04	20.70	20	
1319	18	Ø	0.04	20.66	22	

Values Prior to Sampling

1319	18	Ø	0.04	20.66	22	

Sample ID: VA1418

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106111-50
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 90's
Time: 1348
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 15.8 ppm in BH
BZ 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)	1.788 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

3min Date/Time 6-13-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1348	0	Ø	0.08	20.84	14	
1351	4.5	Ø	0.16	20.81	13	
1354	9	Ø	0.18	20.82	9	
1357	13.5	Ø	0.18	20.88	9	
1400	18	Ø	0.22	20.97	11	

Values Prior to Sampling

1400	18	Ø	0.22	20.97	11	

Sample ID: VA1419
VA1420

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB-106111-150
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 90's
Time: 1451
Review Signature and Date: 10/14/12

WELL OBSERVATIONS

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

Notes: VOC's 1.1 ppm in BH. BZ Ø

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):	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: -.12 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1451	0	Ø	Ø	20.70 DM	49	
1454	4.5	Ø	Ø	20.68 DM	48	
1457	9	Ø	0.08	20.61	8	
1500	13.5	Ø	0.10	20.58	8	
1503	18	Ø	0.10	20.60	5	
1506	22.5	Ø	0.10	20.50	6	

Values Prior to Sampling

1506	22.5	Ø	0.10	20.50	6	

Sample ID: VA1421

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: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel J. Meglinn
Weather: Sunny 80's
Time: 1530
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 0.1 ppm in BH
-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):	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: -.16" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 6-13-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1530	0	Ø	Ø	20.77	10	
1534	6	Ø	0.02	20.74	4	
1538	12	Ø	0.02	20.72	5	
1542	18	Ø	0.02	20.69	3	
1546	24	Ø	0.02	20.90	3	

Values Prior to Sampling

1546	24	Ø	0.02	20.90	3	

Sample ID: JA1422

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 - 350
Field Crew: DA
Site / SWMU No.: 106
Date: 6-14-12
Crew Signature: [signature]
Weather: Sunny 70s
Time: 0851
Review Signature and Date: [signature] 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 9.8 in BH

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 0.00306	(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: -1.6 $"H_2O$ **Purge Flow Rate:** 1.5 cfm

PURGE DATA

4 min Date/Time 6-14-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0851	0	0.00	0.00	21.03	4	
0855	6	0.00	0.10	20.73	6	
0859	12	0.00	0.02	21.03	8	
0903	18	0.00	0.02	20.96	7	
0907	24	0.00	0.02	20.89	6	
0910	28.5	0.00	0.00	20.92	6	3 min

Values Prior to Sampling

0910	28.5	0.00	0.00	20.97	6	

Sample ID: VA1473

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106111-450
Field Crew: DA
Site / SWMU No.: 106
Date: 6-14-12
Crew Signature: DA
Weather: Sunny 70s
Time: 0936
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOCs 1.2 in BH

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)	0.04906 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)	23.912 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft^3

Static Pressure: -1.1 "H_2O **Purge Flow Rate:** 12 cfm

PURGE DATA

4 min Date/Time 6-14-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0936	0	0.00	0.00	21.06	2	
0940	48	0.00	0.02	20.85	95	
0944	96	0.00	0.04	20.97	101	
0948	144	0.00	0.02	20.99	101	
0952	192	0.00	0.04	21.23	99	
0956	240	0.00	0.04	21.20	96	

Values Prior to Sampling

0956	240	0.00	0.04	21.20	96	

Sample ID: VA1424

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106112-025

Field Crew: TN

Site / SWMU No.: 106

Date: 6/6/12

Crew Signature:

Weather: sunny

Time: 1405

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	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~~

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1405	0	0	.44	18.82	18	
1408	4.5	0	.46	18.40	17	
1411	9	0	.44	18.24	14	
1414	13.5	0	.48	18.21	14	
1417	18	0	.48	18.18	14	

Values Prior to Sampling

1417	18	0	.48	18.18	14	

Sample ID: VA1425

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: 6/6/12

Crew Signature:

Weather: sunny

Time: 1452

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):	.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

3 min Date/Time 6/6/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1452	0	0	.92	17.45	18	
1455	4.5	0	.94	17.00	17	
1458	9	0	.96	16.76	16	
1501	13.5	0	.98	16.99	15	
1504	18	0	1.00	17.18	14	

Values Prior to Sampling

1504	18	0	1.00	17.18	14	

Sample ID: VA1426

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: 6/6/12 | Crew Signature: T Mayer

Weather: sunny | Time: 1539 | 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):	.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: +.06 "H2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1539	0	0	.82	16.94	22	
1542	4.5	0	.92	16.45	25	
1545	9	0	.92	16.14	25	
1548	13.5	0	.92	16.37	25	
1551	18	0	.92	16.29	27	
1554	22.5	0	.94	16.13	26	

Values Prior to Sampling

1554	22.5	0	.94	16.13	26	

Sample ID: VA 1427

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, DM

Site / SWMU No.: 106

Date: 6/7/12

Crew Signature: T Nagle

Weather: sunny

Time: 818

Review Signature and Date: 6/8/12

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	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: -1.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min 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
818	0	0	.58	20.17	145	
821	9	0	1.56	16.51	137	
824	18	0	1.48	16.43	137	
827	27	0	1.50	16.43	138	

Values Prior to Sampling

827	27	0	1.50	16.43	138	

Sample ID: VA1428

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106112-350

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 6/7/12

Crew Signature: T Nagel

Weather: sunny

Time: 858

Review Signature and Date: 6/8/2012

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	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: −1.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time 6/7/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
858	0	0	1.26	15.21	7520	
904	9	0	1.30	15.30	7690	
910	18	0	1.30	15.32	7690	
916	27	0	1.32	15.27	7680	

Values Prior to Sampling

916	27	0	1.32	15.27	7680	

Sample ID: VA 1429

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, DM

Site / SWMU No.: 106

Date: 6/7/12

Crew Signature: T Nagle

Weather: sunny

Time: 941

Review Signature and Date: 6/8/2012

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	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: −1.0" H_2O

Purge Flow Rate: ~~1.5 cfm~~ TN 6/7/12 12 cfm

PURGE DATA

4 min Date/Time 6/7/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
941	0	0	.12	20.06	301	
945	48	0	1.36	16.21	7340	
949	96	0	1.42	16.15	7760	
953	144	0	1.48	16.11	8000	
957	192	0	1.48	16.16	8110	
1001	240	0	1.50	16.09	8200	

Values Prior to Sampling

1001	240	0	1.50	16.09	8200	

Sample ID: VA 1430

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: TN

Site / SWMU No.: 106

Date: 6/4/12

Crew Signature: TNagel

Weather: sunny

Time: 1120

Review Signature and Date: 6/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BHVOC's 0

BZ VOC's 0

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: 0 in H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3mm Date/Time 6/4/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1120	0	0	.42	20.08	34	
1123	4.5	0	.44	20.28	25	
1126	9	0	.44	20.40	18	
1129	13.5	0	.46	20.39	15	
1132	18	0	.46	20.43	13	

Values Prior to Sampling

1132	18	0	.46	20.43	13	

Sample ID: VA1431

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106113-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/4/12 | Crew Signature: TNoger

Weather: sunny | Time: 1200 | Review Signature and Date: 10/5/12

WELL OBSERVATIONS

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

Notes: BTEX 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	* 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):	.15 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft^3

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6/4/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1200	0	0	.38	18.94	18	
1203	4.5	0	.44	18.82	14	
1206	9	0	.46	18.72	12	
1209	13.5	0	.46	18.76	10	
1212	18	0	.46	18.90	9	

Values Prior to Sampling

1212	18	0	.46	18.90	9	

Sample ID: VA1432

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: 106113-150

Date: 6/4/12

Time: 1245

Field Crew: TN

Crew Signature: TNagen

Review Signature and Date: 6/5/12

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	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: -.84" H20

Purge Flow Rate: 1.5 afm

PURGE DATA

3mm Date/Time 6/4/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1245	0	0	.38	18.20	12	
1248	4.5	0	.38	18.30	8	
1251	9	0	.40	18.36	7	
1254	13.5	0	.40	18.38	7	
1257	18	0	.40	18.42	6	
1300	22.5	0	.40	18.30	7	

Values Prior to Sampling

1300	22.5	0	.40	18.30	7	

Sample ID: VA1433

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: TN

Site / SWMU No.: 106

Date: 6/4/12

Crew Signature: T Nagy

Weather: ~~Thunderstorms~~ Cloudy TNG 6/4/12

Time: 14~~4~~8 TNG 6/4/12

Review Signature and Date: 6/5/12

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: -1.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6/4/12 TNG 6/4/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1448	0	0	.90	18.64	13	
1454	9	0	.90	18.45	3	
1500	18	0	.90	18.44	4	
1506	27	0	.88	18.57	4	

Values Prior to Sampling

1506	27	0	.88	18.57	4	

Sample ID: VA 1434

VA 1435

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: TN

Site / SWMU No.: 106

Date: 6/4/12

Crew Signature: TNoah

Weather: Sunny

Time: 1534

Review Signature and Date: [illegible] 6/5/12

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	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: −1.0 "H₂O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time 6/4/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1534	0	0	.02	20.78	13	
1540	9	0	.58	18.09	1122	
1546	18	0	.60	18.18	1137	
1552	27	0	.58	18.20	1139	

Values Prior to Sampling

1552	27	0	.58	18.20	1139	

Sample ID: VA1436

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877 | Well ID No/Interval: 106113-450 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/4/12 | Crew Signature: TNagler

Weather: Sunny | Time: 1604 | Review Signature and Date: 6/5/12

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 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: -1.0" H2O

Purge Flow Rate: TN 6/4/12 ~~15 cfm~~ 12 cfm

PURGE DATA

Date/Time 6/4/12 (4 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1604	0	0	.02	21.15	7	
1608	48	0	.58	16.87	4110	
1612	96	0	.60	16.59	4370	
1616	144	0	.50	16.53	4450	
1620	192	0	.60	16.48	4490	
1624	240	0	.60	16.45	4500	

Values Prior to Sampling

1624	240	0	.60	16.45	4500	

Sample ID: VA 1437

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106114
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-30-12
Crew Signature:
Weather: Sunny 70s
Time: 1126
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 14.5ppm in BH

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	0.00306 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	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: 1.5cfm

PURGE DATA

3 min Date/Time 5-30-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1126	0	0.00	0.00	22.02	0	
1129	4.5	0.00	0.06	22.29	1	
1132	9	0.00	0.08	19.59	8	
1135	13.5	0.00	0.08	19.53	10	
1138	18	0.00	0.08	19.53	8	

Values Prior to Sampling

1138	18	0.00	0.08	19.53	8	

Sample ID: VA1438

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: 5-30-12
Crew Signature:
Weather: Sunny 90s
Time: 1159
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 230.8 ppm in BH

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	0.00306 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: 0 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-30-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1159	0	0.00	0.00	20.80	0	
1202	4.5	0.00	0.08	20.61	2	
1205	9	0.00	0.10	20.53	4	
1208	13.5	0.00	0.10	20.10	2	
1211	18	0.00	0.12	20.50	3	

Values Prior to Sampling

1211	18	0.00	0.12	20.50	3	

Sample ID: VA1439

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: 5-30-12
Crew Signature:
Weather: Sunny 70s
Time: 1249
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

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

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	0.00306 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: -.62 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-30-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1249	Ø	0.00	0.00	22.02	2	
1252	4.5	0.00	0.00	22.41	5	
1255	9	0.00	0.08	23.03	5	
1258	13.5	0.00	0.06	21.97	4	
1301	18	0.00	0.06	21.42	3	
1304	22.5	0.00	0.06	21.40	6	

Values Prior to Sampling

1304	22.5	0.00	0.06	21.40	6	

Sample ID: VA1440

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: DA, DN
Site / SWMU No.: 106
Date: 5-30-12
Crew Signature:
Weather: Sunny 70s
Time: 1331
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 1.6 ppm in BH

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	0.00306 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: -.70 "H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

4min Date/Time 5-30-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1331	0	0.00	0.02	20.57	2	
1335	6	0.00	0.10	20.45	1	
1339	12	0.00	0.10	21.52	1	
1343	18	0.00	0.12	21.68	2	
1347	24	0.00	0.12	21.62	1	

Values Prior to Sampling

1347	24	0.00	0.12	21.62	1	

Sample ID: VA1441

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: DA, DM
Site / SWMU No.: 106
Date: 5-30-12
Crew Signature:
Weather: Sunny 80's
Time: 1418
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

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

Notes: VOCs 0.9 ppm in BH

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	0.00306 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: -1.4 "H₂O Purge Flow Rate: 1.5 cfm

PURGE DATA

4/min Date/Time 5-30-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1418	0	0.00	0.00	20.80	2	
1422	6	0.00	0.00	20.90	14	
1426	12	0.00	0.00	20.98	24	
1430	18	0.00	0.02	21.07	26	
1434	24	0.00	0.00	21.88	22	
1437	28.5	0.00	0.02	21.57	23	3 min

Values Prior to Sampling

1437	28.5	0.00	0.02	21.59	23	

Sample ID: VA1442

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 80's

Well ID No/Interval: 106114-450

Date: 5-30-12

Time: 1506

Field Crew: DA, DM

Crew Signature: DM

Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's ppm in BH

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)	0.04906 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

4 min Date/Time 5-30-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1506	0	0.00	0.00	20.84	1	
1510	48	0.00	0.06	21.10	957	
1514	96	0.00	0.08	21.07	1143	
1518	144	0.00	0.06	20.39	947	
1522	192	0.00	0.04	20.36	940	
1526	240	0.00	0.06	20.14	1053	

Values Prior to Sampling

1526	240	0.00	0.06	20.14	1053	

Sample ID: VA1443

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB-106115-025
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-4-12
Crew Signature: Daniel Medina
Weather: Sunny 70's
Time: 0820
Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm 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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.07 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 ft³

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

PURGE DATA

3 min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0820	0	Ø	0.02	20.83	Ø	
0823	4.5	Ø	0.04	21.14	Ø	
0826	9	Ø	0.04	20.75	3	
0829	13.5	Ø	0.06	20.87	4	
0832	18	Ø	0.08	20.95	7	

Values Prior to Sampling

0832	18	Ø	0.08	20.95	7	

Sample ID: VA 1444

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106115-050
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-4-12
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 0654
Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
BZ 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: -.04" H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time 6-4-12	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
0854	0	Ø	Ø	20.78	2	
0857	4.5	Ø	0.04	21.02	Ø	
0900	9	Ø	0.06	21.11	2	
0903	13.5	Ø	0.08	21.16	1	
0906	18	Ø	0.10	21.23	3	

Values Prior to Sampling

0906	18	Ø	0.10	21.23	3	

Sample ID: VA 1445

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106115-150

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 6-4-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 0935

Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's 0 ppm in BH

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):	.45 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)	2.08 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.8 ft³

Static Pressure: -.98" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0935	4.0	0	0	20.70	0	
0938	4.5	0	0.02	20.87	0	
0941	9	0	0	20.88	0	
0944	13.5	0	0.02	20.87	0	
0947	18	0	0.02	20.78	1	
0950	22.5	0	0.02	20.77	3	

Values Prior to Sampling

0950	22.5	0	0.02	20.77	3	

Sample ID: VA1446
VA1447

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: KAFB-106115-250	Field Crew: DM, DA
Site / SWMU No.: 106	Date: 6-4-12	Crew Signature: Daniel Medina
Weather: Sunny 80s	Time: 1036	Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's 0 ppm in BH

BZ 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):	.766 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)	~~2.39~~ ft³ 2.4
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	DM ~~23.9~~ ft³ 24

Static Pressure: −1.1 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1036	0	0	0.02	20.72	0	
1040	6	0	0.02	20.84	0	
1044	12	0	0.04	20.94	0	
1048	18	0	0.06	21.02	0	
1052	24	0	0.04	21.11	0	

Values Prior to Sampling

1052	24	0	0.04	21.11	0	

Sample ID: VA1448

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	**Well ID No/Interval:** KAFB-106116-350	**Field Crew:** DM, DA
Site / SWMU No.: 106	**Date:** 6-4-12	**Crew Signature:** Daniel Medina
Weather: Sunny 80's	**Time:** 1118	**Review Signature and Date:** 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
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):	1.071 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: -1.6" H_2O **Purge Flow Rate:** 1.5cfm

PURGE DATA

4 min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1118	0	Ø	Ø	20.84	Ø	
1122	6	Ø	Ø	20.85	120	
1126	12	Ø	0.02	20.75	121	
1130	18	Ø	0.02	20.89	122	
1134	24	Ø	0.02	20.79	122	
3 min 1137	28.5	Ø	0.04	20.84	124	

Values Prior to Sampling

1137	28.5	Ø	0.04	20.84	124	

Sample ID: VA 1449

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB-106115-450 | Field Crew: DM, DA

Site / SWMU No.: 106 | Date: 6-4-12 | Crew Signature: Daniel Medina

Weather: Partly Cloudy 70's | Time: 1200 | Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: VOC's 1.4 ppm in BH
BZ 0.3 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)	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: 1.6" H_2O **Purge Flow Rate:** 12 cfm

PURGE DATA

4 min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1200	~~480~~ 0	Ø	Ø	20.79	1	
1204	48	Ø	0.20	20.08	525	
1208	96	Ø	0.22	20.14	560	
1212	144	Ø	0.24	20.65	557	
1216	192	Ø	0.24	20.74	561	
1220	240	Ø	0.24	20.85	560	

Values Prior to Sampling

1220	240	Ø	0.24	20.85	560	

Sample ID: VA1450

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106116-025

Field Crew: TN

Site / SWMU No.: 106

Date: 5/29/12

Crew Signature: TNogel

Weather: sunny

Time: 1203

Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 4.3 ppm
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

3mm Date/Time 5/29/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1203	0	0	.06	20.08	23	
1206	4.5	0	.42	19.69	17	
1209	9	0	.44	19.68	16	
1212	13.5	0	.46	19.56	14	
1215	18	0	.46	19.51	13	

Values Prior to Sampling

1215	18	0	.46	19.51	13	

Sample ID: VA 1451

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106116-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/29/12 | Crew Signature: TNagel

Weather: sunny | Time: 1247 | Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

Notes: BH VOC's 4.3ppm
B≥ 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)	17.80 ft³

Static Pressure: -.12" H20

Purge Flow Rate: 1.5 lpm

PURGE DATA

3 min Date/Time 5/29/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1247	0	0	.20	19.82	15	
1250	4.5	0	.68	18.75	23	
1253	9	0	.78	18.26	20	
1256	13.5	0	.84	17.77	14	
1259	18	0	.86	17.55	11	

Values Prior to Sampling

1259	18	0	.86	17.55	11	

Sample ID: UA1452

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** 106116-150	**Field Crew:** TN
Site / SWMU No.: 106	**Date:** 5/29/12	**Crew Signature:** T Nagar
Weather: Sunny	**Time:** 1330	**Review Signature and Date:** 6/20/2012

WELL OBSERVATIONS

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

Notes: BH VOC's 4.3 ppm
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):	.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: -1.1" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/29/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1330	0	0	.04	20.27	7	
1333	4.5	0	.22	19.61	6	
1336	9	0	.26	19.45	7	
1339	13.5	0	.30	1903	6	
1342	18	0	.34	18.76	7	
1345	22.5	0	.36	18.57	7	

Values Prior to Sampling

1345	22.5	0	.36	18.57	7	

Sample ID: VA 1453

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: 5/29/12 | Crew Signature: T Nogle

Weather: sunny | Time: 1422 | Review Signature and Date: [illegible] 5/30/2012

WELL OBSERVATIONS

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

Notes: BH VOC's 4.3ppm
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: -1.5" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 5/29/12 (6 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1422	0	0	.02	20.72	9	
1428	9	0	.06	20.78	11	
1434	18	0	.08	20.48	21	
1440	27	0	.08	20.49	26	

Values Prior to Sampling

1440	27	0	.08	20.49	26	

Sample ID: VA 1454

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF | Well ID No/Interval: 106116 - 350 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/29/12 | Crew Signature: TNoga

Weather: sunny | Time: 1504 | Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

Notes: BHVOC's 4.3ppm
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: −2.5" H_2O | **Purge Flow Rate:** 1.5 cfm

PURGE DATA

6min Date/Time 5/29/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1504	0	0	0	20.75	5	
1510	9	0	.08	20.42	417	
1516	18	0	.12	20.11	549	
1522	27	0	.12	20.13	572	

Values Prior to Sampling

1522	27	0	.12	20.13	572	

Sample ID: VA1455
VA1456

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106116-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/30/12

Crew Signature: T Vogler

Weather: sunny

Time: 815

Review Signature and Date: 5/31/2012

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	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (4") = .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: -1.5" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 5/30/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
815	0	0	.02	20.98	6	
819	48	0	.32	20.06	426	
823	96	0	.66	18.91	3570	
827	144	0	.90	17.99	8290	
831	192	0	1.10	17.49	10870	inst.
835	240	0	1.26	16.94	12860	inst.
					1015 *9	
					= 9135	by dilution

Values Prior to Sampling

835	240	0	1.26	16.94	9135	by dilution

Sample ID: VA1457

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106117-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-29-17
Crew Signature:
Weather: Sunny 80s
Time: 1339
Review Signature and Date: 5/30/2017

WELL OBSERVATIONS

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

Notes: VOCs Ø ppm in BH

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	0.00306 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: -Ø "H2O Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time 5-29-17	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
1339	Ø	0.00	0.00	20.82	Ø	
1342	4.5	0.00	0.24	20.93	Ø	
1345	9	0.00	0.22	20.68	Ø	
1348	13.5	0.00	0.24	20.66	Ø	
1351	18	0.00	0.24	20.72	Ø	

Values Prior to Sampling

1351	18	0.00	0.24	20.72	Ø	

Sample ID: VA1458

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106MW-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-29-12
Crew Signature:
Weather: Sunny 80s
Time: 1414
Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

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	0.00306 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: -.10" H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-29-12	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
1414	0	0.00	0.00	20.76	2	
1417	4.5	0.00	0.18	20.65	1	
1420	9	0.00	0.24	20.67	1	
1423	13.5	0.00	0.32	20.66	2	
1426	18	0.00	0.36	20.61	3	

Values Prior to Sampling

1426	18	0.00	0.36	20.61	3	

Sample ID: VA1459

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106MW-150

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 5-29-13

Crew Signature: DMa

Weather: Sunny 80's

Time: 1459

Review Signature and Date: 6/30/2013

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in Bh

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	0.00306 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: -1.0" 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
1459	0	0.00	0.24	20.45	0	
1502	4.5	0.00	0.24	20.22	0	
1505	9	0.00	0.26	20.52	0	
1508	13.5	0.00	0.28	20.42	0	
1511	18	0.00	0.28	20.44	0	
1514	22.5	0.00	0.26	20.47	0	

Values Prior to Sampling

1514	22.5	0.00	0.26	20.47	0	

Sample ID: VA 1460

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: DA, DM
Site / SWMU No.: 106
Date: 5-30-17
Crew Signature:
Weather: Sunny 60's
Time: 0811
Review Signature and Date: 5/31/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) No
Notes: VOCs 0.4 ppm in BH

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	0.00306 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: -1.2 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

5-30-17 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0811	0	0.00	0.02	20.81	0	
0815	6	0.00	0.20	20.51	98	
0819	12	0.00	0.16	20.51	112	
0823	18	0.00	0.18	20.54	113	
0827	24	0.00	0.20	20.37	114	

Values Prior to Sampling

0827	24	0.00	0.20	20.37	114	

Sample ID: VA1461

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: DA, DM
Site / SWMU No.: 106
Date: 5-30-12
Crew Signature:
Weather: Sunny 60's
Time: 0854
Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.4 ppm in BH

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	0.00306 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: -2.0 $"H_2O$
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min. Date/Time 5-30-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0854	0	0.00	0.00	20.81	0	
0858	6	0.00	0.20	20.50	534	
0902	12	0.00	0.22	20.60	556	
0906	18	0.00	0.22	20.58	566	
0910	24	0.00	0.24	20.60	565	
0914	28.5	0.00	0.26	20.62	569	3 min

Values Prior to Sampling

0914	28.5	0.00	0.26	20.62	569	

Sample ID: VA1462 + VA1463

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: DA, DM
Site / SWMU No.: 106
Date: 5-30-17
Crew Signature:
Weather: Sunny 70s
Time: 1005
Review Signature and Date: 5/31/2017

WELL OBSERVATIONS

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

Notes: VOCs Ø ppm in BH

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	0.04906 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: -2.4 "H₂O
Purge Flow Rate: 12 cfm

PURGE DATA

5-30-17 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1005	~~48~~ 0	0.00	0.00	~~20.77~~	42	
1009	~~96~~ 48	0.00	0.30	20.40	1204	
1013	~~144~~ 96	0.00	0.40	~~20.36~~	2110	
1017	~~192~~ 144	0.00	0.48	20.29	2450	
1021	240 192	0.00	0.52	20.32	2700	
1025	240	0.00	0.58	20.34	2990	

Values Prior to Sampling

1025	240	0.00	0.58	20.34	2990	

Sample ID: VA1464

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106118-025

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 6-4-12

Crew Signature: Daniel Medina

Weather: Cloudy 80's

Time: 1541

Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes:

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)	1.7115 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

3min Date/Time 6-4-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1541	0	Ø	Ø	20.73	22	
1544	4.5	Ø	0.08	20.84	2	
1547	9	Ø	0.06	20.78	2	
1550	13.5	Ø	0.08	20.75	Ø	
1553	18	Ø	0.10	20.80	Ø	

Values Prior to Sampling

1553	18	Ø	0.10	20.80	Ø	

Sample ID: VA1146

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 106118-050

Date: 6/5/12

Time: 1058

Field Crew: TN

Crew Signature: [signature]

Review Signature and Date: [signature] 6/5/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BHVOC'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

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 6/5/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1058	0	0	1.00	19.42	8	
1101	4.5	0	1.04	19.56	7	
1104	9	0	1.12	19.28	8	
1107	13.5	0	1.16	18.96	8	
1110	18	0	1.24	19.38	8	

Values Prior to Sampling

1110	18	0	1.24	19.38	8	

Sample ID: VA1466

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: TN
Site / SWMU No.: 106
Date: 6/5/12
Crew Signature: [signature]
Weather: sunny
Time: 1132
Review Signature and Date: [signature] 6/15/12

WELL OBSERVATIONS

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

Notes: BHVOC's 0
BZ VOC's 0

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	. ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.49 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	150 ft	(K) One Purge Volume (C + J)	2.12 ft³
(E) Depth to Bottom of Screen	160 ft	(L) 10 Purge Volumes (K*10)	21.2 ft³

Static Pressure: -.65" 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
1132	0	0	1.20	17.93	25	
1135	4.5	0	1.32	16.65	34	
1138	9	0	1.24	16.29	35	
1141	13.5	0	1.22	16.19	35	
1144	18	0	1.22	16.13	36	
1147	22.5	0	1.18	16.27	36	

Values Prior to Sampling

1147	22.5	0	1.18	16.27	36	

Sample ID: VA 1467

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: 106118-265

Date: 6-5-17

Time: 1215

Field Crew: DA, DM

Crew Signature: DMA

Review Signature and Date: [illegible] 6/6/2017

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	265 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.81 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	255 ft	(K) One Purge Volume (C + J)	2.44 ft³
(E) Depth to Bottom of Screen	265 ft	(L) 10 Purge Volumes (K*10)	24.4 ft³

Static Pressure: −.85" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

6min Date/Time 6|5|12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1215	0	0.00	0.16	19.37	37	
1221	9	0.00	0.32	18.98	120	
1227	18	0.00	0.40	18.96	124	
1233	27	0.00	0.40	19.21	109	

Values Prior to Sampling

1233	27	0.00	0.40	19.21	109	

Sample ID: VA1468

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 80s

Well ID No/Interval: 106118 - 350

Date: 6-5-12

Time: 1303

Field Crew: DA, DM

Crew Signature:

Review Signature and Date: 6/6/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 in BH

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	0.00306 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: -1.16 "H2O

Purge Flow Rate: 1.5

PURGE DATA

6 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
1303	0	0.00	0.00	20.70	6	
1309	9	0.00	0.12	20.31	25	
1315	18	0.00	0.12	20.34	24	
1321	27	0.00	0.14	20.86	23	

Values Prior to Sampling

1321	27	0.00	0.14	20.86	23	

Sample ID: VA1469

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 80's

Well ID No/Interval: 106118-450

Date: 6-5-12

Time: 1349

Field Crew: DA, DM

Crew Signature:

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in Bff

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	0.04906 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)	ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.721 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.21 ft³

Static Pressure: -1.1 "H₂O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 6-5-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1349	0	0.00	0.00	20.79	5	
1353	48	0.00	0.00	20.97	8	
1357	96	0.00	0.00	21.22	7	
1401	144	0.00	0.00	21.12	5	
1405	192	0.00	0.00	21.08	4	
1409	240	0.00	0.00	21.02	5	

Values Prior to Sampling

1409	240	0.00	0.00	21.02	5	

Sample ID: VA1470

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106119-25
Field Crew: DA
Site / SWMU No.: 106
Date: 6-6-17
Crew Signature:
Weather: Sunny 80s
Time: 1242
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: Intact / Damaged
Locked: (Yes) No
Well ID Mark: (Yes) No
Notes: VOCs 90.7 ppm in BH

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	0.00306 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: 0 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-6-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1242	0	0.00	0.02	20.76	104	
1245	4.5	0.00	0.04	20.72	10	
1248	9	0.00	0.04	20.75	10	
1251	13.5	0.00	0.08	20.79	9	
1254	18	0.00	0.08	20.88	8	

Values Prior to Sampling

1254	18	0.00	0.08	20.88	8	

Sample ID: VA1471

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106119-50
Field Crew: DA
Site / SWMU No.: 106
Date: 6-6-12
Crew Signature:
Weather: Sunny 80s
Time: 1319
Review Signature and Date: 6-7-12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 16.0 ppm in BH

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	0.00306 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: +.12 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

6-6-12 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1319	0	0.00	0.07	20.48	3	
1322	4.5	0.00	0.28	20.34	2	
1325	9	0.00	0.43	20.28	1	
1328	13.5	0.00	0.50	20.19	2	
1331	18	0.00	0.50	20.16	1	

Values Prior to Sampling

1331	18	0.00	0.50	20.16	1	

Sample ID: VA 1477
VA 1478

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: DA

Site / SWMU No.: 106

Date: 6-6-17

Crew Signature: DA

Weather: Sunny 80's

Time: 1409

Review Signature and Date: 6/8/17

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark (Yes) - No

Notes: VOCs 1.8 ppm in BH

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	0.00306 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: 0 "H₂O

Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 6-6-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1409	0	0.00	0.04	21.02	8	
1412	4.5	0.00	0.46	20.33	8	
1415	9	0.00	0.44	20.13	3	
1418	13.5	0.00	0.46	19.96	7	
1421	18	0.00	0.48	19.86	2	
1423	21	0.00	0.48	19.96	3	2 min

Values Prior to Sampling

1423	21	0.00	0.48	19.96	3	

Sample ID: VA1474

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny 80s

Well ID No/Interval: 106119-250

Date: 6-6-12

Time: 1448

Field Crew: DA

Crew Signature: DNA

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in BH

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	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	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: +.10 "H2O

Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 6-6-12	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
1448	0	0.00	0.00	20.82	0	
1452	6	0.00	0.14	20.55	21	
1456	12	0.00	0.16	20.45	22	
1500	18	0.00	0.18	20.41	22	
1504	24	0.00	0.16	20.43	23	

Values Prior to Sampling

1504	24	0.00	0.16	20.43	23	

Sample ID: VA1475

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 80's

Well ID No/Interval: 106119 - 350

Date: 6-6-17

Time: 1541

Field Crew: DA

Crew Signature:

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in BH

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	0.00306 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: -.40" H₂O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6-6-17	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
1541	0	0.00	0.02	20.96	0	
1547	9	0.00	0.04	21.02	131	
1553	18	0.00	0.06	20.96	137	
1559	27	0.00	0.06	21.05	139	

Values Prior to Sampling

1559	27	0.00	0.06	21.05	139	

Sample ID: VA1476

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB-106119-450
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 70's
Time: 0812
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 3.4 ppm in BH
BZ 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, (6" = .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: - 1.8" H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 6-13-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0812	0	Ø	Ø	20.98	Ø	
0816	48	Ø	0.04	20.58	79	
0820	96	Ø	0.24	20.27	187	
0824	144	Ø	0.28	20.14	225	
0828	192	Ø	0.20	20.39	254	
0832	240	Ø	0.18	20.60	190	

Values Prior to Sampling

0832	240	Ø	0.18	20.60	190	

Sample ID: VA1477

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106120-025

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-11-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1214

Review Signature and Date: 6/10/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH. 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)	17.05 ft³

Static Pressure: Ø " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-11-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1214	0	Ø	1.12	19.94	5	
1217	4.5	Ø	1.30	19.42	7	
1220	9	Ø	1.30	19.39	5	
1223	13.5	Ø	1.36	19.39	5	
1226	18	Ø	1.30	19.41	5	

Values Prior to Sampling

1226	18	Ø	1.30	19.41	5	

Sample ID: VA1478

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: KAFB-106/20-050

Field Crew: DM, TW

Site / SWMU No.: 106

Date: 6-11-12

Crew Signature: Daniel Mechina

Weather: Sunny 90's

Time: 1300

Review Signature and Date: 6/12/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH.
BZ 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)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.785 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.85 ft³

Static Pressure: Ø " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-11-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1300	0	Ø	2.32	17.92	6	
1303	4.5	Ø	2.36	18.18	5	
1306	9	Ø	2.34	17.77	5	
1309	13.5	Ø	2.34	17.69	6	
1312	18	Ø	2.32	17.14	5	

Values Prior to Sampling

1312	18	Ø	2.32	17.14	5	

Sample ID: VA1479

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No/Interval: KAFB- 106120-150

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-11-12

Crew Signature: Daniel Medina

Weather: Sunny 90's

Time: 1348

Review Signature and Date: 6/18/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH. BZ Ø

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)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.095 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.95 ft³

Static Pressure: -1.6" H_2O Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 6-11-12	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
1348	0	Ø	0.40	18.86	4	
1351	4.5	Ø	0.40	19.10	4	
1354	9.	Ø	0.40	19.19	2	
1357	13.5	Ø	0.36	19.21	3	
1400	18	Ø	0.40	19.30	3	
1403	22.5	Ø	0.40	19.35	2	

Values Prior to Sampling

1406	22.5	Ø	0.40	19.35	2	

Sample ID: VA1480

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-BFF-106120-250

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-11-12

Crew Signature: Daniel Medina

Weather: Sunny 90's

Time: 1427

Review Signature and Date: 6/20/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH. 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)	1.635 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.395 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.95 ft³

Static Pressure: -1.8" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6-11-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1427	0	Ø	0.02	20.37	6	
1433	9	Ø	0.42	19.50	3	
1439	18	Ø	0.32	21.23	3	
1445	27	Ø	0.34	20.66	3	

Values Prior to Sampling

1445	27	Ø	0.34	20.66	3	

Sample ID: VA1481

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106120-350

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-11-12

Crew Signature: Daniel Medina

Weather: Sunny 90's

Time: 1512

Review Signature and Date: 6/11/12

WELL OBSERVATIONS

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

Notes: VOC's 0 ppm in BH
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)	1.635 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: -2.1" H_2O Purge Flow Rate: 1.5CFM

PURGE DATA

6min Date/Time 6-11-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1512	0	Ø	0.02	20.36	8	
1518	9	Ø	0.30	18.77	301	
1524	18	Ø	0.32	18.49	338	
1530	27	Ø	0.34	18.64	370	

Values Prior to Sampling

1530	27	Ø	0.34	18.64	370	

Sample ID: VA14852

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106120-450
Field Crew: DM, TN
Site / SWMU No.: 106
Date: 6-11-12
Crew Signature: Daniel Medina
Weather: Sunny 90's
Time: 1555
Review Signature and Date: 6/18/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH.
BZ 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)	23.705 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.05 ft³

Static Pressure: -2.1" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time 6-11-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1555	0	Ø	0.02	20.58	4	
1559	~~4~~ DM 48	Ø	0.22	20.22	575	
1603	~~18~~ DM 96	Ø	0.34	~~20~~ DM 16.59	2360	
1607	144	Ø	0.36	17.79	2860	
1611	192	Ø	0.38	16.13	2980	
1615	240	Ø	0.38	17.80	3030	

Values Prior to Sampling

1615	240	Ø	0.38	17.80	3030	

Sample ID: VP1483

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106121-025

Field Crew: DM

Site / SWMU No.: 106

Date: 5-31-12

Crew Signature: Daniel Medina

Weather: Sunny 70's

Time: 0819

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

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

Notes: VOC's 0.3 ppm in BH
BZ 0.5ppm

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	~~0.07~~ ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.07 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)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: -.04

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 5-31-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0819	0	Ø	0.06	20.78	4	
0822	4.5	Ø	0.08	20.94	1	
0825	9	Ø	0.12	21.03	0	
0828	13.5	Ø	0.12	20.61	3	
0831	18	Ø	0.10	20.73	2	

Values Prior to Sampling

0831	18	Ø	0.10	20.73	2	

Sample ID: VA1484

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106121-050

Field Crew: DM

Site / SWMU No.: 106

Date: 5-31-12

Crew Signature: Daniel Madrid

Weather: Sunny 80's

Time: 0852

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

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

Notes: VOC's 0.3 ppm in BH
BZ 0.1

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):	0.15 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: -.12

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-31-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0852	~~DM 4.5~~ 0	Ø	Ø	20.74	Ø	
0855	~~DM 4~~ 4.5	Ø	0.08	20.85	2	
0858	~~DM 13.5~~ 9	Ø	0.12	20.72	1	
0901	~~DM 8~~ 13.5	Ø	0.10	20.75	Ø	
0904	18	Ø	0.10	20.66	Ø	

Values Prior to Sampling

0904	18	Ø	0.10	20.66	Ø	

Sample ID: VA1485

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106121-150

Field Crew: DM

Site / SWMU No.: 106

Date: 5-31-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 0926

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

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

Notes: VOC's 0.3 ~~1.0~~ ppm in BH
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):	0.45 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)	2.08 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.8 ft³

Static Pressure: -1.0

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-31-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0926	0	Ø	Ø	20.80	1	
0929	4.5	Ø	Ø	20.88	Ø	
0932	9	Ø	Ø	20.99	Ø	
0935	13.5	Ø	Ø	21.14	Ø	
0938	18	Ø	Ø	21.20	Ø	
0941	22.5	Ø	Ø	21.21	Ø	

Values Prior to Sampling

0941	22.5	Ø	Ø	21.21	Ø	

Sample ID: VA 1486
VA 1487-FD

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB-106121-250

Field Crew: DM

Site / SWMU No.: 106

Date: 5-31-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1018

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

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

Notes: VOC's 0.3 ppm in BH

BZ 0.4

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	0.176 ft² DM	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.76 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: -1.2

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5-31-12	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	Ø	Ø	20.81	2	
1024	9	Ø	0.04	20.81	2	
1030	18	Ø	0.04	20.62	1	
1036	27	Ø	0.04	20.51	Ø	

Values Prior to Sampling

1036	27	Ø	0.04	20.51	Ø	

Sample ID: VA1488

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106121-350

Field Crew: DM

Site / SWMU No.: 106

Date: 5-31-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1128

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: VOC's 0.4 ppm in BH
BZ 0.6

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	~~1.07~~ 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 ft³

Static Pressure: -1.4

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5-31-12	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
1128	0	0	0	20.81	6	
1134	9	0	0.02	20.27	76	
1140	18	0	0.06	20.96	84	
1146	27	0	0.06	20.80	83	

Values Prior to Sampling

1146	27	0	0.06	20.90	83	

Sample ID: VA1489

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF
Well ID No/Interval: KAFB-106121-450
Field Crew: DM
Site / SWMU No.: 106
Date: 5-31-12
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 1211
Review Signature and Date: 6/4/12

WELL OBSERVATIONS

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

Notes: VOC's 0.6 ppm in BH
BZ 0.3

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	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -1.8
Purge Flow Rate: 12cfm

PURGE DATA

4 min Date/Time 5-31-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1211	0	Ø	Ø	20.86	2	
1215	48	Ø	Ø	20.84	29	
1219	96	Ø	0.02	20.42	197	
1223	144	Ø	0.06	20.11	220	
1227	192	Ø	0.06	19.55	251	
1231	240	Ø	0.08	19.33	249	

Values Prior to Sampling

1231	240	Ø	0.08	19.33	249	

Sample ID: VA1490

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106122-025

Field Crew: DM

Site / SWMU No.: 106

Date: 6-12-12

Crew Signature: Daniel Medina

Weather: Sunny 80°s

Time: 1233

Review Signature and Date: 6/13/12

WELL OBSERVATIONS

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

Notes: VOC's 5.0 ppm in BH
BZ 4.1

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):	.076 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: Ø" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time 6-12-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1233	0	Ø	1.36	18.71	32	
1236	4.5	Ø	1.38	18.88	32	
1239	9	Ø	1.36	18.72	27	
1242	13.5	Ø	1.36	18.72	25	
1245	18	Ø	1.36	18.75	23	

Values Prior to Sampling

1245	18	Ø	1.36	18.75	23	

Sample ID: VA1491

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106122-050

Field Crew: DM

Site / SWMU No.: 106

Date: 6-12-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1312

Review Signature and Date: 6/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's 6.2 ppm in BH. BZ 5.7

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)	1.635 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.785 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.85 ft³

Static Pressure: +.04" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-12-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1312	0	Ø	1.58	18.36	53	
1315	4.5	Ø	1.60	18.26	28	
1318	9	Ø	1.60	18.24	24	
1321	13.5	Ø	1.58	18.19	21	
1324	18	Ø	1.58	18.13	20	

Values Prior to Sampling

1324	18	Ø	1.58	18.13	20	

Sample ID: VA1492

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106122-150

Field Crew: DM

Site / SWMU No.: 106

Date: 6-12-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1345

Review Signature and Date: 6/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's 6.3 ppm in BH.
BZ 6.0

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):	0.45 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)	2.085 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.85 ft³

Static Pressure: $-1.4''$ H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 6-12-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1345	0	Ø	0.30	19.03	37	
1348	4.5	Ø	0.34	18.96	24	
1351	9	Ø	0.34	18.90	16	
1354	13.5	Ø	0.34	18.96	14	
1357	18	Ø	0.34	19.57	14	
1400	22.5	Ø	0.36	19.55	15	

Values Prior to Sampling

1400	22.5	Ø	0.36	19.55	15	

Sample ID: VA1493

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106122-250

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-12-12

Crew Signature: Daniel Medina

Weather: Sunny 90's

Time: 1431

Review Signature and Date: 6/13/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
BZ 3.7

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)	1.635 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: - 2.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6-12-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1431	0	Ø	0.38	19.29	24	
1437	9	Ø	0.38	19.16	14	
1443	18	Ø	0.38	19.42	8	
1449	27	Ø	0.36	19.82	8	

Values Prior to Sampling

1449	27	Ø	0.36	19.82	8	

Sample ID: VA1494

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106122-350

Field Crew: DM, TN

Site / SWMU No.: 106

Date: 6-12-12

Crew Signature: Daniel Medina

Weather: Sunny 90's

Time: 1512

Review Signature and Date: 6/13/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOC's Ø ppm in BH

BZ 1.0

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)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: $-2.8''\ H_2O$

Purge Flow Rate: 1.5cfm

PURGE DATA

6min Date/Time 6-12-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1512	0	Ø	0.06	20.47	178	
1518	9	Ø	0.68	19.32	28	
1524	18	Ø	0.68	19.46	29	
1530	27	Ø	0.66	19.85	34	

Values Prior to Sampling

1530	27	Ø	0.66	19.85	34	

Sample ID: VA1495

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106122-450
Field Crew: DM, TN
Site / SWMU No.: 106
Date: 6-12-12
Crew Signature: Daniel J Mochina
Weather: Sunny 90's
Time: 1556
Review Signature and Date: 6/13/12

WELL OBSERVATIONS

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

Notes: VOC's 0 ppm in BH
BZ 5.1 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: -.88" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time 6-12-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1556	0	0	.18	19.96	19	
1600	48	0	.76	18.57	1316	
1604	96	0	.70	18.07	2080	
1608	144	0	.70	17.99	2300	
1612	192	0	.68	17.84	2700	
1616	240	0	.68	17.78	2900	

Values Prior to Sampling

1616	240	0	.68	17.78	2900	

Sample ID: VA1496

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106123-025

Field Crew: TN

Site / SWMU No.: 106

Date: 5/16/12

Crew Signature: TNeff

Weather: sunny

Time: 1206

Review Signature and Date: 5/17/12

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	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

Date/Time 5/16/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1200	0	0	1.60	18.86	5	
1203	4.5	0	1.56	19.03	24	
1206	9	0	1.50	19.33	23	
1209	13.5	0	1.48	19.34	22	
1212	18	0	1.36	19.10	19	

Values Prior to Sampling

1212	18	0	1.36	19.10	19	

Sample ID: VA1497

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BTF | Well ID No/Interval: 106123-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/16/12 | Crew Signature:

Weather: Sunny | Time: 1225 | Review Signature and Date: 5/19/12

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, 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: 0" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

5/16/12 Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1225	0	0	1.24	19.27	5	
1228	4.5	0	1.22	19.14	1	
1231	9	0	1.26	19.15	3	
1234	13.5	0	1.26	19.11	3	
1237	18	0	1.26	19.08	3	

Values Prior to Sampling

1237	18	0	1.26	19.08	3	

Sample ID: VA 1498
VA 1499

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: TN

Site / SWMU No.: 106

Date: 5/16/12

Crew Signature: T Nagra

Weather: sunny

Time: 1330

Review Signature and Date: 5/17/12

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	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: –1.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3mm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1330	0	0	.08	19.75	4	
1333	4.5	0	.28	19.10	6	
1336	9	0	.24	19.05	2	
1339	13.5	0	.26	19.03	2	
1342	18	0	.28	19.42	2	
1345	22.5	0	.28	19.39	2	

Values Prior to Sampling

1345	22.5	0	.28	19.39	2	

Sample ID: VA 1500

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
Site / SWMU No.: 106
Date: 5/16/12
Crew Signature: T. Nagel
Weather: sunny
Time: 1403
Review Signature and Date: 5/17/12

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: -1.0" H20
Purge Flow Rate: 1.5 afm

PURGE DATA

6 min Date/Time 5/16/12	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
1403	0	0	.36	19.28	2	
1409	9	0	.40	19.45	3	
1415	18	0	.40	19.59	3	
1421	27	0	.38	19.46	2	

Values Prior to Sampling

1421	27	0	.38	19.46	2	

Sample ID: VA 1501

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

Site / SWMU No.: 106

Date: 5/16/12

Crew Signature: TNash

Weather: sunny

Time: 1444

Review Signature and Date: 5/19/12

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	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: → 1.4 "H₂O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5/16/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1444	0	0	.04	20.50	3	
1450	9	0	.20	20.16	4	
1456	18	0	.32	19.83	3	
1502	27	0	.36	19.15	3	

Values Prior to Sampling

1502	27	0	.36	19.15	3	

Sample ID: VA1502

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

Site / SWMU No.: 106

Date: 5/16/12

Crew Signature: T Wagner

Weather: sunny

Time: 1523

Review Signature and Date: 5/17/12

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	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: −1.2 " H_2O

Purge Flow Rate: ~~1.5 cfm~~ TN 5/16/12 12 cfm

PURGE DATA

4mm

Date/Time 5/16/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1523	0	0	1.10	19.23	9	
1527	48	0	0.92	19.22	48	
1531	96	0	0.88	19.11	99	
1535	144	0	0.86	19.03	121	
1539	192	0	0.86	18.95	181	
1543	240	0	0.86	18.97	200	
1545	264	0	0.86	18.97	220	

Values Prior to Sampling

1545	264	0	0.86	18.97	220	

Sample ID: VA 1503

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106124.025

Field Crew: TN

Site / SWMU No.: 106

Date: 5/31/12

Crew Signature: TNoga

Weather: sunny

Time: 846

Review Signature and Date: 6/4/12

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: −.14 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/31/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
846	0	0	.18	21.48	14	
849	4.5	0	.82	19.79	12	
852	9	0	.96	19.61	11	
855	13.5	0	1.16	19.32	10	
858	18	0	1.22	19.12	10	

Values Prior to Sampling

858	18	0	1.22	19.12	10	

Sample ID: VA1504

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106124-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/31/12

Crew Signature: T Nagle

Weather: sunny

Time: 918

Review Signature and Date: [signature] 6/4/12

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):	.16 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: -.23" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 5/31/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
918	0	0	1.34	18.97	17	
921	4.5	0	1.36	19.09	12	
924	9	0	1.40	19.00	12	
927	13.5	0	1.42	19.03	12	
930	18	0	1.42	18.98	10	

Values Prior to Sampling

930	18	0	1.42	18.98	10	

Sample ID: VA 1505

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106 124-150 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/31/12 | Crew Signature: TNagen

Weather: sunny | Time: 958 | Review Signature and Date: 6/4/12

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 TN 5/31/12	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: – 1.0" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/31/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
958	0	0	.12	20.20	19	
1001	4.5	0	.14	20.11	23	
1004	9	0	.14	20.53	21	
1007	13.5	0	.14	20.71	19	
1010	18	0	.16	20.56	20	
1013	22.5	0	.16	20.51	21	

Values Prior to Sampling

1013	22.5	0	.16	20.51	21	

Sample ID: VA 1506

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106124-250

Field Crew: TN

Site / SWMU No.: 106

Date: 5/31/12

Crew Signature: T Nagler

Weather: sunny

Time: 1036

Review Signature and Date: 6/4/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOCs0

BZ VOC's0

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: −1.0" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time 5/31/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1036	0	0	.02	20.51	17	
1042	9	0	.20	19.93	13	
1048	18	0	.20	20.03	13	
1054	27	0	.22	20.24	11	

Values Prior to Sampling

1054	27	0	.22	20.24	11	

Sample ID: VA1507

VA1508

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106124-350

Field Crew: TN

Site / SWMU No.: 106

Date: 5/31/12

Crew Signature: T Rager

Weather: sunny

Time: 1132

Review Signature and Date: 6/4/12

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: −1.3" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5/31/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1132	0	0	.02	20.52	137	
1138	9	0	.28	19.72	918	
1144	18	0	.28	19.88	936	
1150	27	0	.26	18.97	938	

Values Prior to Sampling

1150	27	0	.26	18.97	938	

Sample ID: VA1509

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106124-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/31/12

Crew Signature: TNagen

Weather: sunny

Time: 1208

Review Signature and Date: 6/4/12

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 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: −1.0" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 5/31/12	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
1208	0	0	.02	21.14	18	
1212	48	0	.06	21.23	23	
1216	96	0	.24	20.88	156	
1220	144	0	.34	20.17	564	
1224	196	0	.40	19.41	1056	
1228	240	0	.48	18.72	2280	
1230	264	0	.52	18.49	2410	
1232	288	0	.54	18.30	2680	

Values Prior to Sampling

~~1228~~ 1232 TN 5/31/12	288	0	.54	18.30	2680	

Sample ID: VA 1510

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

TP 5/14/12

Project Name: ~~106~~ KAFB-377

Well ID No/Interval: 106125-150

Field Crew: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: T Nagy

Weather: sunny

Time: 1032

Review Signature and Date: 5/15/2012

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	.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):	.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: -1.4" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1032	0	0	.50	18.65	6	
1035	4.5	0	.52	18.10	5	
1038	9	0	.52	18.11	5	
1041	13.5	0	.50	18.11	5	
1044	18	0	.50	18.10	5	
1047	22.5	0	.50	18.13	5	

Values Prior to Sampling

1047	22.5	0	.50	18.13	5	

Sample ID: VA1513

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - B77 | Well ID No/Interval: 106125-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/14/12 | Crew Signature: TNagle

Weather: sunny | Time: 1100 | Review Signature and Date: [illegible] 05/15/2012

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	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: TN 5/14/12 −2.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6m

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1100	0	0	.10	20.71	7	
1106	9	0	.18	19.61	1	
1112	18	0	.18	19.16	3	
1118	27	0	.14	18.86	1	

Values Prior to Sampling

1118	27	0	.14	18.86	1	

Sample ID: VA1514

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106125-350 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/14/12 | Crew Signature: TNoe

Weather: sunny | Time: 1135 | Review Signature and Date: 5/15/2012

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	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: Tubing -2.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1135	0	0	.18	19.14	19	
1141	9	0	.24	19.76	1006	
1147	18	0	.24	19.90	1013	
1153	27	0	.26	19.83	1016	

Values Prior to Sampling

1153	27	0	.26	19.83	1016	

Sample ID: VA 1515

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106125-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: TNagel

Weather: sunny

Time: 1210

Review Signature and Date: 05/15/2012

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	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):	22.07 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 ft^3

Static Pressure: +-2.40" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 mm Date/Time 5/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1210	0	0	.02	20.70	3	
1214	48	0	.54	17.34	6680	
1218	96	0	.56	17.64	7020	
1222	144	0	.58	17.98	7080	
1226	192	0	.60	17.73	7110 TN 5/14/12	
1230	240	0	.58	17.50	7140	

Values Prior to Sampling

1230	240	0	.58	17.50	7140	

Sample ID: VA1516

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106126-025

Field Crew: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: T Nogen

Weather: sunny

Time: 1319

Review Signature and Date: [signature] 5/15/2012

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	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft² .00306	(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: Ø "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 5/14/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1319	0	0	1.02	18.97	9	
1322	4.5	0	1.24	18.66	8	
1325	9	0	1.28	19.11	8	
1328	13.5	0	1.28	19.31	8	
1331	18	0	1.30	19.28	8	

Values Prior to Sampling

1331	18	0	1.30	19.28	8	

Sample ID: VA1517

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106126-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: TNage

Weather: sunny

Time: 1350

Review Signature and Date: [illegible] 5/15/2012

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):	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)	17.8 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: 0" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 5/14/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1350	0	0	1.16	18.78	6	
1353	4.5	0	1.30	18.57	5	
1356	9	0	1.28	18.46	6	
1359	13.5	0	1.28	18.51	7	
1402	18	0	1.28	18.55	8	

Values Prior to Sampling

1402	18	0	1.28	18.55	8	

Sample ID: VA1518

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877
Well ID No/Interval: 106126-150
Field Crew: TN
Site / SWMU No.: 106
Date: 5/14/12
Crew Signature: T Nagel
Weather: sunny
Time: 1423
Review Signature and Date: [illegible] 5/15/2012

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	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: -1.4" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 5/14/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1423	0	0	0.24	19.79	1	
1426	4.5	0	0.28	20.07	1	
1429	9	0	0.28	19.82	2	
1432	13.5	0	0.28	18.98	4	
1435	18	0	0.28	18.67	4	
1438	22.5	0	0.26	18.55	4	

Values Prior to Sampling

1438	22.5	0	0.26	18.55	4	

Sample ID: VA1519

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: TN

Site / SWMU No.: 106

Date: 5/14/12

Crew Signature: T Nagel

Weather: sunny

Time: 1502

Review Signature and Date: 5/15/2012

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	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: −1.4" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 5/14/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1502	0	0	.10	19.59	1	
1508	9	0	.16	19.64	1	
1514	18	0	.18	19.66	2	
1520	27	0	.16	19.69	2	

Values Prior to Sampling

1520	27	0	.16	19.69	2	

Sample ID: VA1520

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106126-350

Field Crew: TN

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: [signature]

Weather: sunny

Time: 830

Review Signature and Date: [signature] 5/15/12

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: -2.8" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 5/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
834	0	0	.04	21.22	4	
840	9	0	.10	21.32	9	
846	18	0	.06	20.43	24	
852	27	0	.08	20.33	64	
855	30.5	0	.08	20.31	71	
858	34	0	.10	20.29	82	

Values Prior to Sampling

TN 5/15/12 ~~852~~ 858	TN 5/15/12 ~~27~~ 34	0	.10	20.29	82	

Sample ID: VA1521
VA1522

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106126-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/15/12

Crew Signature: T Nuper

Weather: sunny

Time: 926

Review Signature and Date: 5/15/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BHVOC'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: −1.8" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time 5/15/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
926	0	0	.10	20.96	25	
930	48	0	.10	20.94	39	
934	96	0	.16	20.87	178	
938	144	0	.22	20.75	411	
942	192	0	.22	20.69	501	
946	240	0	.24	20.61	621	

Values Prior to Sampling

946	240	0	.24	20.61	621	

Sample ID: VA1523

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-14-17
Crew Signature: DMA
Weather: Sunny 70s
Time: 1315
Review Signature and Date: 5/15/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.1 in BH

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 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/14/17	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1315	0	0.00	0.50	20.23	1	
1318	4.5	0.00	0.54	20.38	0	
1321	9	0.00	0.56	19.80	12	
1324	13.5	0.00	0.60	19.96	12	
1327	18	0.00	0.60	20.32	11	

Values Prior to Sampling

1327	18	0.00	0.60	20.32	11	

Sample ID: VA1524

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-14-17
Crew Signature:
Weather: Sunny 70s breezy
Time: 1356
Review Signature and Date: 05/15/2017

WELL OBSERVATIONS

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

Notes: VOCs Ø in BH

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: -0.4 "H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-14-17	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1356	Ø	0.00	0.44	19.98	1	
1359	4.5	0.00	0.56	19.90	Ø	
1402	9	0.00	0.58	19.88	Ø	
1405	13.5	0.00	0.60	19.64	Ø	
1408	18	0.00	0.60	19.58	Ø	

Values Prior to Sampling

1408	18	0.00	0.60	19.58	Ø	

Sample ID: VA1525

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-14-12
Crew Signature: DMA
Weather: Sunny 70s Windy
Time: 1423
Review Signature and Date: 5/15/2012

WELL OBSERVATIONS

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

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 ~~2015-14-12~~	0.00306 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: -1.4 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-14-12	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
1423	0	0.00	0.08	19.78	0	
1426	4.5	0.00	0.22	19.52	0	
1429	9	0.00	0.24	19.39	0	
1432	13.5	0.00	0.24	19.41	0	
1435	18	0.00	0.24	19.42	0	
1438	22.5	0.00	0.24	19.37	0	

Values Prior to Sampling

1438	22.5	0.00	0.24	19.37	0	

Sample ID: VA1576

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-14-12
Crew Signature:
Weather: Sunny 70's Windy
Time: 1458
Review Signature and Date: 5/15/2012

WELL OBSERVATIONS

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

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: 1.7 "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 5-14-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1458	∅	0.00	0.10	20.14	2	
1502	6	0.00	0.12	20.10	1	
1506	12	0.00	0.14	20.07	2	
1510	18	0.00	0.12	19.95	∅	
1514	24	0.00	0.12	19.95	1	

Values Prior to Sampling

1514	24	0.00	0.12	19.95	1	

Sample ID: VA-1527

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-350
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-14-17
Crew Signature: DM DA
Weather: Sunny 70s Windy
Time: 1535
Review Signature and Date: 5/15/2017

WELL OBSERVATIONS

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

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	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	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: -2.2 "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 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
1535	0	0.00	0.18	20.74	9	
1539	6	0.00	0.20	19.83	539	
1543	12	0.00	0.22	19.81	555	
1547	18	0.00	0.20	19.84	561	
1551	24	0.00	0.22	19.80	574	
1553	~~30~~ 27	0.00	0.22	19.81	575	2 min

Values Prior to Sampling

1553	30	0.00	0.22	19.81	575	

Sample ID: VA1578

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: DA, DM
Site / SWMU No.: 106
Date: 5-15-12
Crew Signature:
Weather: Sunny 60°
Time: 0820
Review Signature and Date: 5/15/12

WELL OBSERVATIONS

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

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)	0.04906 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: 2.4 "H₂O
Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time (4 min) 5-15-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0820	0	0.00	0.00	20.72	1	
0824	48	0.00	0.06	20.96	31	
0828	96	0.00	0.20	20.19	440	
0832	144	0.00	0.28	19.99	1067	
0836	192	0.00	0.28	19.61	1337	
0840	240	0.00	0.30	15.91	1595	

Values Prior to Sampling

0840	240	0.00	0.30	15.91	1595	

Sample ID: VA1529

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, DM
Site / SWMU No.: 106
Date: 6-5-17
Crew Signature:
Weather: Sunny 80s
Time: 1527
Review Signature and Date: 6/6/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.6ppm in BH

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	0.00306 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: +.10 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 6-5-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1527	0	0.00	0.00	20.75	2	
1525	4.5	0.00	0.06	20.96	0	
1528	9	0.00	0.12	21.20	0	
1531	13.5	0.00	0.14	21.43	0	
1534	18	0.00	0.12	21.02	1	

Values Prior to Sampling

1534	18	0.00	0.12	21.02	1	

Sample ID: VA1530

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106128-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-5-12
Crew Signature: DMA
Weather: Sunny 80s
Time: 1557
Review Signature and Date: [illegible] 6/6/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) / Damaged
Locked: (Yes) / No
Well ID Mark: (Yes) / No
Notes: VOCs 6.1 ppm in BH

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	0.00306 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: +.26 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 6-5-12	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
1557	0	0.00	21.17	0.06	0	
1600	4.5	0.00	0.28	20.98	5	
1603	9	0.00	0.30	21.02	4	
1606	13.5	0.00	0.30	21.20	5	
1609	18	0.00	0.30	21.24	6	

Values Prior to Sampling

1609	18	0.00	0.30	21.24	6	

Sample ID: VA1531

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: 106128-150

Date: 6-6-17

Time: 0847

Field Crew: DA DM RM 6-6-17

Crew Signature:

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in BH

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	0.00306 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: -.40 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 6-6-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0847	0	0.00	0.02	20.88	0	
0851	6	0.00	0.00	20.95	0	
0855	12	0.00	0.06	21.03	0	
0859	18	0.00	0.04	21.32	0	
0901	21	0.00	0.00	20.90	0	2 min

Values Prior to Sampling

0901	21	0.00	0.00	20.90	0	

Sample ID: VA1532 + VA1533

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106128-250
Field Crew: DA
Site / SWMU No.: 106
Date: 6-6-12
Crew Signature:
Weather: Sunny 70s
Time: 0931
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged
Locked: Yes - No
Well ID Mark: Yes - No
Notes: VOCs 1.8 ppm in BH

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	0.00306 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: -.52" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 6-6-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv) 6-6-12	Comments
0941	0	0.00	0.00	20.12	~~20.120~~ 20	
0945	6	0.00	0.38	20.41	0	
0949	12	0.00	0.38	~~20~~ 20.36	0	
0953	18	0.00	0.38	20.11	0	
0957	24	0.00	0.38	20.07	0	

Values Prior to Sampling

0957	24	0.00	0.38	20.07	0	

Sample ID: VA 1534

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
Site / SWMU No.: 106
Date: 6-6-12
Crew Signature: DA
Weather: Sunny 70s
Time: 1021
Review Signature and Date: 6/7/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.8 ppm in BH

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	0.00306 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: -.74 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 6-6-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1021	0	0.00	0.02	20.18	2	
1025	6	0.00	0.08	20.43	588	
1029	12	0.00	0.10	20.58	872	
1033	18	0.00	0.12	20.44	899	
1037	24	0.00	0.14	20.29	908	
1040	28.5	0.00	0.14	20.30	914	3 min

Values Prior to Sampling

1040	28.5	0.00	0.14	20.30	914	

Sample ID: VA1535

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: 106128-450
Date: 6-6-12
Time: 1111
Field Crew: DA
Crew Signature:
Review Signature and Date: 6/7/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) No
Well ID Mark: (Yes) No
Notes: VOCs 1.9 ppm in BH

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	0.04906 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: -1.1 "H2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 6-6-12	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
1111	0	0.00	0.00	20.84	5	
1115	48	0.00	0.12	21.03	1767	
1119	96	0.00	0.12	20.81	2020	
1123	144	0.00	0.14	20.61	2250	
1127	192	0.00	0.14	20.61	2310	
1131	240	0.00	0.16	20.56	2390	

Values Prior to Sampling

1131	240	0.00	0.16	20.56	2390	

Sample ID: VA1536

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106131-025
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-20-12
Crew Signature:
Weather: Sunny 90s
Time: 1353
Review Signature and Date: 6/21/12

WELL OBSERVATIONS

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

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	0.00306 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 "H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 6-20-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1353	0	0	0	20.86	1	
1356	4.5	0	0.04	21.20	4	
1359	9	0	0.04	21.01	3	
1402	13.5	0	0.04	20.87	1	
1405	18	0	0.06	20.50	1	

Values Prior to Sampling

1405	18	0	0.06	20.50	1	

Sample ID: VA1550

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106131-55
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-20-12
Crew Signature:
Weather: Sunny 90°
Time: 1427
Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs @ 4.07 ppm in BH

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	0.00306 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)	18.033 ft³

Static Pressure: +.01 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6-20-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	DO 6-20-12 Comments
1427	0	0	0	20.75	~~20.75~~	2
1430	4.5	0	0.02	20.87	~~20.87~~	1
1433	9	0	0.02	20.95	~~20.95~~	1
1436	13.5	0	0.02	21.08	~~21.08~~	1
1439	18	0	0.02	21.29	~~21.29~~	1

Values Prior to Sampling

1439	18	0	0.02	21.29	~~21.29~~	1

Sample ID: KA1551

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106131-150
Field Crew: JA, DM
Site / SWMU No.: 106
Date: 6-20-17
Crew Signature:
Weather: Sunny 90s
Time: 1510
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: VOCs 6.2 ppm in BH

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	0.00306 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: +.12 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 9-20-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1510	0	0	0.07	20.81	2	
1513	4.5	0	0.06	20.64	5	
1516	9	0	0.02	20.70	2	
1519	13.5	0	0.00	20.78	2	
1522	18	0	0.07	21.04	3	
1525	22.5	0	0.00	21.27	3	

Values Prior to Sampling

1525	22.5	0	0.00	21.27	3	

Sample ID: VA 1552

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BH | **Well ID No/Interval:** 106131-245 | **Field Crew:** PA, DM

Site / SWMU No.: 106 | **Date:** 6-20-12 | **Crew Signature:**

Weather: Sunny 90s | **Time:** 1538 | **Review Signature and Date:**

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.7497 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	235 ft	(K) One Purge Volume (C + J)	2.3847 ft³
(E) Depth to Bottom of Screen	245 ft	(L) 10 Purge Volumes (K*10)	23.847 ft³

Static Pressure: 0 "H2O | **Purge Flow Rate:** 1.5 cfm

PURGE DATA

4 min Date/Time 6-20-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1538	0	0	0.00	21.17	0	
1542	6	0	0.02	20.83	0	
1546	12	0	0.04	20.96	1	
1550	18	0	0.02	20.78	1	
1554	24	0	0.04	20.32	1	

Values Prior to Sampling 1554 @ 6-20-12

1554	24	0	0.04	20.32	1	

Sample ID: VA1553
VA1554

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106131-350
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-21-12
Crew Signature:
Weather: Windy 70's
Time: 0834
Review Signature and Date: 6/20/12

WELL OBSERVATIONS

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

Notes: VOC's 0 ppm in Bkt.
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	0.00306 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: -2.7 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0834	0	0	0.00	20.98	4	
0840	9	0	0.02	20.63	60	
0846	18	0	0.04	20.73	65	
0857	27	0	0.02	20.85	58	
			~~0.02~~ 6-21-12	~~20.8~~ 6-21-12		

Values Prior to Sampling

0857	27	0	0.02	20.85	58	

Sample ID: VA1555

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106131-450
Field Crew: DM, DA
Site / SWMU No.: 106
Date: 6-21-12
Crew Signature:
Weather: Windy 70s
Time: 0921
Review Signature and Date: 6/22/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH.
BZ 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)	0.04906 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: -1.12 "H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 6-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0921	0	Ø	0.00	20.91	Ø	
0925	48	Ø	0.00	20.89	90	
0929	96	Ø	0.04	20.83	227	
0933	144	Ø	0.02	20.86	236	
0937	192	Ø	0.04	20.89	249	
0941	240	Ø	0.06	20.87	252	

Values Prior to Sampling

0941	240	Ø	0.06	20.87	252	

Sample ID: VA1556

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: DA, DM

Site / SWMU No.: 106 | Date: 5-21-17 | Crew Signature:

Weather: Sunny 60s | Time: 0809 | Review Signature and Date: 5/22/17

WELL OBSERVATIONS

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

Notes: VOCs 0.7 ppm in BH

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	0.00306 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 "H2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-21-17	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
0807	0	0.00	0.07	20.71	0	
0810	4.5	0.00	0.12	20.88	0	
0813	9	0.00	0.17	20.98	1	
0816	13.5	0.00	0.18	21.08	1	
0819	18	0.00	0.17	20.61	1	

Values Prior to Sampling

0819	18	0.00	0.17	20.61	1	

Sample ID: VA1557

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-050
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-21-12
Crew Signature:
Weather: Sunny 60s
Time: 0843
Review Signature and Date: 5/30/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.8 ppm in BH

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	0.00306 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: -.10 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-21-12	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
0843	0	0.00	0	20.80	0	
0846	4.5	0.00	0.10	20.97	3	
0849	9	0.00	0.06	20.98	4	
0852	13.5	0.00	0.06	20.87	4	
0855	18	0.00	0.06	20.83	4	

Values Prior to Sampling

0855	18	0.00	0.06	20.83	4	

Sample ID: VA1558

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106132-175 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 5-21-12 | Crew Signature:

Weather: Sunny 70s | Time: 0917 | Review Signature and Date:

WELL OBSERVATIONS

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

Notes: VOCs 0.1 ppm in BH

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	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.5355 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	165 ft	(K) One Purge Volume (C + J)	2.1705 ft³
(E) Depth to Bottom of Screen	175 ft	(L) 10 Purge Volumes (K*10)	21.705 ft³

Static Pressure: -2.5 "H₂O | Purge Flow Rate: 1.5 cFm

PURGE DATA

3 min Date/Time 5-21-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0917	0	0.00	0.00	20.80	0	
0920	4.5	0.00	0.00	20.89	0	
0923	9	0.00	0.02	20.99	0	
0926	13.5	0.00	0.02	21.08	0	
0929	18	0.00	0.04	21.24	1	
0932	22.5	0.00	0.04	21.29	1	

Values Prior to Sampling

0932	22.5	0.00	0.04	21.29	1	

Sample ID: VA1559

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-21-12
Crew Signature:
Weather: Sunny 70's
Time: 0952
Review Signature and Date:

WELL OBSERVATIONS

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

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	0.00306 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: -2.8 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

5 min Date/Time 5-21-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0952	0	0.00	0.02	20.73	2	
0956	6	0.00	0.04	20.83	0	
1000	12	0.00	0.04	20.84	1	
1004	18	0.00	0.04	20.76	2	
1008	24	0.00	0.04	20.87	1	

Values Prior to Sampling

1008	24	0.00	0.04	20.87	1	

Sample ID: VA1560

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: DA, AM

Site / SWMU No.: 106 | Date: 5-21-12 | Crew Signature:

Weather: Sunny 70s | Time: 1032 | Review Signature and Date:

WELL OBSERVATIONS

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

Notes: VOCs 0.9 ppm in BH

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	0.00306 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: -2.7" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

4/min Date/Time 5-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1032	0	0.00	0.00	20.80	3	
1036	6	0.00	0.10	20.97	2	
1040	12	0.00	0.10	21.20	2	
1044	18	0.00	0.10	21.67	4	
1048	24	0.00	0.10	22.01	3	
1051	28.5	0.00	0.12	22.17	4	3 min

Values Prior to Sampling

1051	28.5	0.00	0.12	22.17	4	

Sample ID: VA1561

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-21-12
Crew Signature: DMA
Weather: Sunny 70s
Time: 1131
Review Signature and Date: 05/22/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 0.1 ppm in BH

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	0.04906 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: -1.8 "H_2O
Purge Flow Rate: 12cfm

PURGE DATA

4 min Date/Time 5-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1131	0	0.00	0.00	20.83	0	
1135	48	0.00	0.02	20.91	17	
1139	96	0.00	0.04	20.99	28	
1143	144	0.00	0.06	21.12	49	
1147	192	0.00	0.08	21.25	84	
1151	240	0.00	0.08	20.60	91	

Values Prior to Sampling

1151	240	0.00	0.08	20.60	91	

Sample ID: VA1562

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106133-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-16-12
Crew Signature:
Weather: Sunny 60s
Time: 0817
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

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

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):	0.765 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 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-16-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv) 5-16-12	Comments
0817	0	0.00	0.00	20.92	67	
0820	4.5	0.00	0.90	20.01	1	
0823	9	0.00	0.96	19.97	0	
0826	13.5	0.00	0.98	19.94	0	
0829	18	0.00	1.00	19.93	0	

Values Prior to Sampling

0829	18	0.00	1.00	19.93	0	

Sample ID: VA1563

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~106033-50~~ 5-16-12 106133-50

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 5-16-12

Crew Signature:

Weather: Sunny 60s

Time: 0846

Review Signature and Date: 5/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark: (Yes) - No

Notes: VOCs @ ppm in BH

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	0.00306 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: -.04 "H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-16-12	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
0846	0	0.00	0.24	19.87	4	
0849	4.5	0.00	0.96	19.31	2	
0852	9	0.00	0.96	19.26	2	
0855	13.5	0.00	0.98	19.17	2	
0858	18.0	0.00	0.96	19.39	1	

Values Prior to Sampling

0858	18.0	0.00	0.96	19.39	1	

Sample ID: VA1564 & VA1565

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106133-170
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-16-12
Crew Signature:
Weather: Sunny 60°
Time: 0930
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

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

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	0.00306 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.5202 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: −1.5 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-16-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0930	0	0.00	0.42	19.42	2	
0933	4.5	0.00	0.44	19.14	3	
0936	9	0.00	0.42	19.17	2	
0939	13.5	0.00	0.40	19.66	3	
0942	18	0.00	0.40	19.54	2	
0945	22.5	0.00	0.38	19.47	2	

Values Prior to Sampling

0945	22.5	0.00	0.38	19.47	2	

Sample ID: VA1566

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106133-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-16-12
Crew Signature: DM
Weather: Sunny 60s
Time: 1017
Review Signature and Date: 5/19/12

WELL OBSERVATIONS

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

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	0.00306 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)	24.0 ft³

Static Pressure: −1.5 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 5-16-12	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
1017	0	0.00	0.00	21.65	4	
1016	6	0.00	0.77	18.70	5	
1020	12	0.00	0.77	18.41	4	
1024	18	0.00	0.74	18.31	4	
1028	24	0.00	0.74	18:49	4	

Values Prior to Sampling

1028	24	0.00	0.74	18.49	4	

Sample ID: VA1567

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: 106133-350
Date: 5-16-12
Time: 1043

Field Crew: DA, DM
Crew Signature: [signature]
Review Signature and Date: [signature] 5/17/12

WELL OBSERVATIONS

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

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: −2.0 "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1043	0	0.00	0.00	20.12	1	
1047	6	0.00	0.42	19.43	29	
1051	12	0.00	0.54	19.05	43	
1055	18	0.00	0.64	18.41	58	
1059	24	0.00	0.68	17.98	65	
1103	28.5	0.00	0.72	18.01	72	3 min

Values Prior to Sampling

1103	28.5	0.00	0.72	18.01	72	

Sample ID: VA1568

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106133 - 450

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 5-16-12

Crew Signature:

Weather: Sunny 60°

Time: 1147

Review Signature and Date: 5/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark (Yes) - No

Notes: VOCs 0 ppm in BH

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)	0.04906 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: −2.1 " H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4/min Date/Time 5-16-12	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
1147	0	0.00	0.02	22.38	6	
1151	48	0.00	0.22	20.17	63	
1155	96	0.00	0.32	19.93	130	
1159	144	0.00	0.39	19.72	161	
1203	192	0.00	0.42	19.52	223	
1207	240	0.00	0.48	19.31	242	
~~12 Hr~~ 5-16-12						

Values Prior to Sampling

1207	240	0.00	0.48	19.31	240	

Sample ID: VA1569

Shaw 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: DA, DM
Site / SWMU No.: 106
Date: 6-20-12
Crew Signature:
Weather: Sunny 90's
Time: 1729
Review Signature and Date: 6/21/12

WELL OBSERVATIONS

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

Notes: VOCs 77.2 ppm 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	ft² 0.04906	(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)	23.712 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.12 ft³

Static Pressure: +0.11 "H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 6-20-12	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
1729	0	0	0.02	21.22	1	
1733	48	0	0.10	21.31	64	
1737	96	0	0.00	20.87	63	
1741	144	0	0.04	21.19	83	
1745	192	0	0.10	21.61	74	
1749	240	0	0.04	20.77	75	

Values Prior to Sampling

1749	240	0	0.04	20.77	75	

Sample ID: VA1575
VA1576

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106135-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-21-12
Crew Signature:
Weather: Sunny 80s
Time: 1320
Review Signature and Date: 5/22/12

WELL OBSERVATIONS

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

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	0.00306 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: Ø "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-21-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1320	Ø	0.00	0.02	20.08	Ø	
1323	4.5	0.00	0.04	20.61	1	
1326	9	0.00	0.04	20.56	Ø	
1329	13.5	0.00	0.02	20.54	1	
1332	18	0.00	0.04	20.58	1	

Values Prior to Sampling

1332	18	0.00	0.04	20.58	1	

Sample ID: VA1577

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106135-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-21-12
Crew Signature:
Weather: Sunny 80's
Time: 1357
Review Signature and Date: 5/22/12

WELL OBSERVATIONS

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

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	0.00306 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: 0 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1357	0	0.00	0.00	20.82	0	
1400	4.5	0.00	0.00	20.65	1	
1403	9	0.00	0.00	20.72	0	
1406	13.5	0.00	0.00	20.83	1	
1409	18	0.00	0.02	20.85	0	

Values Prior to Sampling

1409	18	0.00	0.02	20.85	0	

Sample ID: VA1578

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: DA, DM

Site / SWMU No.: 106 | Date: 5-21-12 | Crew Signature: DA DM

Weather: Sunny 80s | Time: 1433 | Review Signature and Date: 5/22/12

WELL OBSERVATIONS

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

Notes: VOC 0 ppm in BH

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	0.00306 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 ~~20.0~~ 5-21-12	

Static Pressure: -.80" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1433	0	0.00	0.02	20.88	0	
1436	4.5	0.00	0.00	20.87	1	
1439	9	0.00	0.00	21.67	2	
1442	13.5	0.00	0.02	21.91	2	
1445	18	0.00	0.02	21.71	1	
1448	22.5	0.00	0.04	21.39	2	

Values Prior to Sampling

1448	22.5	0.00	0.04	21.39	2	

Sample ID: VA1579

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106/35-250
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-26-17
Crew Signature:
Weather: Sunny 80s
Time: 1514 5-21-17
Review Signature and Date: 5/22/17

WELL OBSERVATIONS

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

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	0.00306 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: -1.7 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 5-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1514	0	0.00	0.00	20.78	2	
1518	6	0.00	0.00	20.40	4	
1522	12	0.00	0.00	20.21	3	
1526	18	0.00	0.00	20.81	3	
1530	24	0.00	0.00	20.76	3	

Values Prior to Sampling

1530	24	0.00	0.00	20.76	3	

Sample ID: VA 1580

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106135-350
Field Crew: DM
Site / SWMU No.: 106
Date: 5-22-12
Crew Signature: Daniel Medina
Weather: Sunny 80°'s
Time: 1415
Review Signature and Date: 5/23/12

WELL OBSERVATIONS

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

Notes: VOC's 38.2 ppm in BH
BZ 0.2 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	~~1.07~~ ft² DM	(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)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: +.72
Purge Flow Rate: 1.5cfm

PURGE DATA

6 min Date/Time 5-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1415	0	Ø	0.04	20.78	15	
1421	9	Ø	0.04	20.68	14	
1427	18	Ø	0.04	20.87	13	
1433	27	Ø	0.04	20.93	15	

Values Prior to Sampling

1433	27	Ø	0.04	20.93	15	

Sample ID: VA1581

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF
Well ID No/Interval: KAFB-106135-450
Field Crew: DM
Site / SWMU No.: 106
Date: 5-22-12
Crew Signature: Daniel Medina
Weather: Sunny 90's
Time: 1508
Review Signature and Date: 5/23/12

WELL OBSERVATIONS

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

Notes: VOC's 0.6 ppm in BH
BZ 0.4 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 ~~22.07~~ DM	(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	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +1.2

Purge Flow Rate: 12cfm

PURGE DATA

4 min Date/Time 5-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1508	0	Ø	0.02	20.77	35	
1512	48	Ø	0.02	20.84	37	
1516	96	Ø	0.02	20.91	36	
1520	144	Ø	Ø	21.07	36	
1524	192	Ø	Ø	21.24	37	
1528	240	Ø	Ø	21.16	37	

Values Prior to Sampling

1528	240	Ø	Ø	21.16	37	

Sample ID: VA 1582

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106136-025 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: TN

Weather: sunny | Time: 832 | Review Signature and Date: 5/22/12

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 ~~15~~ ft³ NS 5/21/12	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ~~25~~ 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: Ø" H20 | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
832	0	0	.10	20.74	6	
835	4.5	0	.24	20.76	6	
838	9	0	.20	20.34	4	
841	13.5	0	.24	20.41	4	
844	18	0	.24	20.45	6	

Values Prior to Sampling

844	18	0	.24	20.45	6	

Sample ID: VA 1583

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106136-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/21/12

Crew Signature: TNga

Weather: sunny

Time: 906

Review Signature and Date: 5/22/12

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 5/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
906	0	0	.20	20.50	7	
909	4.5	0	.24	20.88	5	
912	9	0	.24	20.74	5	
915	13.5	0	.26	20.75	6	
918	18	0	.26	20.82	6	

Values Prior to Sampling

918	18	0	.26	20.82	6	

Sample ID: VA1584

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106136-150

Field Crew: TN

Site / SWMU No.: 106

Date: 5/21/12

Crew Signature: TNagen

Weather: sunny

Time: 938

Review Signature and Date: [illegible] 5/22/12

WELL OBSERVATIONS

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

Notes: B1 VOC's 0
B2 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):	.49 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)	2.12 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21.2 ft³

Static Pressure: -1.0" H20

Purge Flow Rate: 1.5 l/m

PURGE DATA

3 min Date/Time 5/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
938	0	0	.08	20.37	7	
941	4.5	0	.10	20.51	5	
944	9	0	.10	20.55	6	
947	13.5	0	.08	20.23	5	
950	18	0	.08	19.58	5	
953	22.5	0	.10	19.50	5	

Values Prior to Sampling

953	22.5	0	.10	19.50	5	

Sample ID: VA 1585

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106136-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: T Nogen

Weather: sunny | Time: | Review Signature and Date: 05/22/12

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: -2.2" H20

Purge Flow Rate: 1.5 l/m

PURGE DATA

Gmin Date/Time 5/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1014	0	0	.02	20.65	8	
1020	9	0	.08	20.87	6	
1026	18	0	.12	20.06	6	
1032	27	0	.12	20.58	5	

Values Prior to Sampling

1032	27	0	.12	20.58	5	

Sample ID: VA1586
VA1587

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106136 - 350

Field Crew: TN

Site / SWMU No.: 106

Date: 5/21/12

Crew Signature: TNager

Weather: sunny

Time: 1107

Review Signature and Date: 5/22/12

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: -2.0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmm Date/Time 5/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1107	0	0	0	20.75	6	
1113	9	0	.08	20.68	6	
1119	18	0	.08	20.64	5	
1125	27	0	.10	20.67	5	

Values Prior to Sampling

1125	27	0	.10	20.67	5	

Sample ID: VA1588

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-13FT

Well ID No/Interval: 106136-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/21/12

Crew Signature: T Nagra

Weather: sunny

Time: 1148

Review Signature and Date: 5/28/12

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~~ 6" = .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: -1.8 " H20

Purge Flow Rate: TN 5/21/12 ~~1.5 cfm~~ 12 cfm

PURGE DATA

4 mm Date/Time 5/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1148	0	0	0	20.69	6	
1152	48	0	.16	20.52	6	
1156	96	0	.16	20.51	6	
1200	144	0	.18	20.50	6	
1204	192	0	.18	20.45	6	
1208	240	0	.18	20.41	6	

Values Prior to Sampling

1208	240	0	.18	20.41	6	

Sample ID: VA1589

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: DA, DM
Site / SWMU No.: 106
Date: 5-16-12
Crew Signature:
Weather: Sunny 70s
Time: 1404
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

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

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	0.00306 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: 0 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-16-12	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
1404	0	0.00	0.20	20.71	5	
1407	4.5	0.00	0.22	20.71	2	
1410	9	0.00	0.22	20.65	1	
1413	13.5	0.00	0.22	20.69	1	
1416	18	0.00	0.24	20.77	1	

Values Prior to Sampling

1416	18	0.00	0.24	20.77	1	

Sample ID: VA1590

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106137-50
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-16-17
Crew Signature:
Weather: Sunny 70s
Time: 1434
Review Signature and Date:

WELL OBSERVATIONS

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

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	0.00306 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: +.10
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-16-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1434	0	0.00	0.06	19.97	1	
1437	4.5	0.00	0.27	19.95	1	
1440	9	0.00	0.27	20.05	0	
1443	13.5	0.00	0.27	20.08	0	
1446	18	0.00	0.27	20.11	1	

Values Prior to Sampling

1446	18	0.00	0.27	20.11	1	

Sample ID: VA1591

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: DA, BM
Site / SWMU No.: 106
Date: 5-16-17
Crew Signature:
Weather: Sunny 70°
Time: 1515
Review Signature and Date: 5/17/17

WELL OBSERVATIONS

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

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	0.00306 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: NR
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
1515	0	0.00	0.04	19.96	4	
1519	6	0.00	0.16	19.51	3	
1523	12	0.00	0.14	19.67	2	
1527	18	0.00	0.16	19.83	1	
1530	22.5	0.00	0.16	19.92	1	3 min

Values Prior to Sampling

1530	22.5	0.00	0.16	19.92	1	

Sample ID: VA1592

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: DA, DM
Site / SWMU No.: 106
Date: 5-17-12
Crew Signature: DM
Weather: Sunny 60s
Time: 0810
Review Signature and Date: [illegible] 5/17/2012

WELL OBSERVATIONS

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

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	0.00306 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: Ø "H₂O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 5-17-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
0810	0	0.00	0.00	20.77	2	
0814	6	0.00	0.00	21.21	Ø	
0818	12	0.00	0.00	21.26	1	
0822	18	0.00	0.00	21.32	Ø	
0826	24	0.00	0.00	20.77	Ø	

Values Prior to Sampling

0826	24	0.00	0.00	20.77	Ø	

Sample ID: VA1593

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: DA, DM

Site / SWMU No.: 106 | Date: 5-16-12 | Crew Signature: [signature]

Weather: Sunny 70s | Time: 1311 | Review Signature and Date: [signature] 5/17/12

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	~~0.00306~~ 0.0218 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	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: -1.5 "H2O | Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 5-16-12	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
1311	0	0.00	0.02	20.71	8	
1315	6	0.00	0.06	20.90	5	
1319	12	0.00	0.04	20.68	5	
1323	18	0.00	0.02	20.95	5	
1327	24	0.00	0.02	20.70	2	
1330	28.5	0.00	0.02	20.71	2	3 min

Values Prior to Sampling

1330	28.5	0.00	0.02	20.71	2	

Sample ID: VA1594

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-450

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 5-17-12

Crew Signature: DM

Weather: Sunny 60's

Time: 0842

Review Signature and Date: 5/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in BH

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	0.04906 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: 1.8 "H_2O

Purge Flow Rate: 17cfm

PURGE DATA

4 min Date/Time 5-17-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0842	0	0.00	0.00	20.77	2	
0846	48	0.00	0.04	20.66	49	
0850	96	0.00	0.04	20.65	57	
0854	144	0.00	0.04	20.68	60	
0858	192	0.00	0.04	20.70	66	
0902	240	0.00	0.06	20.70	68	

Values Prior to Sampling

0902	240	0.00	0.06	20.70	68	

Sample ID: VA1595
VA1596

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106138-025 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/23/12 | Crew Signature: [signature]

Weather: sunny | Time: 825 | Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BH VOC's
BZVOC'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: 0" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/23/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
825	0	0	2.84	18.53	9	
828	4.5	0	3.04	18.67	6	
831	9	0	3.06	18.72	6	
834	13.5	0	3.06	18.81	6	
837	18	0	3.02	17.65	5	

Values Prior to Sampling

837	18	0	3.02	17.65	5	

Sample ID: VA1597

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106138-050
Field Crew: TN
Site / SWMU No.: 106
Date: 5/23/12
Crew Signature: T Nagle
Weather: sunny
Time: 900
Review Signature and Date:

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	* 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):	.15 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft^3

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

PURGE DATA

3mm Date/Time 5/23/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
900	0	0	1.76	17.90	2	
903	4.5	0	1.98	17.94	2	
906	9	0	2.08	17.96	2	
909	13.5	0	2.14	18.06	2	
912	18	0	2.16	17.97	2	

Values Prior to Sampling

912	18	0	2.16	17.97	2	

Sample ID: VA1598

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: 106138-150	Field Crew: TN
Site / SWMU No.: 106	Date: 5/23/12	Crew Signature: TNagr
Weather: sunny	Time: 932	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):	.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: +1.1" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/23/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
932	0	0	.18	19.75	9	
935	4.5	0	.18	20.22	8	
938	9	0	.18	20.16	9	
941	13.5	0	.18	20.24	8	
944	18	0	.18	19.74	6	
947	22.5	0	.18	19.78	3	

Values Prior to Sampling

947	22.5	0	.18	19.78	3	

Sample ID: VA1599

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: 106138-250	Field Crew: TN
Site / SWMU No.: 106	Date: 5/23/12	Crew Signature: TNagel
Weather: sunny	Time: 1015	Review Signature and Date:

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, 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: +1.8" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time 5/23/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1015	0	0	.20	20.27	7	
1021	9	0	.22	20.17	4	
1027	18	0	.22	20.25	6	
1033	27	0	.22	19.56	5	

Values Prior to Sampling

1033	27	0	.22	19.56	5	

Sample ID: VA1600

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106138-350 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/23/12 | Crew Signature: TNeger

Weather: sunny | Time: 1049 | Review Signature and Date:

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	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: +1.4 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6mm Date/Time 5/23/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1049	0	0	.18	20.59	7	
1055	9	0	.20	20.75	5	
1101	18	0	.20	20.74	6	
1108	27	0	.22	20.55	7	

Values Prior to Sampling

1108	27	0	.22	20.55	7	

Sample ID: VA 1601

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: 106138 -450

Date: 5/23/12

Time: 1129

Field Crew: TN

Crew Signature: TNag

Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BH VOC's 0
B3 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: + 1.4" H20

Purge Flow Rate: 12 cfm

PURGE DATA

4mm Date/Time 5/23/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1129	0	0	.16	20.56	6	
1133	48	0	.18	20.38	7	
1137	96	0	.18	20.72	6	
1141	144	0	.18	20.83	5	
1145	192	0	.16	21.18	6	
1149	240	0	.18	20.64	5	

Values Prior to Sampling

1149	240	0	.18	20.64	5	

Sample ID: VA1602

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106139-025 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 6/7/12 | Crew Signature: TNoger

Weather: sunny | Time: 1100 | Review Signature and Date: 6/8/2012

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	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 | Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time 6/7/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1102	0	0	.44	19.91	29	
1105	4.5	0	.54	19.87	26	
1108	9	0	.56	19.94	22	
1111	13.5	0	.56	20.19	16	
1114	18	0	.56	20.22	14	

Values Prior to Sampling

1114	18	0	.56	20.22	14	

Sample ID: VA1603

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106139-050 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 6/7/12 | Crew Signature: T Nagel

Weather: sunny | Time: 1132 | Review Signature and Date: 6/8/2012

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	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: Ø

Purge Flow Rate: 1.5 cfm

PURGE DATA

3mm Date/Time 6/7/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1132	0	0	.78	18.85	19	
1135	4.5	0	.78	19.07	13	
1138	9	0	.80	19.10	12	
1141	13.5	0	.80	19.17	11	
1144	18	0	.80	19.19	10	

Values Prior to Sampling

1144	18	0	.80	19.19	10	

Sample ID: VA 1604

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106139 - 150

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 6/7/12

Crew Signature: T Nagel

Weather: sunny

Time: 1200

Review Signature and Date: 6/8/2012

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	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: −1.0 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 6/7/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1200	0	0	.26	20.47	12	
1203	4.5	0	.58	19.57	11	
1206	9	0	.56	18.99	11	
1209	13.5	0	.56	19.22	11	
1212	18	0	.56	19.15	10	
1215	22.5	0	.54	19.04	9	

Values Prior to Sampling

1215	22.5	0	.54	19.04	9	

Sample ID: VA1605

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106139 - 250

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 6/11/12

Crew Signature:

Weather: sunny

Time: 835

Review Signature and Date: 6/12/12

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: −2.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gwm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
835	0	0	.48	19.65	5	
842	9	0	.66	19.87	4	
849	18	0	.70	19.87	6	
856	27	0	.72	19.87	6	

Values Prior to Sampling

856	27	0	.72	19.87	6	

Sample ID: VA 1606

VA 1607

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106139-350

Field Crew: TN

Site / SWMU No.: 106

Date: 6/11/12

Crew Signature: T Nagle

Weather: sunny

Time: 929

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)	27.0 ft³

Static Pressure: −2.0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time 6/11/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
929	0	0	.32	19.46	4	
935	9	0	.76	19.56	6	
941	18	0	.76	19.63	6	
947	27	0	.76	19.74	7	

Values Prior to Sampling

947	27	0	.76	19.74	7	

Sample ID: VA1608

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106139-450

Field Crew: TN, DM

Site / SWMU No.: 106

Date: 6/11/12

Crew Signature: T Nagy

Weather: sunny

Time: 1017

Review Signature and Date: 6/18/12

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 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: TN 6/12/12 -2.0"H2O

Purge Flow Rate: 12cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1017	0	0	0	20.62	5	
1021	48	0	.62	19.37	8	
1025	96	0	.70	19.21	7	
1029	144	0	.78	19.09	6	
1033	192	0	.84	19.04	7	
1037	240	0	.88	19.07	7	

Values Prior to Sampling

1037	240	0	.88	19.07	7	

Sample ID: VA 1609

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF
Well ID No/Interval: KAFB-106140-025
Field Crew: DM
Site / SWMU No.: 106
Date: 5-22-10
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 0847
Review Signature and Date: 5/23/10

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
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 ft³

Static Pressure: Ø
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)	
0926	0	Ø	Ø	20.82	-1	
0929	4.5	Ø	0.02	21.00	-2	
0932	9	Ø	Ø	20.77	2	
0935	13.5	Ø	0.02	21.17	4	
0938	18	Ø	0.04	21.26	6	

Values Prior to Sampling

0938	18	Ø	0.04	21.26	6	

Sample ID: VA1610

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB-106104-050

Field Crew: DM

Site / SWMU No.: 106

Date: 5-22-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 1006

Review Signature and Date: 5/23/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
BZ 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	.15 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):	.15 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.78 ft^3
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.8 ft^3

Static Pressure: Ø

Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-22-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1006	0	Ø	Ø	20.82	-1	
1009	4.5	Ø	Ø	21.18	0	
1012	9	Ø	Ø	21.34	-1	
1015	13.5	Ø	0.01	21.46	Ø	
1018	18	Ø	0.02	21.51	Ø	

Values Prior to Sampling

1018	18	Ø	0.02	21.51	Ø	

Sample ID: VA1611

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106104-150	**Field Crew:** DM
Site / SWMU No.: 106	**Date:** 5-22-12	**Crew Signature:** Daniel Medina
Weather: Sunny 80's	**Time:** 1042	**Review Signature and Date:** 5/23/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
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	~~0.45~~ ft² DM	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.45 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)	2.085 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.85 ft³

Static Pressure: -.60

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1042	0	Ø	Ø	20.89	1	
1045	4.5	Ø	Ø	21.19	1	
1048	9	Ø	0.02	21.28	0	
1051	13.5	Ø	0.04	21.43	1	
1054	18	Ø	0.04	21.08	1	
1057	22.5	Ø	0.04	21.13	1	

Values Prior to Sampling

1057	22.5	Ø	0.04	21.13	1	

Sample ID: VA1612

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	**Well ID No/Interval:** KAFB-106104-250	**Field Crew:** DM
Site / SWMU No.: 106	**Date:** 5-22-12	**Crew Signature:** Daniel Medina
Weather: Sunny 80's	**Time:** 1114	**Review Signature and Date:** 05/23/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
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	~~0.765~~ ft² 2"	(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: -.70 **Purge Flow Rate:** 1.5 cfm

PURGE DATA

6 min Date/Time 5-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1114	0	Ø	Ø	20.88	2	
1120	9	Ø	0.02	20.76	Ø	
1126	18	Ø	0.02	21.03	1	
1132	27	Ø	0.04	20.68	1	

Values Prior to Sampling

1132	27	Ø	0.04	20.68	1	

Sample ID: VA1613

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB-106104-350
Field Crew: DM
Site / SWMU No.: 106
Date: 5-22-12
Crew Signature: Daniel J Medina
Weather: Sunny 80's
Time: 1151
Review Signature and Date: 05/23/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
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	~~1.07~~ 1.07 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)	2.70 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: - 1.0
Purge Flow Rate: 1.5 cfm

PURGE DATA

0 min Date/Time 5-22-12	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
1151	0	Ø	Ø	20.89	2	
1157	9	Ø	0.04	21.56	72	
1203	18	Ø	0.02	21.99	76	
1209	27	Ø	0.02	22.32	78	

Values Prior to Sampling

1209	27	Ø	0.02	22.32	78	

Sample ID: VA1614

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB-106104-450	**Field Crew:** DM
Site / SWMU No.: 106	**Date:** 5-22-12	**Crew Signature:** Daniel Mechim
Weather: Sunny 80's	**Time:** 1232	**Review Signature and Date:** 05/23/12

WELL OBSERVATIONS

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

Notes: VOC's Ø ppm in BH
BZ 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):	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: Ø

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 5-22-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1232	0	Ø	Ø	20.81	2	
1236	48	Ø	0.12	20.83	463	
1240	96	Ø	0.12	20.61	479	
1244	144	Ø	0.12	20.94	486	
1248	192	Ø	0.14	21.08	482	
1252	240	Ø	0.12	20.60	476	

Values Prior to Sampling

1252	240	Ø	0.12	20.60	476	

Sample ID: VA1615

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106141-25
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-29-17
Crew Signature: DM DA
Weather: Sunny 60s
Time: 0811
Review Signature and Date: [illegible] 05/30/2017

WELL OBSERVATIONS

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

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	0.0076 ft² 0.0765 5-29-17	(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: -.10 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-29-17	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0811	0	0.00	0.00	20.88	1	
0814	4.5	0.00	0.00	21.39	0	
0817	9	0.00	0.00	21.58	1	
0820	13.5	0.00	0.00	21.70	1	
0823	18	0.00	0.00	20.68	1	

Values Prior to Sampling

0823	18	0.00	0.00	20.68	1	

Sample ID: VA1616 + VA1617

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106141-50 | Field Crew: DA, DM

Site / SWMU No.: 106 | Date: 5-29-12 | Crew Signature:

Weather: Sunny 60° | Time: 0929 | Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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: -.24"H2O | Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-29-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0929	0	0.00	0.00	20.84	0	
0932	4.5	0.00	0.00	21.10	0	
0935	9	0.00	0.00	21.21	0	
0938	13.5	0.00	0.00	21.86	0	
0941	18	0.00	0.00	22.44	0	

Values Prior to Sampling

0941	18	0.00	0.00	22.44	0	

Sample ID: VA1618

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106141 - 170
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-29-12
Crew Signature:
Weather: Sunny 70s
Time: 1012
Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) No
Well ID Mark: (Yes) No
Notes: 100 ppm in BH

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	0.00306 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 160	~~140~~ ft	(K) One Purge Volume (C + J)	2.094 ft³
(E) Depth to Bottom of Screen 170	~~150~~ ft	(L) 10 Purge Volumes (K*10)	20.94 ft³

Static Pressure: -1.8 "H₂O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5-29-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1012	0	0.00	0.00	20.80	1	
1015	4.5	0.00	0.00	21.18	0	
1018	9.0	0.00	0.04	21.56	0	
1021	13.5	0.00	0.00	21.88	0	
1024	18	0.00	0.00	21.66	0	
1027	22.5	0.00	0.00	21.77	0	

Values Prior to Sampling

1027	22.5	0.00	0.00	21.77	0	

Sample ID: VA 1619

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: 5-29-12
Crew Signature:
Weather: Sunny 70s
Time: 1052
Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

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	0.00306 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: -1.8 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time 5-29-12	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
1052	0	0.00	0.00	20.71	1	
1056	6	0.00	0.00	20.19	1	
1100	12	0.00	0.02	19.82	1	
1104	18	0.00	0.04	19.89	1	
1108	24	0.00	0.04	20.71	1	

Values Prior to Sampling

1108	24	0.00	0.04	20.71	1	

Sample ID: VA1620

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: 5-29-12
Crew Signature:
Weather: Sunny 70s
Time: 1130
Review Signature and Date: 5/30/2012

WELL OBSERVATIONS

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

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	0.00306 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: -2.0 "H_2O
Purge Flow Rate: 1.5cfm

PURGE DATA

4 min Date/Time 5-29-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1130	0	0.00	0.00	20.79	0	
1134	6	0.00	0.00	20.69	0	
1138	12	0.00	0.00	20.76	0	
1142	18	0.00	0.00	20.94	0	
1146	24	0.00	0.00	20.06	0	
1149	28.5	0.00	0.02	21.38	0	3 min

Values Prior to Sampling

1149	28.5	0.00	0.02	21.38	0	

Sample ID: VA1621

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106141-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-29-17
Crew Signature:
Weather: Sunny. 70s
Time: 1212
Review Signature and Date: 6/28/2017

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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~~	0.04906 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: -1.7 "H2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time 5-29-17	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
1212	0	0.00	0.00	20.76	0	
1216	48	0.00	0.00	22.47	0	
1220	96	0.00	0.00	22.68	0	
1224	144	0.00	0.00	22.99	0	
1228	192	0.00	0.00	21.89	0	
1232	240	0.00	0.08	21.56	0	

Values Prior to Sampling

1232	240	0.00	0.08	21.56	0	

Sample ID: VA1622

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106142-030 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: T Nolan

Weather: sunny | Time: 1324 | Review Signature and Date: 5/22/12

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	30 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):	.09 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	20 ft	(K) One Purge Volume (C + J)	1.72 ft^3
(E) Depth to Bottom of Screen	30 ft	(L) 10 Purge Volumes (K*10)	17.2 ft^3

Static Pressure: 0

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1324	0	0	.24	20.91	6	
1327	4.5	0	.24	20.79	5	
1330	9	0	.22	20.38	6	
1333	13.5	0	.24	19.72	2	
1336	18	0	.24	19.71	2	

Values Prior to Sampling

1336	18	0	.24	19.71	2	

Sample ID: VA1623

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106142-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: TNolan

Weather: sunny | Time: 1355 | Review Signature and Date: 5/22/12

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 5/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1355	0	0	.24	20.01	7	
1358	4.5	0	.28	19.90	4	
1401	9	0	.26	19.66	4	
1404	13.5	0	.26	19.62	4	
1407	18	0	.28	19.49	5	

Values Prior to Sampling

1407	18	0	.28	19.49	5	

Sample ID: VA1624

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106 142-170 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: TNager

Weather: sunny | Time: 1424 | Review Signature and Date: 5/22/12

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	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):	.52 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	160 ft	(K) One Purge Volume (C + J)	2.15 ft³
(E) Depth to Bottom of Screen	170 ft	(L) 10 Purge Volumes (K*10)	21.5 ft³

Static Pressure: −1.4" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time 5/21/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1424	0	0	.06	20.49	9	
1427	4.5	0	.18	20.28	6	
1430	9	0	.18	20.32	5	
1433	13.5	0	.18	20.13	4	
1436	18	0	.18	19.90	4	
1439	22.5	0	.18	19.86	5	

Values Prior to Sampling

1439	22.5	0	.18	19.86	5	

Sample ID: VA 1625
VA 1626

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 10642-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/21/12 | Crew Signature: TNagu

Weather: sunny | Time: 1526 | Review Signature and Date: 5/22/12

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: −1.4" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

6 min Date/Time 5/21/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1520	0	0	.08	21.23	12	
1526	9	0	.29	20.41	4	
1532	18	0	.20	20.48	5	
1538	27	0	.14	20.13	4	

Values Prior to Sampling

1538	27	0	.14	20.13	4	

Sample ID: VA 1627

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF | Well ID No/Interval: 10642 - 350 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/22/12 | Crew Signature: T Nagen

Weather: sunny | Time: 1454 | Review Signature and Date: 5/23/12

WELL OBSERVATIONS

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

Notes: BHVOC's 4.4 ppm
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: +1.0" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time 5/22/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1454	0	0	.16	20.40	16	
1500	9	0	.18	20.02	11	
1506	18	0	.22	20.18	12	
1512	27	0	.16	20.08	6	

Values Prior to Sampling

1512	27	0	.16	20.08	6	

Sample ID: VA1628

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106142-450

Field Crew: TN

Site / SWMU No.: 106

Date: 5/22/12

Crew Signature: T Nagler

Weather: sunny

Time: 1533

Review Signature and Date: 5/23/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 4.4 ppm
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: +1.0" H_2O

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
1533	0	0	.08	20.24	11	
1537	48	0	.12	20.05	12	
1541	96	0	.14	19.77	15	
1545	144	0	.14	19.83	16	
1549	192	0	.14	20.14	19	
1553	240	0	.16	20.04	20	

Values Prior to Sampling

1553	240	0	.16	20.04	20	

Sample ID: VA1629

Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/ICE: KAFB 106149

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: T Nagel

Weather: Sunny

Time: 935

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0.8 ppm

Static Pressure: -1.6" H20

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
941	0	2.40	15.46	11650	

X VA9060 X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB 106149-P05ICE

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: TN DR

Weather: sunny

Time: 830

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0.2 ppm

Static Pressure: +.30" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
842	0	6.82	9.01	2110	

VA9061

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB106149-PostC2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: TNagen

Weather: sunny

Time: 845

Review Signature and Date: 6/14/12

Background VOC: 0 TN 6/14/12

Breathing Zone VOC: 2.1 ppm

Static Pressure: +1.0 "H2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
850	0	9.20	7.69	442	

VA9062

Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB 106160-IN

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature:

Weather: sunny

Time: ~~1132~~ TN 6/14/12 1155

Review Signature and Date: 6/18/12

Background VOC: 1.7 ppm

Breathing Zone VOC: 1.7 ppm

Static Pressure: $-1.2"H_2O$

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1200	0	.78	17.41	4190	

XVA9063X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB 106 ICE Post 2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: TN

Weather: sunny

Time: 1132

Review Signature and Date: 6/14/12

Background VOC: 1.7 ppm

Breathing Zone VOC: 1.7 ppm

Static Pressure: +.90" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1138	0	9.10	3.96	91	

VA 9065

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB 106161-IN

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: TNoggen

Weather: Sunny

Time: 1040

Review Signature and Date: 6/14/12

Background VOC: 1.3 ppm

Breathing Zone VOC: 1.3 ppm

Static Pressure: $-1.4''$ H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1047	0	1.62	15.94	13290	

X VA 9066 X

X VA 9067 X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB 106161-PostC2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: T Nagem

Weather: sunny

Time: 1020

Review Signature and Date: 6/14/12

Background VOC: 1.3 ppm

Breathing Zone VOC: 1.3 ppm

Static Pressure: +1.6 "H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1026	0	9.40	4.11	83	

VA 9068

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: ST 106-IN

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: T Nagy

Weather: sunny

Time: 1236

Review Signature and Date: 6/14/12

Background VOC: 1.3ppm

Breathing Zone VOC: 1.3ppm

Static Pressure: ~~0~~

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/14/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1236	0	2.20	15.24	6920	

X VA 9056 X
X VA 9057 X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: ST 106-Post C1

Field Crew: TN, PB

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: T Nagen

Weather: sunny

Time: 1235

Review Signature and Date: 6/14/12

Background VOC: 1.3 ppm

Breathing Zone VOC: 1.3 ppm

Static Pressure: +3.4" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1240	0	12.52	.67	76	

V 9058

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: ST106 Post C2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/14/12

Crew Signature: T Nagel

Weather: Sunny

Time: 1305

Review Signature and Date: 6/14/12

Background VOC: 1.4 ppm

Breathing Zone VOC: 1.4 ppm

Static Pressure: +.60" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1309	0	11.78	1.54	82	

VA9059

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: SVEW 01-260

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: TNgn

Weather: sunny

Time: 837

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: -1.8 "H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
837	0	5.20	12.33	18800	inst.
839	0	5.22	12.63	19140	inst
841	0	5.26	12.54	19400	inst.
				1760 * 9	
				= 15840	by dilution
841	0	5.26	12.54	15840	by dilution

X VA 1384 X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: SVEW02-060

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: TNagy

Weather: Sunny

Time: 913

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: TN 6/13/12 -.15" H_2O ~~-10" H_2O~~

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

2min Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
913	0	14.46	.74	18890	
915	0	14.44	1.10	19050	
917	0	14.50	.71	19280	
				1493 x.9	
				= 13437	by dilution
917	0	14.50	.71	13437	by dilution

VA 1385

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: SVEW03-160

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: T Naper

Weather: sunny

Time: 945

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 -1.0" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
945	0	10.96	3.73	19520	inst.
947	0	12.38	3.28	15250	inst.
949	0	12.28	3.08	18060	inst.
				1535 x 9	
				= 13815	by dilution
949	0	12.28	3.08	13815	by dilution

VA 1386

VA 1387

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/ICE: SVEW 04-313

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: TNagel

Weather: sunny

Time: 1107

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 -1.2" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

2min Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1107	0	3.08	15.56	22520	
1109	0	2.32	17.14	9370	
1111	0	3.22	16.22	7630	
1113	0	2.26	17.77	6490	
1115	0	1.82	18.21	6040	
1117	0	1.68	18.19	5730	
1117	0	1.68	18.19	5730	

* VA1388X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: SVEW-05-460

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: TNogle

Weather: sunny

Time: 1035

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 – 1.2" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1035	0	10.98	4.32	11230	
1037	0	1.78	18.27	1462	
1039	0	1.80	18.26	1435	
1039	0	1.80	18.26	1435	

VA 1389

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/ICE: SVE W-06-060 | Field Crew: TN, DR

Site / SWMU No.: 106 | Date: 6/13/12 | Crew Signature: TN Dorr

Weather: sunny | Time: 1238 | Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 "H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

2min Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1238	0	7.64	7.77	2010	
1240	0	7.72	7.71	2240	
1242	0	7.78	7.67	2300	
1242	0	7.78	7.67	2300	

VA 1390

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/ICE: SVEW 07-160 | Field Crew: TN, DR

Site / SWMU No.: 106 | Date: 6/13/12 | Crew Signature: TNoger

Weather: sunny | Time: 1155 | Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 -.85" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

2nnn Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1155	0	.04	19.64	256	
1157	0	.24	19.34	280	
1159	0	.96	18.99	2740	
1201	0	1.04	19.05	3190	
1203	0	1.08	18.89	3470	
1205	0	1.12	18.52	3640	
1205	0	1.12	18.52	3640	

X VA1391 X

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: SVEW08-260

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: T Nagel

Weather: sunny

Time: 1316

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 – 1.0" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

2nn Date/Time 6/13/12	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1316	0	2.26	15.31	1725	
1318	0	2.30	15.34	1666	
1320	0	2.30	15.40	1647	
1320	0	2.30	15.40	1647	

VA 1392

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877

Well ID No/ICE: SVEW 09-460

Field Crew: TN

Site / SWMU No.: 106

Date: 6/13/12

Crew Signature: TN

Weather: sunny

Time: 1347

Review Signature and Date: 6/14/12

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0 – 1.0" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1347	0	2.18	15.42	1723	
1349	0	2.20	15.42	1675	
1351	0	2.22	15.42	1644	
1351	0	2.22	15.42	1644	

VA 1393

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVEW-11-410
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-21-17
Crew Signature: DMA
Weather: Sunny 90s
Time: 1307
Review Signature and Date: 6-22-17

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

CALCULATIONS

(A) Depth to Well Bottom	410 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	0.0218 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	8.938 ft³	(J) Filter Pack Volume (F x G)	0.40875 ft³
(D) Depth to Top of Screen 6-21-17 407.5	2.5 ft	(K) One Purge Volume (C + J)	13.0255 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	130.255 ft³

Static Pressure: -1.12 "H2O
Purge Flow Rate: 12 cfm

PURGE DATA

3 min Date/Time 6-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1307	0	0	0.00	20.96	1	
1310	36	0	0.04	20.58	14	
1313	72	0	0.02	20.54	15	
1316	108	0	0.04	20.61	15	
1318	132	0	0.06	20.60	16	2 min

Values Prior to Sampling

1318	132	0	0.06	20.60	16	

Sample ID: VA1395

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW13-410

Field Crew: TN

Site / SWMU No.: WG

Date: 6/6/12

Crew Signature: T Nogen

Weather: sunny

Time: 1229

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BHVOC's @
BZVOC's @

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):	8.93 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	400 ft	(K) One Purge Volume (C + J)	105.6 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	105.6 ft³

Static Pressure: NR

Purge Flow Rate: 12 cfm

PURGE DATA

3min Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1229	0	0	.50	18.13	1156	
1232	36	0	.96	16.45	3530	
1235	72	0	.98	16.43	3550	
1238	108	0	1.00	16.44	3550	

Values Prior to Sampling

1238	108	0	1.00	16.44	3550	

Sample ID: VA1397

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 60°s

Well ID No/Interval: SVMW-01-50 DA 5-17-12

Date: 5-17-12

Time: 1027

Field Crew: DA, DM

Crew Signature: [signature]

Review Signature and Date: [signature] 05/17/12

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: VOCs Ø 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	0.00136 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)	0.4875 ft³
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	0.47675 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.7675 ft³ 5-17-12

Static Pressure: Ø" H_2O

Purge Flow Rate: 1cfm

PURGE DATA

Date/Time 2 min 5-17-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1027	0	0.00	0.12	20.76	3	
1029	2	0.00	0.66	20.41	Ø	
1031	4	0.00	0.68	20.55	Ø	
1033	6	0.00	0.70	20.61	Ø	

Values Prior to Sampling

1033	6	0.00	0.70	20.61	Ø	

Sample ID: VA1316

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: DA, DM
Site / SWMU No.: 106
Date: 5-17-12
Crew Signature:
Weather: Sunny 70s
Time: 1057
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 845 ppm 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)	0.40875 ft^3
(D) Depth to Top of Screen	97.5 ft	(K) One Purge Volume (C + J)	0.54475 ft^3
(E) Depth to Bottom of Screen	100 ft	(L) 10 Purge Volumes (K*10)	5.4475 ft^3

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

PURGE DATA

2 min Date/Time 5-17-12	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
1057	0	0.00	0.18	20.71	16	
1059	2	0.00	0.96	20.06	551	
1101	4	0.00	1.00	20.05	576	
1103	6	0.00	1.04	20.04	598	

Values Prior to Sampling

1103	6	0.00	1.04	20.04	598	

Sample ID: VA1317

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-01-250
Field Crew: DA, DM
Site / SWMU No.: 206
Date: 5-17-12
Crew Signature:
Weather: Sunny 70s
Time: 1129
Review Signature and Date: 5/17/12

WELL OBSERVATIONS

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

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):	0.34272 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)	0.75147 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.5147 ft³

Static Pressure: +.28 "H2O
Purge Flow Rate: 1.0cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1129	0	0.00	0.06	20.79	~~8~~ 8	
1131	2	0.00	0.08	20.76	8	
1133	4	0.00	0.08	20.79	7	
1135	6	0.00	0.08	21.10	5	
1137	8	0.00	0.08	21.15	8	

Values Prior to Sampling

1137	8	0.00	0.08	21.15	8	

Sample ID: VA1318

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-[illegible]-300
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 5-17-17
Crew Signature:
Weather: Sunny 70's
Time: 1156
Review Signature and Date: 5/17/17

WELL OBSERVATIONS

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

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	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):	0.408 ft^3	(J) Filter Pack Volume (F x G)	0.40875 ft^3
(D) Depth to Top of Screen	297.5 ft	(K) One Purge Volume (C + J)	0.81675 ft^3
(E) Depth to Bottom of Screen	300 ft	(L) 10 Purge Volumes (K*10)	8.1675 ft^3

Static Pressure: +.14 "Hg
Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time (2 min) 5-17-17	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1158	0	0.00	0.07	21.41	6	
1200	2	0.00	0.06	21.38	30	
1202	4	0.00	0.08	21.31	36	
1204	6	0.00	0.06	21.20	33	
1206	8	0.00	0.06	21.11	34	
1207	9	0.00	0.08	21.07	35	1 min

Values Prior to Sampling

1207	9	0.00	0.08	21.02	35	

Sample ID: VA1319

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW02-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/4/12 | Crew Signature: I Nagler

Weather: sunny | Time: 841 | Review Signature and Date: 6/5/12

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	52.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ¼" = .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	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: -.04" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/4/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
841	0	0	.16	20.61	3	
843	2	0	.36	20.45	5	
845	4	0	.48	20.36	5	
847	6	0	.58	20.26	5	

Values Prior to Sampling

847	6	0	.58	20.26	5	

Sample ID: VA1320

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW02-100 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/4/12 | Crew Signature: T Nagler

Weather: sunny | Time: 912 | Review Signature and Date: 6/5/12

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	99.5 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):	.14 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	97 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	99.5 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: −.14" 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
912	0	0	10.46	7.15	14270	inst.
914	2	0	10.46	7.15	14450	inst.
916	4	0	10.58	7.14	14330	inst.
918	6	0	10.52	7.13	14480	inst.
					1146 *9	
					= 10314	by dilution

Values Prior to Sampling

918	6	0	10.52	7.13	10314	by dilution

Sample ID: VA1321

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW02-150 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/4/12 | Crew Signature: T Nolen

Weather: sunny | Time: 945 | Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: BHVOC's 0

BZ VOC's 0

CALCULATIONS

TD 6/4/12

(A) Depth to Well Bottom	152.5	(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	150 ft	(K) One Purge Volume (C + J)	.60 ft³
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.0 ft³

Static Pressure: −1.0" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time 6/4/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
945	0	0	1.14	17.47	1086	
947	2	0	1.48	17.08	1563	
949	4	0	1.48	17.02	1588	
951	6	0	1.50	17.22	1604	

Values Prior to Sampling

951	6	0	1.50	17.22	1604	

Sample ID: VA1322

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW03-50

Field Crew: TN

Site / SWMU No.: 106

Date: 5/17/12

Crew Signature: T Nagler

Weather: sunny

Time: 853

Review Signature and Date: 5/17/12

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	52.5 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):	.07 ft³	(J) Filter Pack Volume (F x G)	.40 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: 0

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/17/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
853	0	0	4.27	10.50	53	
855	2	0	~~4.58~~ 11.28 TN 5/17/12	4.01	16	
857	4	0	11.32	3.97	17	
859	6	0	11.32	3.96	17	

Values Prior to Sampling

859	6	0	11.32	3.96	17	

Sample ID: VA 1323

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: ~~106~~ SVMW03-100

Field Crew: TN

Site / SWMU No.: 106

Date: 5/17/12

Crew Signature: [signature]

Weather: sunny

Time: 926

Review Signature and Date: [signature] 5/17/12

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	102.5 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):	.14 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	100.0 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: 0

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 5/17/12	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
926	0	0	14.36	.81	10910	inst.
928	2	0	14.32	.83	10940	inst.
930	4	0	14.36	.79	10890	inst.
932	6	0	14.36	.71	10960	inst.
					840 x 9	
					= 7560	by dilution

Values Prior to Sampling

932	6	0	14.36	.71	7560	by dilution

Sample ID: VA1324

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW03-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/17/12 | Crew Signature: TN

Weather: sunny | Time: 1004 | Review Signature and Date: 5/17/12

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	252.5 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):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	250.0 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: 0

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 5/17/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1004	0	0	4.98	11.19	6860	
1006	2	0	4.96	11.13	6680	
1008	4	0	4.92	11.17	6560	
1010	6	0	4.90	11.17	6570	
1012	8	0	4.92	11.15	6580	

Values Prior to Sampling

1012	8	0	4.92	11.15	6580	

Sample ID: VA 1325
VA 1326

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877 | Well ID No/Interval: SVMW-03-300 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/17/12 | Crew Signature: TN

Weather: sunny | Time: 1049 | Review Signature and Date: 5/17/12

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	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	300.0 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	302.5 ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: 0

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/17/12	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
1049	0	0	.02	20.54	62	
1051	2	0	9.26	6.02	12090	inst.
1053	4	0	9.46	5.85	12830	inst.
1055	6	0	9.42	5.84	12800	inst.
1057 1mm	8	0	9.56	5.82	12940	inst.
1058	9	0	9.56	5.86	13110	inst.
					1042 * 9	
					= 9378	by dilution

Values Prior to Sampling

1058	9	0	9.56	5.86	9378	by dilution

Sample ID: VA1327

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW 04-050

Field Crew: TN

Site / SWMU No.: 106

Date: 5/29/12

Crew Signature: TNoe

Weather: sunny

Time: 837

Review Signature and Date: 5/30/2012

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	52.5 ft	(F) Filter Pack Length (E –D)	2.50 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	50 ft	(K) One Purge Volume (C + J)	.47 ft³
(E) Depth to Bottom of Screen	52.50 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: −.32" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/29/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
837	0	0	9.72	7.15	1053	
839	2	0	10.04	6.67	1009	
841	4	0	10.10	6.58	1009	
843	6	0	10.12	6.57	1011	

Values Prior to Sampling

843	6	0	10.12	6.57	1011	

Sample ID: VA1328

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | **Well ID No/Interval:** SVMW-04-100 | **Field Crew:** TN

Site / SWMU No.: 106 | **Date:** 5/29/12 | **Crew Signature:** TNoa

Weather: sunny | **Time:** 904 | **Review Signature and Date:** 5/30/2012

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	100.50 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):	.14 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	98.00 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	100.50 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: -.40" H2O | **Purge Flow Rate:** 1.0 l/m

PURGE DATA

2 min Date/Time 5/29/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
904	0	0	10.72	6.18	14550	inst.
906	2	0	10.98	5.82	14860	inst.
908	4	0	11.16	5.72	15410	inst.
910	6	0	11.20	5.58	15620	inst.
					1259 x9	
					= 11331	by dilution

Values Prior to Sampling

910	6	0	11.20	5.58	11331	by dilution

Sample ID: VA1329

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW04-250

Field Crew: TN

Site / SWMU No.: 106

Date: 5/29/12

Crew Signature: TNoger

Weather: sunny

Time: 937

Review Signature and Date: 5/30/2012

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	252.50 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):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 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: -1.40 "H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 5/29/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
937	0	0	.06	21.31	103	
939	2	0	.88	19.35	3290	
941	4	0	1.06	18.96	4860	
943	6	0	1.10	18.82	5240	
945	8	0	1.16	18.69	5680	

Values Prior to Sampling

945	8	0	1.16	18.69	5680	

Sample ID: UA1330

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW04-300

Field Crew: TN

Site / SWMU No.: 106

Date: 5/29/12

Crew Signature: TNoel

Weather: sunny

Time: 1025

Review Signature and Date: 5/30/2012

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	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):	.41 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	297.5 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	300.00 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: -1.80

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 5/29/12	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
1025	0	0	.04	20.50	33	
1027	2	0	.84	18.74	196	
1029	4	0	.86	18.47	189	
1031	6	0	.88	18.40	189	
1033	8	0	.88	18.48	187	
1035	10	0	.90	18.49	186	

Values Prior to Sampling

1035	10	0	.90	18.49	186	

Sample ID: VA 1331

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW05-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/30/12 | Crew Signature: TNagen

Weather: Sunny | Time: 1345 | Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

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

Notes: BH VOC's 1.1 ppm
BZ VOC's 0

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	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	50.0 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: +.12" H_2O | Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/30/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1345	0	0	5.04	14.60	150	
1347	2	0	5.50	14.00	152	
1349	4	0	5.50	14.03	145	
1351	6	0	5.52	14.08	139	

Values Prior to Sampling

1351	6	0	5.52	14.08	139	

Sample ID: VA1332

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW05-100

Field Crew: TN

Site / SWMU No.: 106

Date: 5/30/12

Crew Signature: I Nolan

Weather: sunny

Time: 1419

Review Signature and Date: 6/3/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BH VOC's 1.2 ppm
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	102.50 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):	.14 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: +.22" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/30/12	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
1419	0	0	7.08	13.07	143	
1421	2	0	8.10	10.89	192	
1423	4	0	8.02	10.87	229	
1425	6	0	7.98	10.83	263	

Values Prior to Sampling

1425	6	0	7.98	10.83	263	

Sample ID: VA 1333
VA 1334

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW05-230
Field Crew: TN
Site / SWMU No.: 106
Date: 5/30/12
Crew Signature: T Nagle
Weather: sunny
Time: 1504
Review Signature and Date: 6/3/2012

WELL OBSERVATIONS

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

Notes: BH VOC's 1.5 ppm
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	231.00 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):	.31 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	228.5 ft	(K) One Purge Volume (C + J)	.71 ft³
(E) Depth to Bottom of Screen	231.0 ft	(L) 10 Purge Volumes (K*10)	7.1 ft³

Static Pressure: -.22" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 5/30/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1504	0	0	.10	20.68	75	
1506	2	0	.74	19.64	72	
1508	4	0	.74	19.76	70	
1510	6	0	.72	19.80	64	
1512	8	0	.74	19.86	62	

Values Prior to Sampling

1512	8	0	.74	19.86	62	

Sample ID: VA 1335

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW 05-290

Field Crew: TN

Site / SWMU No.: 106

Date: 5/30/12

Crew Signature: T Nyder

Weather: sunny

Time: 1538

Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BH VOC's 1.3 ppm
BZ VOC's 0

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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.39 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	287.5 ft	(K) One Purge Volume (C + J)	.79 ft³
(E) Depth to Bottom of Screen	290 ft	(L) 10 Purge Volumes (K*10)	7.9 ft³

Static Pressure: -.45" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 5/30/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1538	0	0	2.98	18.77	91	
1540	2	0	1.02	19.04	147	
1544	4	0	1.00	19.02	145	
1546	6	0	1.00	19.02	146	
1548	8	0	0.98	18.99	148	

Values Prior to Sampling

1548	8	0	0.98	18.99	148	

Sample ID: VA1336

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW06-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/5/12 | Crew Signature: TNagen

Weather: sunny | Time: 1513 | Review Signature and Date: 6/7/12

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	52.5 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):	.07 ft³	(J) Filter Pack Volume (F x G)	.40 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: +.22" H_2O | **Purge Flow Rate:** 1.0 dlm

PURGE DATA

2 min Date/Time 6/5/12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1513	0	0	2.82	16.49	18	
1515	2	0	2.84	16.67	12	
1517	4	0	2.84	16.98	12	
1519	6	0	2.84	17.44	11	

Values Prior to Sampling

1519	6	0	2.84	17.44	11	

Sample ID: VA 1337

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW06-100 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/5/12 | Crew Signature: TNapa

Weather: sunny | Time: 1536 | Review Signature and Date: 6/6/2012

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	102 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):	.14 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	99.5 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	102 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: +.34" H2O

Purge Flow Rate: 60 cfm

PURGE DATA

2mm Date/Time 6/5/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1536	0	0	3.24	15.62	17	
1538	2	0	4.02	14.33	10	
1540	4	0	4.16	14.08	9	
1542	6	0	4.18	14.01	9	

Values Prior to Sampling

1542	6	0	4.18	14.01	9	

Sample ID: VA1338

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SVMW06-250	**Field Crew:** TN
Site / SWMU No.: 106	**Date:** 6/5/12	**Crew Signature:** T Nagar
Weather: sunny + hot	**Time:** 1600	**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	254.5 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):	.35 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	252 ft	(K) One Purge Volume (C + J)	.75 ft³
(E) Depth to Bottom of Screen	254.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: +.18" H_2O **Purge Flow Rate:** 1.0 cfm

PURGE DATA

2 min Date/Time 6/5/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1600	0	0	1.54	13.95	4880	
1602	2	0	1.64	13.74	5230	
1604	4	0	1.76	13.56	5660	
1608	6	0	1.94	13.46	6470	
1610	8	0	1.96	13.45	6520	

Values Prior to Sampling

1610	8	0	1.96	13.45	6520	

Sample ID: VA1339

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW06-302 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/6/12 | Crew Signature: TNash

Weather: sunny | Time: 838 | Review Signature and Date: 6/7/12

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	305 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	305.0 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: −.56" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/6/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
838	0	0	.10	20.93	15	
840	2	0	1.18	16.46	2890	
842	4	0	1.18	16.13	2930	
844	6	0	1.18	16.11	2940	
846	8	0	1.20	16.14	2950	
848	10	0	1.20	16.15	2960	

Values Prior to Sampling

848	10	0	1.20	16.15	2960	

Sample ID: VA1340

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW07-050

Field Crew: TN

Site / SWMU No.: 106

Date: 6/5/12

Crew Signature: T Noger

Weather: sunny

Time: 835

Review Signature and Date: 6/5/12

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	52.0 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	49.5 ft	(K) One Purge Volume (C + J)	.47 ft³
(E) Depth to Bottom of Screen	52.0 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: -1.0" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/5/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
835	0	0	.02	20.76	14	
837	2	0	.66	18.97	20	
839	4	0	.72	18.90	21	
841	6	0	.70	18.45	19	

Values Prior to Sampling

841	6	0	.70	18.45	19	

Sample ID: VA1341

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW07-100 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/5/12 | Crew Signature: T Nuger

Weather: sunny | Time: 857 | Review Signature and Date: 6/5/12

WELL OBSERVATIONS

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

Notes: 13 H VOC's 0

13 Z 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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.14 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	95.5 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	98.0 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: 0 **Purge Flow Rate:** 1.0 cfm

PURGE DATA

2 min Date/Time 6/5/12	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
857	0	0	5.20	14.52	1016	
859	2	0	5.34	14.30	1101	
901	4	0	5.34	14.32	1097	
903	6	0	5.34	14.34	1102	

Values Prior to Sampling

903	6	0	5.34	14.34	1102	

Sample ID: VA1342

VA1343

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW07-150 | Field Crew: TN

Site / SWMU No.: 106 | Date: 6/5/12 | Crew Signature: T Nagel

Weather: sunny | Time: 932 | Review Signature and Date: 6/6/12

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)	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	150.0ft	(L) 10 Purge Volumes (K*10)	6.0 ft³

Static Pressure: 0 | Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/5/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
932	0	0	4.70	15.36	12	
934	2	0	5.48	13.85	11	
936	4	0	5.48	13.82	10	
938	6	0	5.50	13.82	10	

Values Prior to Sampling

938	6	0	5.50	13.82	10	

Sample ID: VA 1344

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 | Field Crew: DA

Site / SWMU No.: 106 | Date: 5-15-12 | Crew Signature: [signature]

Weather: Sunny 70s | Time: 1332 | Review Signature and Date: [signature] 5/16/2012

WELL OBSERVATIONS

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

Notes: VOCs 1,433 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):	0.068 ft³	(J) Filter Pack Volume (F x G)	0.40875 ft³
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	0.477 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.77 ft³

Static Pressure: −0.84 "H_2O | Purge Flow Rate: 1.5cfm

PURGE DATA

2 min Date/Time 5/15/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1332	0	0.00	8.56	10.43	7,030	
1334	3	0.00	10.58	5.88	9,740	
1336	6	0.00	10.62	5.81	9,820	

Values Prior to Sampling

1336	6	0.00	10.62	5.81	9,820	

Sample ID: VA1345

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW08-100
Field Crew: DA
Site / SWMU No.: 106
Date: 5-15-17
Crew Signature: DNA
Weather: Sunny 70s
Time: 1400
Review Signature and Date: [illegible] 5/16/2017

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOCs 1.5 in BH

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	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):	0.136 ft^3	(J) Filter Pack Volume (F x G)	0.4088 ft^3
(D) Depth to Top of Screen	97.5 ft	(K) One Purge Volume (C + J)	0.5446 ft^3
(E) Depth to Bottom of Screen	100 ft	(L) 10 Purge Volumes (K*10)	5.446 ft^3

Static Pressure: -.98 "H2O
Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time 5-15-17	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1400	0	0.00	4.64	8.90	36	
1402	3	0.00	10.08	6.76	31	
1404	6	0.00	10.10	6.70	29	

Values Prior to Sampling

1404	6	0.00	10.10	6.70	29	

Sample ID: VA1346

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW08-250 DA 5-15-12

Field Crew: DA

Site / SWMU No.: 106

Date: 5-15-12

Crew Signature:

Weather: Sunny 70s

Time: 1426

Review Signature and Date: 5/16/2012

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 186 in BH 0 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 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)	0.40875 ft^3
(D) Depth to Top of Screen	242.5 ft	(K) One Purge Volume (C + J)	0.74875 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft^3

Static Pressure: -1.12 $"H_2O$

Purge Flow Rate: 1.5 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1426	0	0.00	1.74	17.93	20	
1428	3	0.00	0.56	19.34	1254	
1430	6	0.00	0.56	19.40	1249	
1432	9	0.00	0.56	19.21	1250	

Values Prior to Sampling

1432	9	0.00	0.56	19.21	1250	

Sample ID: VA1347

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106108-350

Field Crew: TN

Site / SWMU No.: 106

Date: 5/16/12

Crew Signature: [signature]

Weather: sunny

Time: 926

Review Signature and Date: [signature] 5/19/2012

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	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: -2.8" H_2O

PURGE DATA

Purge Flow Rate: 1.5 cfm

6 min Date/Time 5/16/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
926	0	0	.04	20.40	80	
932	9	0	.32	19.41	735	
938	18	0	.32	19.45	758	
944	27	0	.32	19.46	763	

Values Prior to Sampling

944	27	0	.32	19.46	763	

Sample ID: VA 1403

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW09-050 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 6/12/12 | Crew Signature: T Nash

Weather: sunny | Time: 834 | Review Signature and Date: 6/12/12

WELL OBSERVATIONS

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

Notes: BH VOC's

BZ VOC's 0

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	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	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: −.28" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/12/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
834	0	0	12.26	4.61	1178	
836	2	0	13.12	2.36	1881	
838	4	0	13.10	2.37	1952	
840	6	0	13.10	2.39	2050	

Values Prior to Sampling

840	6	0	13.10	2.39	2050	

Sample ID: VA1349

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW09-100 | Field Crew: TN, DM

Site / SWMU No.: 106 | Date: 6/12/12 | Crew Signature: TN

Weather: sunny | Time: 0932 | Review Signature and Date: [illegible] 6/12/12

WELL OBSERVATIONS

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

Notes: BH VOC's

B2 VOC's 0

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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.14 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: -.47" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/12/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0932	0	Ø	13.94	1.84	24875	Inst.
0934	2	Ø	13.92	2.45	24490	Inst.
0936	4	Ø	14.04	1.64	25360	Inst.
0938	6	Ø	14.24	1.66	25140	Inst.
					1,927 x 9	
					= 17,343 by dilution	

Values Prior to Sampling

0938	6	Ø	14.24	1.66	~~25140~~ 17,343

Sample ID: VA1350

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: TN, DM

Site / SWMU No.: 106

Date: 6/12/12

Crew Signature: T Nye

Weather: sunny

Time: 1015

Review Signature and Date: 6/6/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BHVOC's 0

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	252.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ¼" = .00136, ⅜" = .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 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: −2.1 "H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/12/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1015	0	0	5.34	16.28	4380	
1017	2	0	1.78	16.75	4400	
1019	4	0	1.80	16.78	4520	
1021	6	0	1.78	16.79	4530	
1023	8	0	1.78	16.84	4530	

Values Prior to Sampling

1023	8	0	1.78	16.84	4530	

Sample ID: VA1351

Shaw Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVHW 09-266
Field Crew: TN, DM
Site / SWMU No.: 106
Date: 6/12/12
Crew Signature: T Nagen
Weather: sunny
Time: 1108
Review Signature and Date: 6/12/12

WELL OBSERVATIONS

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

Notes: BH VOC's
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	268.5 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):	.37 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	266 ft	(K) One Purge Volume (C + J)	.77 ft³
(E) Depth to Bottom of Screen	268.5 ft	(L) 10 Purge Volumes (K*10)	7.7 ft³

Static Pressure: -2.3" H_2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time 6/12/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1108	0	0	2.72	14.12	17510	inst.
1110	2	0	2.78	14.21	17320	inst.
1112	4	0	2.72	14.39	17080	inst.
1114	6	0	2.76	14.41	16600	inst.
1116	8	0	2.76	14.32	16770	inst.
					1449 x 9	
					= 13041	by dilution

Values Prior to Sampling

1116	8	0	2.76	14.32	13041	by dilution

Sample ID: VA1352

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~KAFB-7M~~ SVMW-10-050

Field Crew: DM, DA

Site / SWMU No.: 106

Date: 6-13-12

Crew Signature: Daniel Medina

Weather: Sunny 80's

Time: 0917

Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 5.7 ppm in BH
BZ ~~0ppm~~ 1.7

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)	.40875 ft³
(D) Depth to Top of Screen	47.5 ft	(K) One Purge Volume (C + J)	0.47675 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	4.7675 ft³

Static Pressure: −.14" H_2O

Purge Flow Rate: 1 cfm

PURGE DATA

2min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0917	0	Ø	0.68	20.09	1760	
0919	2	Ø	0.72	20.13	1764	
0921	4	Ø	0.76	20.13	1792	
0922	5	Ø	0.78	20.13	1808	1 min

Values Prior to Sampling

0922	5	Ø	0.78	20.13	1808	

Sample ID: VA1353

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: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 0950
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 101.6 ppm
BZ 0.4

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)	.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: -.26" H_2O
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0950	0	Ø	0.86	19.77	1509	
0952	2	Ø	0.92	19.75	2700	
0954	4	Ø	0.94	19.80	2730	
0956	6	Ø	0.96	19.86	2760	

Values Prior to Sampling

0956	6	Ø	0.96	19.86	2760	

Sample ID: VA1354

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: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Medina
Weather: Sunny 80's
Time: 1022
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: VOC's 346.6 ppm in BH
BZ 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)	.40875 ft³
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	0.61275 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	6.1275 ft³

Static Pressure: -1.1" H_2O
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1022	0	Ø	Ø	20.79	38	
1024	2	Ø	0.30	20.11	1760	
1026	4	Ø	0.50	20.12	1810	
1028	6	Ø	0.54	20.22	1834	
1029	7	Ø	0.52	20.36	1814	1 min

Values Prior to Sampling

1029	7	Ø	0.52	20.36	1814	

Sample ID: VA1355
VA1356

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: DM, DA
Site / SWMU No.: 106
Date: 6-13-12
Crew Signature: Daniel Machin
Weather: Sunny 80's
Time: 1127
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

Notes: VOC's 11.9 ppm in BH
BZ 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):	.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)	0.74875 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft³

Static Pressure: - 1.4" H_2O
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 6-13-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1127	0	Ø	0.42	19.89	1348	
1129	2	Ø	0.14	20.53	670	
1131	4	Ø	0.18	20.67	830	
1133	6	Ø	0.18	20.71	841	
1135	8	Ø	0.18	20.63	851	

Values Prior to Sampling

1135	8	Ø	0.18	20.63	851	

Sample ID: VA1357

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 -050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 5/30/12 | Crew Signature: T Nagler

Weather: sunny | Time: 935 | Review Signature and Date: 5/31/2012

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	52.50 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	50.0 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: −.12 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time 5/30/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
935	0	0	14.38	.95	10680	inst.
937	2	0	14.44	.87	11180	inst.
939	4	0	14.36	.93	11490	inst.
941	6	0	14.48	.80	12110	inst.
					930 x 9	
					= 8370	by dilution

Values Prior to Sampling

941	6	0	14.48	.80	8370	by dilution

Sample ID: VA1358

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: TN

Site / SWMU No.: 106

Date: 5/30/12

Crew Signature: TNeph

Weather: sunny

Time: 1010

Review Signature and Date: 5/31/2012

WELL OBSERVATIONS

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

Notes: BHVOC's @
BZVOC's @

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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.14 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: -.22" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time 5/30/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1010	0	0	13.50	13.29	32760	inst.
1012	2	0	13.92	1.17	32760	inst.
1014	4	0	13.76	1.19	32760	inst.
1016	6	0	14.04	1.13	32760	inst.
					3230 x 9	
					= 29070	by dilution

Values Prior to Sampling

1016	6	0	14.04	1.13	29070	by dilution

Sample ID: VA1359

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: TN

Site / SWMU No.: 106 | Date: 5/30/12 | Crew Signature: T Nagel

Weather: sunny | Time: 1040 | Review Signature and Date: 5/31/2012

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	252.5 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):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 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: -1.00 "H₂O

Purge Flow Rate: 10 cfm

PURGE DATA

2 min Date/Time 5/30/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv) TVOC 5/30/12	Comments
1040	0	0	8.02	6.94	~~734~~ 25960	inst.
1042	2	0	7.76	7.83	26330	inst.
1044	4	0	7.56	7.92	26760	inst.
1046	6	0	7.60	8.01	27550	inst.
1048	8	0	7.58	8.15	27460	inst.
					2150 x 9	
					= 19350	by dilution

Values Prior to Sampling

1048	8	0	7.58	8.15	19350	by dilution

Sample ID: VA1360

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: TN

Site / SWMU No.: 106

Date: 5/30/12

Crew Signature: TNafen

Weather: sunny

Time: 1110

Review Signature and Date: 5/31/2012

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	262.5 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):	.36 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	260.0 ft	(K) One Purge Volume (C + J)	.76 ft³
(E) Depth to Bottom of Screen	262.5 ft	(L) 10 Purge Volumes (K*10)	7.6 ft³

Static Pressure: -1.00" 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
1110	0	0	0.48	19.84	2180	
1112	2	0	0.95	18.95	4990	
1114	4	0	1.32	18.18	7180	
1116	6	0	1.68	17.59	8700	
1118	8	0	2.08	17.25	10940	inst.
					1006 x 9	
					= 9054	by dilution

Values Prior to Sampling

1118	8	0	2.08	17.25	9054	by dilution

Sample ID: VA1361

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-12-150
Field Crew: DA
Site / SWMU No.: 106
Date: 6-14-12
Crew Signature:
Weather: Sunny 80s
Time: 1050
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

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	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):	0.204 ft^3	(J) Filter Pack Volume (F x G)	0.40875 ft^3
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	0.61875 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	6.1275 ft^3

Static Pressure: −0.42 "H_2O **Purge Flow Rate:** 1.0cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1050	0	0.00	0.00	20.79	2	
1052	2	0.00	0.00	21.05	3	
1054	4	0.00	0.00	20.90	4	
1056	6	0.00	0.00	20.84	3	
1057	7	0.00	0.00	20.87	2	1 min
		0.00				

Values Prior to Sampling

1057	7	0.00	0.00	20.87	2	

Sample ID: VA1362

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: DA, DM
Site / SWMU No.: 106
Date: 6-14-12
Crew Signature: DMA
Weather: Sunny 80s
Time: 1120
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

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	0.00136 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)	0.40875 ft³
(D) Depth to Top of Screen	247.5 ft	(K) One Purge Volume (C + J)	0.74875 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft³

Static Pressure: −0.52 "H₂O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6-14-12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1120	0	0.00	0.00	21.07	2	
1122	2	0.00	0.02	21.00	5	
1124	4	0.00	0.02	20.79	7	
1126	6	0.00	0.02	20.67	7	
1128	8	0.00	0.02	20.67	6	

Values Prior to Sampling

1128	8	0.00	0.02	20.67	6	

Sample ID: VA1363

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-12-350
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-14-12
Crew Signature: DMA
Weather: Sunny 80°
Time: 1208
Review Signature and Date: 6/14/12

WELL OBSERVATIONS

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

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 0.00136	(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)	0.40875 ft³
(D) Depth to Top of Screen	347.5 ft	(K) One Purge Volume (C + J)	0.88475 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	8.8475 ft³

Static Pressure: -0.44 "H2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

3 min Date/Time 6-14-12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1159	0	0.00	0.00	20.83	1	
1202	3	0.00	0.04	20.91	4	
1205	6	0.00	0.04	20.90	4	
1208	9	0.00	0.06	20.86	5	

Values Prior to Sampling

1208	9	0.00	0.06	20.86	5	

Sample ID: VA1364

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-12-450
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-14-17
Crew Signature:
Weather: Sunny 80s
Time: 1230
Review Signature and Date: 6/14/17

WELL OBSERVATIONS

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

Notes: VOCs Ø PPM in BH

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	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):	0.612 ft^3	(J) Filter Pack Volume (F x G)	0.40875 ft^3
(D) Depth to Top of Screen	447.5 ft	(K) One Purge Volume (C + J)	1.02075 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	10.2075 ft^3

Static Pressure: -0.46 "H_2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6-14-17	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1230	Ø	0.00	0.00	20.83	6	
1232	2	0.00	0.00	20.93	11	
1234	4	0.00	0.00	21.22	10	
1236	6	0.00	0.00	21.76	11	
1238	8	0.00	0.02	21.90	12	
1240	10	0.00	0.02	21.89	12	

Values Prior to Sampling

1240	10	0.00	0.02	21.89	12	

Sample ID: VA1365

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SWMU-13-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-21-12
Crew Signature: [signature]
Weather: Sunny Windy 10's
Time: 1029
Review Signature and Date: [signature] 6/22/12

WELL OBSERVATIONS

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

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	0.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.204 ft³	(J) Filter Pack Volume (F x G) 0.40875	~~0.044775 ft³~~ 0.40875 ft³
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	0.61275 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	6.1275 ft³

Static Pressure: -3.0" H₂O
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 6-21-12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1029	0	0	0	21.06	6	
1031	2	0	0	21.15	0	
1033	4	0	0.10	20.41	93	
1035	6	0	0.12	20.40	106	

Values Prior to Sampling

1035	6	0	0.12	20.40	106	

Sample ID: VA1366

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: DA, DM
Site / SWMU No.: 106
Date: 6-21-12
Crew Signature:
Weather: Sunny Windy 80s
Time: 1058
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	0.00136 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)	0.40875 ft³
(D) Depth to Top of Screen	247.5 ft	(K) One Purge Volume (C + J)	0.74875 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft³

Static Pressure: -2.1" H_2O
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 9-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1058	0	0	0.00	20.83	1	
~~6-21-12 0905~~ 1100	2	0	0.00	20.69	2	
1102	4	0	0.02	20.74	0	
1104	6	0	0.04	20.73	1	
1106	8	0	0.06	20.88	0	

Values Prior to Sampling

1106	8	0	0.06	20.88	0	

Sample ID: VA1367
VA1368

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: DA, DM
Site / SWMU No.: 106
Date: 6-21-17
Crew Signature:
Weather: Sunny Windy 80s
Time: 1207
Review Signature and Date: 6/30/17

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	0.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.476 ft³	(J) Filter Pack Volume (F x G)	0.40875 ft³
(D) Depth to Top of Screen	347.5 ft	(K) One Purge Volume (C + J)	0.88475 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	8.8475 ft³

Static Pressure: -2.5 "H2O
Purge Flow Rate: lcfm

PURGE DATA

3 min Date/Time 6-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1207	0	0	0.02	21.10	1	
1205	3	0	0.12	20.92	0	
1208	6	0	0.12	20.93	1	
1211	9	0	0.12	20.89	1	

Values Prior to Sampling

1211	9	0	0.12	20.89	1	

Sample ID: VA1369

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** DA 6-21-12 SVMW ~~450~~ 13-450	**Field Crew:** DA, PM
Site / SWMU No.: 106	**Date:** 6-21-12	**Crew Signature:** [signature]
Weather: Sunny 80°	**Time:** 1230	**Review Signature and Date:** [signature] 6/22/12

WELL OBSERVATIONS

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

Notes: VOCs Ø ppm in BH

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	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):	0.612 ft^3	(J) Filter Pack Volume (F x G)	0.40875 ft^3
(D) Depth to Top of Screen	447.5 ft	(K) One Purge Volume (C + J)	1.02075 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	10.2075 ft^3

Static Pressure: -2.9 "H_2O **Purge Flow Rate:** 1.0 cfm

PURGE DATA

3 min Date/Time 6-21-12	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1230	Ø	Ø	0.02	20.82	3	
1233	3	Ø	0.02	20.62	23	
1236	6	Ø	0.02	20.64	25	
1239	9	Ø	0.02	20.82	23	
1241	11	Ø	0.02	20.83	22	2 min

Values Prior to Sampling

1241	11	Ø	0.02	20.83	22	

Sample ID: VA 1370

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-14-150
Field Crew: DA, DM
Site / SWMU No.: 106
Date: 6-21-17
Crew Signature:
Weather: Sunny 90's
Time: 1426
Review Signature and Date: 6/28/17

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	0.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.204 ft³	(J) Filter Pack Volume (F x G)	0.40875 ft³
(D) Depth to Top of Screen	147.5 ft	(K) One Purge Volume (C + J)	0.61275 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: -2.1 "H₂O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1426	0	0	0	20.43	2	
1428	2	0	0	20.65	0	
1430	4	0	0.07	20.67	1	
1432	6	0	0.02	20.60	0	
1433	7	0	0.07	20.67	0	1/min

Values Prior to Sampling

1433	7	0	0.02	20.67	0	

Sample ID: VA1371

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: DA, DM
Site / SWMU No.: 106
Date: 6-21-17
Crew Signature:
Weather: Sunny 90s
Time: 1448
Review Signature and Date: 6/30/17

WELL OBSERVATIONS

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

Notes: VOCs 0 ppm in BH

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	0.00136 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)	0.40875 ft³
(D) Depth to Top of Screen	247.5 ft	(K) One Purge Volume (C + J)	0.74875 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	7.4875 ft³

Static Pressure: -2.0 "H2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1448	0	0	0	20.79	2	
1450	2	0	0	20.67	1	
1452	4	0	0	20.66	2	
1454	6	0	0	20.68	3	
1456	8	0	0	20.83	1	

Values Prior to Sampling

1456	8	0	0	20.83	1	

Sample ID: VA1327

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-19 14-350 (2016-21-12)

Field Crew: DA, DM

Site / SWMU No.: 106

Date: 6-21-17

Crew Signature:

Weather: Sunny 90s

Time: 1528

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: VOCs 0 ppm in BH

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	0.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.476 ft³	(J) Filter Pack Volume (F x G)	0.40875 ft³
(D) Depth to Top of Screen	347.5 ft	(K) One Purge Volume (C + J)	0.88475 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	ft³

Static Pressure: -2.3 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1528	0	0	0.00	20.81	1	
1531	3	0	0.00	20.85	1	
1534	6	0	0.00	20.91	3	
1537	9	0	0.00	20.94	4	

Values Prior to Sampling

1537	9	0	0.00	20.94	4	

Sample ID: VA1373

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: DA, DM
Site / SWMU No.: 106
Date: 6-21-17
Crew Signature: DM
Weather: Sunny 90s
Time: 1556
Review Signature and Date: 6/22/17

WELL OBSERVATIONS

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

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	0.00136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.612 ft³	(J) Filter Pack Volume (F x G)	0.408875 ft³
(D) Depth to Top of Screen	447.5 ft	(K) One Purge Volume (C + J)	1.020875 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	10.20875 ft³

Static Pressure: -2.1 "H₂O
Purge Flow Rate: 1.0 cfm

PURGE DATA

3 min Date/Time 6-21-17	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1556	0	0	0	21.12	1	
1559	3	0	0.14	20.17	17	
1602	6	0	0.12	20.08	14	
1605	9	0	0.16	20.00	15	
1607	11	0	0.14	20.04	14	2 min

Values Prior to Sampling

1607	11	0	0.14	20.04	14	

Sample ID: VA1374

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW15-150

Field Crew: TN

Site / SWMU No.: 106

Date: 6/6/12

Crew Signature: [signature]

Weather: sunny

Time: 938

Review Signature and Date: [signature] 6/7/12

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	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):	.20 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	180 ft	(K) One Purge Volume (C + J)	.60 ft³
(E) Depth to Bottom of Screen	1525 ft	(L) 10 Purge Volumes (K*10)	6.0 ft³

Static Pressure: -.32" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2mm Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
938	0	0	.02	21.01	11	
940	2	0	.46	18.01	11	
942	4	0	.52	17.64	10	
944	6	0	.50	17.55	10	

Values Prior to Sampling

944	6	0	.50	17.55	10	

Sample ID: VA1375

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: TN

Site / SWMU No.: 106

Date: 6/6/12

Crew Signature: T Rogers

Weather: sunny

Time: 1020

Review Signature and Date: 6/7/12

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	252.5 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):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 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: −.34" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time 6/6/12	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1020	0	0	.12	20.55	16	
1022	2	0	.74	17.19	182	
1024	4	0	.74	16.97	159	
1026	6	0	.76	16.79	154	
1028	8	0	.76	16.88	147	

Values Prior to Sampling

1028	8	0	.76	16.88	147	

Sample ID: VA1376

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: TN

Site / SWMU No.: 106

Date: 6/6/12

Crew Signature: [signature]

Weather: Sunny

Time: 1100

Review Signature and Date: [signature] 6/7/12

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	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):	.48 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	.88 ft³
(E) Depth to Bottom of Screen	3525 ft	(L) 10 Purge Volumes (K*10)	8.8 ft³

Static Pressure: -.60 "H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1100	0	0	.70	15.77	5440	
1102	2	0	.98	15.25	6610	
1104	4	0	.98	15.13	6640	
1106	6	0	.98	15.36	6640	
1108	8	0	.98	15.36	6670	
1110	10	0	.98	15.26	6680	

Values Prior to Sampling

1110	10	0	.98	15.26	6680	

Sample ID: VA1377
VA1378

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: TN

Site / SWMU No.: 106 | Date: 6/6/12 | Crew Signature: Tyler

Weather: sunny | Time: 1150 | Review Signature and Date:

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	452.5 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):	.60 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	450 ft	(K) One Purge Volume (C + J)	1.00 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10.0 ft³

Static Pressure: -.62" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min

Date/Time 6/6/12	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1150	0	0	.02	20.21	45	
1152	2	0	1.70	16.28	14410	inst.
1154	4	0	1.66	16.30	14130	inst.
1156	6	0	1.60	16.25	13950	inst.
1158	8	0	1.64	16.20	13780	inst.
1200	10	0	1.64	16.25	13640	inst.
					826 x 9	
					= 7434	by dilution

Values Prior to Sampling

1200	10	0	1.64	16.25	7434	by dilution

Sample ID: VA1379