Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106121-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/11/11

Crew Signature: Tim Nyer

Weather: sunny

Time: 1134

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.14 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)	1.77 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.7 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1134	0	0	1.26	19.14	12	
1137	4.5	0	1.22	19.09	11	
1140	9	0	1.20	19.07	10	
1143	13.5	0	1.20	19.05	9	
1146	18	0	1.20	19.05	9	

Values Prior to Sampling

1146	18	0	1.20	19.05	9	

Sample ID: VA0544R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106126-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/11/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1207

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: +.72" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1207	0	0	.40	18.61	3070	
1211	48	0	.42	18.39	3890	
1215	96	0	.44	18.73	3990	
1219	144	0	.44	18.43	4050	
1223	192	0	.46	18.06	4150	
1227	240	0	.46	17.93	4180	

Values Prior to Sampling

1227	240	0	.46	17.93	4180	

Sample ID: VA0578R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-01-050

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nuger

Weather: rain

Time: 815

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BH VOC's 2.9 ppm (open)
BZ VOC's 0 ppm

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	500 ft	(K) One Purge Volume (C + J)	.47 ft³
E) Depth to Bottom of Screen	51.5 ft	(L) 10 Purge Volumes (K*10)	4.7 ft³

Static Pressure: 0" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/13/11 817	0	0	3.44	17.11	0	
819	2	0	3.62	17.05	0	
821	4	0	3.66	17.14	1	
823	6	0	3.70	17.18	3	

Values Prior to Sampling

823	TD @ 6	0	3.70	17.18	3	

Sample ID: VA0687
VA0688

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: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagar

Weather: rain

Time: 856

Review Signature and Date: 12-14-11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BH VOC's 5.5ppm(open)

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"H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/13/11 856	0	0	5.38	14.13	3250	
858	2	0	5.76	13.81	3570	
900	4	0	6.00	13.58	TP 3710	
902	6	0	6.06	13.53	3750	

Values Prior to Sampling

902	6	0	6.06	13.53	3750	

Sample ID: VA0689

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: TN

Site / SWMU No.: 106 | Date: 12/13/11 | Crew Signature: Tim Nogan

Weather: rain | Time: 924 | Review Signature and Date: 12/14/11

WELL OBSERVATIONS

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

Notes: BH VOC's 12.2ppm (open)
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +1.4" H_2O | **Purge Flow Rate:** 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/13/11 924	0	0	.50	20.77	15	
926	2	0	.52	20.79	8	
928	4	0	.56	20.75	7	
930	6	0	.54	20.77	8	
932	8	0	.54	20.80	7	

Values Prior to Sampling

932	8	0	.54	20.80	7	

Sample ID: VA0690

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-01-300

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nay

Weather: rain

Time: 954

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

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

Notes: BKgd VOC's 0.4ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	311.0 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):	.42 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	308.5 ft	(K) One Purge Volume (C + J)	.82 ft³
(E) Depth to Bottom of Screen	311.0 ft	(L) 10 Purge Volumes (K*10)	8.2 ft³

Static Pressure: +1.4" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
954	0	0	.44	19.96	291	
956	2	0	.44	19.97	295	
958	4	0	.44	19.95	301	
1000	6	0	.46	19.94	304	
1002	8	0	.46	19.92	307	
1004	10	0	.46	19.89	311	

Values Prior to Sampling

1004	10	0	.46	19.89	311	

Sample ID: VA0691

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: SVMW02-50
Field Crew: RB
Site / SWMU No.: 106
Date: 11 2 11
Crew Signature:
Weather: Sunny 40s
Time: 834
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd 0
BZ 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: -.40
Purge Flow Rate: 1

PURGE DATA

2 min Date/Time 11-2-11	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
834	0	0	.54	20.56	2	
836	2	0	1.22	19.75	6	
838	4	0	2.32	18.33	19	
840	6	0	2.68	17.82	26	

Values Prior to Sampling

840	6	0	2.68	17.82	26	

Sample ID: VA0692-~~F~~Q

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: BVMW 02-100
Field Crew: RB
Site / SWMU No.: 106
Date: 11-2-11
Crew Signature:
Weather: Sunny 40s
Time:
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

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):	.13 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	97 ft	(K) One Purge Volume (C + J)	.53 ft³
(E) Depth to Bottom of Screen	99.5 ft	(L) 10 Purge Volumes (K*10)	5.3 ft³

Static Pressure: -.68
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 11-2-11	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
856	0	0	.10	20.60	23	
858	2	0	3.34	16.34	1994	
900	4	0	3.52	16.10	2290	
902	6	0	5.06	14.23	4790	

Values Prior to Sampling

902	6	0	5.06	14.23	4790	

Sample ID: VA0693-FQ

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF
Well ID No/Interval: SVMW D2-150
Field Crew: RB
Site / SWMU No.: 106
Date: 11-2-11
Crew Signature:
Weather: Sunny 50s
Time: 931
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BK1 0.0
BK2 0.0

CALCULATIONS

(A) Depth to Well Bottom	1525 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	150 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: -.56
Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 11-2-11	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
931	0	0	.02	21.28	8	
933	2	0	.10	21.10	11	
935	4	0	.14	21.01	17	
937	6	0	.20	20.85	25	

Values Prior to Sampling

937	6	0	.20	20.85	25	

Sample ID: VA0674-FQ

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-03-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: T. Nagy

Weather: sunny

Time: 1513

Review Signature and Date: 10-19-2011

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 1.4 ppm

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	52.5 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):	.065 ft³	(J) Filter Pack Volume (F x G)	.4 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	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
10/19/11 1513	0	0	1.74	18.02	19	
1515	2	0	4.14	15.59	33	
1517	4	0	4.22	15.55	47	
1519	6	0	4.22	15.59	50	

Values Prior to Sampling

1519	6	0	4.22	15.59	50	

Sample ID: VA0695

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB/BFF	Well ID No/Interval: SVMW-03	Field Crew: TN, DR
Site / SWMU No.: 106	Date: 10-19-2011	Crew Signature:
Weather: Warm, Sunny	Time: 1541	Review Signature and Date: 10/19/11

WELL OBSERVATIONS

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

Notes: Pile of Contaminated Soil almost burying well
VOC's 0.0 BZ
VOC's 0.0 Background

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	.136 ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.139 ft³	(J) Filter Pack Volume (F x G)	.4 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.539 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.39 ft³

Static Pressure: +.40 inches H^2O Purge Flow Rate: 1 scfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10-19-2011 1549	0	0.00	0.02	0.00	86	
1551	2	0.00	10.02	7.28	8766	
1553	4	0.00	10.02	7.26	8760	
1555	6	0.00	10.08	7.19	8790	

Values Prior to Sampling

1555	6	0.00	10.08	7.19	8790	

Sample ID: VA0696

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-03-250

Field Crew: FN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature:

Weather: sunny

Time: 855

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

B2 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)	.4 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: 0" H_2O

Purge Flow Rate: 1.5CFM

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/20/11 903	0	0	1.14	18.81	702	
905	2	0	1.84	17.41	3130	
907	4	0	1.86	17.35	3140	
909	6	0	1.88	17.31	3160	
911	8	0	1.90	17.28	3180	

Values Prior to Sampling

911	8	0	1.90	17.28	3180	

Sample ID: VA0697

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: ~~TN KAFB~~ SVMW03-300	Field Crew: TN
Site / SWMU No.: 106	Date: 10/20/11	Crew Signature: Tim Noper
Weather: sunny	Time: 931	Review Signature and Date: [signature] 10/20/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	302.5 TN ft	(F) Filter Pack Length (E –D)	2.5 ~~10~~ TN 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 ~~1.63~~ TN ft³
(D) Depth to Top of Screen	300 ft	(K) One Purge Volume (C + J)	.81 ft³
(E) Depth to Bottom of Screen	302.5 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

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

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/20/11 933	0	0	2.00	16.03	6400	
935	2	0	2.46	15.28	9410	
937	4	0	2.50	15.22	9580	
939	6	0	2.52	15.16	9700	
941	8	0	2.54	15.14	9740	
943	10	0	2.56	15.12	9800	

Values Prior to Sampling

943	10	0	2.56	15.12	9800	

Sample ID: VA0698
VA0699

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: 10/6/11
Crew Signature: Tim Nagel
Weather: windy
Time: 1535
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
BZ VOC's 5.7

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 ft	(K) One Purge Volume (C + J)	4.07 ft³
(E) Depth to Bottom of Screen	52.5 ft	(L) 10 Purge Volumes (K*10)	4.07 ft³

Static Pressure: +.15" 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
10/6/11 1535	0	0	8.36	9.54	818	
1537	2	0	8.38	9.55	800	
1539	4	0	8.40	9.56	816	
1541	6	0	8.40	9.56	855	

Values Prior to Sampling

1541	6	0	8.40	9.56	855	

Sample ID: VA0700

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: 10/6/11
Crew Signature: Tim Nagel
Weather: windy
Time: 1604
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BKgd VOC's 1.8
BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	100.5 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):	.136 ft³	(J) Filter Pack Volume (F x G)	~~.40~~ ft³
(D) Depth to Top of Screen	98 ft	(K) One Purge Volume (C + J) .4136	~~.536~~ ft³
(E) Depth to Bottom of Screen	100.50 ft	(L) 10 Purge Volumes (K*10)	4.13 ft³

Static Pressure: +.28" 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
10/6/11 1604	0	0	7.78	10.12	11980	inst.
1606	2	0	7.82	10.16	11900	inst.
1608	4	0	7.84	10.02	12020	inst.
1610	6	0	7.88	9.96	12030	inst.
					1070 x 9	
					= 9630	by dilution

Values Prior to Sampling

1610	6	0	7.88	9.96	~~12030~~ TV	
					9630	

Sample ID: VA0701

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-04-250
Field Crew: FN
Site / SWMU No.: 106
Date: 10/10/11
Crew Signature:
Weather: sunny
Time: 920
Review Signature and Date: 10/11/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	2502.5 ft (TD)	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.34 ft^3	(J) Filter Pack Volume (F x G)	.40 ft^3
(D) Depth to Top of Screen	2500 ft	(K) One Purge Volume (C + J)	.74 ft^3
(E) Depth to Bottom of Screen	2525 ft	(L) 10 Purge Volumes (K*10)	7.4 ft^3

Static Pressure: -.54" 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
10/10/11 920	0	0	0.02	21.34	23	
922	2	0	.56	20.82	195	
924	4	0	.64	20.94	267	
926	6	0	.70	21.23	327	
928	8	0	.74	21.35	359	

Values Prior to Sampling

928	8	0	.74	21.35	359	

Sample ID: VA0702

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-04-300

Field Crew: TN

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: TN Mac

Weather: Sunny

Time: 954

Review Signature and Date: [illegible] 10/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.408 ft³	(J) Filter Pack Volume (F x G)	4.0 ft³
(D) Depth to Top of Screen	297.5 ft	(K) One Purge Volume (C + J)	.808 ft³
(E) Depth to Bottom of Screen	300 ft	(L) 10 Purge Volumes (K*10)	8.1 ft³

Static Pressure: -.56" H_2O

Purge Flow Rate: 160 cfm

PURGE DATA

Date/Time (2nd)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
954	0	0	.12	20.67	32	
956	2	0	.66	19.76	94	
958	4	0	.66	19.85	92	
1000	6	0	.66	19.78	91	
1002	8	0	.66	19.67	91	
1004	10	0	.68	19.49	89	

Values Prior to Sampling

1004	10	0	.68	19.49	89	

Sample ID: VA0703

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-05-50

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: Tim Nagy

Weather: Sunny

Time: 1426

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No (TN)

Well ID Mark: (Yes) - No

Notes: Bkgd 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)	.0.4 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" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/9/11 1426	0	0	3.30	17.00	52	
1428	2	0	3.38	17.17	50	
1430	4	0	3.40	17.41	46	
1432	6	0	3.42	17.39	44	

Values Prior to Sampling

1432	6	0	3.42	17.39	44	

Sample ID: VA0704

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVMW-05-100
Field Crew: TN
Site / SWMU No.: 106
Date: 11/9/11
Crew Signature: T Noggle
Weather: sunny
Time: 1451
Review Signature and Date: 11/10/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
B ≥ 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: 0 " H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/9/11 1451	0	0	4.46	15.40	128	
1453	2	0	4.64	14.86	157	
1455	4	0	4.68	14.78	161	
1457	6	0	4.92	14.73	160	

Values Prior to Sampling

1457	6	0	4.92	14.73	160	

Sample ID: VA0705

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-05-230

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: T Nolan

Weather: Sunny

Time: 1518

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	232 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):	.32 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	229.5 ft	(K) One Purge Volume (C + J)	.72 ft³
(E) Depth to Bottom of Screen	232 ft	(L) 10 Purge Volumes (K*10)	7.2 ft³

Static Pressure: -2.8" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/9/11 1518	0	0	.16	20.25	43	
1520	2	0	.38	20.11	36	
1522	4	0	.38	20.12	35	
1524	6	0	.40	20.15	31	
1526	8	0	.40	20.20	29	

Values Prior to Sampling

1526	8	0	.40	20.20	29	

Sample ID: VA070G

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: 11/9/11 | Crew Signature: Tin Nop

Weather: sunny | Time: 1544 | Review Signature and Date: 11/10/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
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: −3.0 " H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/9/11 1544	0	0	.18	20.22	~~20.2~~ TN 54	
1546	2	0	.42	20.08	68	
1548	4	0	.42	19.93	70	
1550	6	0	.44	19.93	72	
1552	8	0	.44	19.94	73	

Values Prior to Sampling

1552	8	0	.44	19.94	73	

Sample ID: VA0707

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, AT

Site / SWMU No.: 106

Date: 12/15/11

Crew Signature: TN

Weather: sunny 20's

Time: 932

Review Signature and Date: 12/15/11

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)	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: -.36" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
932	0	0	1.88	18.79	5	
934	2	0	1.36	19.24	0	
936	4	0	1.38	19.22	0	
938	6	0	1.40	19.20	0	

Values Prior to Sampling

938	6	0	1.40	19.20	0	

Sample ID: VA0708

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: SVMW-06 - 100

Date: 12/15/11

Time: 958

Field Crew: TN, AT

Crew Signature: T. Nagy

Review Signature and Date: 12/15/11

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	102.0 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):	.16 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	102.0 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: −.44 "H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
958	0	0	1.46	18.95	0	
1000	2	0	2.36	18.03	0	
1002	4	0	2.48	17.90	0	
1004	6	0	2.66	17.69	0	

Values Prior to Sampling

1004	6	0	2.66	17.69	0	

Sample ID: VA0709

VA0710

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVHW-06-252

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 12/15/11

Crew Signature: Tim Nagle

Weather: sunny

Time: 1037

Review Signature and Date: 12/15/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Blt VOC's 0
B2 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) 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):	.35 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
D) Depth to Top of Screen	254.5 ft	(K) One Purge Volume (C + J)	.75 ft³
E) Depth to Bottom of Screen	252.0 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: -.97" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1037	0	0	.80	17.60	3760	
1039	2	0	.98	17.16	4160	
1041	4	0	1.08	16.78	4610	
1043	6	0	1.12	16.69	4730	
1045	8	0	1.10	16.67	4780	

alues Prior to Sampling

1045	8	0	1.10	16.67	4780	

Sample ID: VA0711

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW 06-252 | Field Crew: TN, AT

Site / SWMU No.: 106 | Date: 12/22/11 | Crew Signature: TN

Weather: snow | Time: 1539 | Review Signature and Date: 12/27/11

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):	.34 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
D) Depth to Top of Screen	252 ft	(K) One Purge Volume (C + J)	.74 ft³
E) Depth to Bottom of Screen	254.5 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: + .28 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/22/11 1539	0	0	.88	18.10	3890	
1541	2	0	.78	18.22	3540	
1543	4	0	.80	18.18	3560	
1545	6	0	.82	18.17	3470	
1547	8	0	.82	18.14	3460	

Values Prior to Sampling

1547	8	0	.82	18.14	3460	

Sample ID: VA0711-R

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF | Well ID No/Interval: SVMW 06-302 | Field Crew: TN, AT

Site / SWMU No.: 106 | Date: 12/15/14 | Crew Signature: Tim Nagy

Weather: sunny | Time: 1110 | Review Signature and Date: 12/15/14

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	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):	.42 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)	.82 ft³
E) Depth to Bottom of Screen	305.0 ft	(L) 10 Purge Volumes (K*10)	8.2 ft³

Static Pressure: -.84" H20 | Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1110	0	0	.02	20.61	40	
~~1110~~ 1112	2	0	.12	20.40	170	
1114	4	0	.24	20.03	429	
1116	6	0	.30	19.80	840	
1118	8	0	.31	19.76	960	
1120	10	0	.32	19.68	1004	

Values Prior to Sampling

1120	10	0	.32	19.68	1004	

Sample ID: VA0712

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: 12/12/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 840

Review Signature and Date: 12-13-11

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	52.0 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: + .80 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
843	0	0	.60	19.12	25	
845	2	0	.44	19.97	23	
847	4	0	.34	19.53	23	
849	6	0	.32	19.53	24	

Values Prior to Sampling

849	6	0	.32	19.53	24	

Sample ID: VA0713

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: 12/12/11

Crew Signature: Tim Nagel

Weather: cloudy

Time: 910

Review Signature and Date: 12-13-11

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	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):	.13 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)	.53 ft³
(E) Depth to Bottom of Screen	98 ft	(L) 10 Purge Volumes (K*10)	5.3 ft³

Static Pressure: 0" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

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
12/12/11 910	0	0	3.02	17.45	658	
912	2	0	3.10	17.46	674	
914	4	0	3.12	17.43	677	
916	6	0	3.14	17.42	683	

Values Prior to Sampling

916	6	0	3.14	17.42	683	

Sample ID: VA0714

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: 12/12/11

Crew Signature: Tim Nogen

Weather: cloudy

Time: 933

Review Signature and Date: 12/13/11

WELL OBSERVATIONS

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

Notes: BH VOC's 0
BZVOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150.0 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):	.20 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	147.5ft	(K) One Purge Volume (C + J)	.60 ft³
(E) Depth to Bottom of Screen	150.0ft	(L) 10 Purge Volumes (K*10)	TV 6.00 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
933	0	0	2.50	18.49	2	
935	2	0	2.60	18.39	0	
937	4	0	2.62	18.36	1	
939	6	0	2.44	18.03	2	

alues Prior to Sampling

939	6	0	2.44	18.03	2	

Sample ID: VA0715

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No/Interval: SWMW08-50

Field Crew: RB

Site / SWMU No.: 106

Date: 10/31/11

Crew Signature:

Weather: Sunny

Time: 1529

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 0
BZ 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: +.30

Purge Flow Rate: 1.0 cfm

PURGE DATA

10/31/11 Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1529	0	0	.02	20.98	9	
1531	2	0	.02	21.02	9	
1533	4	0	.02	21.05	8	
1535	6	0	.04	21.06	9	

Values Prior to Sampling

1535	6	0	.04	21.06	9	

Sample ID: VA0716

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF	**Well ID No/Interval:** SVMW-08-100	**Field Crew:** KB
Site / SWMU No.: 106	**Date:** 10/31/11	**Crew Signature:**
Weather: Sunny	**Time:** 1552	**Review Signature and Date:** 11/2

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
Bz 0.0

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):	.13 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.53 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.3 ft³

Static Pressure: + .20" H_2O **Purge Flow Rate:** 1 cfm

PURGE DATA

10/31/11 Date/Time 2min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1552	0	0.0	8.70	9.50	148	
1554	2	0.0	8.74	9.45	150	
1556	4	0.0	8.76	9.40	155	
1558	6	0.0	8.76	9.37	158	

Values Prior to Sampling

1558	6	0.0	8.76	9.37	158	

Sample ID: VA0717

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: SVMW-08-250
Field Crew: RB
Site / SWMU No.: 106
Date: 10/31/11
Crew Signature:
Weather: Sunny
Time: 1612
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
Bz 0.0

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):	1.34 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: +.30
Purge Flow Rate: 1 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1612	0	0	.66	19.57	188	
1614	2	0	.70	19.60	212	
1616	4	0	.72	19.65	208	
1618	6	0	.72	19.69	208	
1620	8	0	.72	19.72	205	

Values Prior to Sampling

1620	8	0	.72	19.72	205	

Sample ID: VA0718
VA0719

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-09-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: TN Nail

Weather: sunny

Time: 1051

Review Signature and Date: 10/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's Ø
BZ VOC's Ø

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: Ø " H_2O

Purge Flow Rate: 0.60 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/10/11 1051	0	0	6.28	15.55	334	
1053	2	0	7.34	11.47	1176	
1055	4	0	7.92	11.43	1271	
1057	6	0	7.88	11.53	1325	

Values Prior to Sampling

1057	6	0	7.88	11.53	1325	

Sample ID: VA0721

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVEW-09-100
Field Crew: TN
Site / SWMU No.: 106
Date: 10/10/11
Crew Signature: TN Noe
Weather: sunny
Time: 1123
Review Signature and Date: 10/11/11

WELL OBSERVATIONS

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

Notes: Bkgd 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 ft	(K) One Purge Volume (C + J)	.54 ft³
(E) Depth to Bottom of Screen	1025 ft	(L) 10 Purge Volumes (K*10)	5.4 ft³

Static Pressure: -.06" H_2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	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
10/10/11 1123	0	0	8.18	9.51	15350	inst.
1125	2	0	8.24	10.01	15620	
1127	4	0	8.16	9.72	15800	inst.
1129	6	0	8.06	9.85	15520	inst.
					1431 x9	
				=		by dilution

Values Prior to Sampling

1129	6	0	8.06	9.85	~~155~~	by dilution

Sample ID: KVA0722

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

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: T. Nas

Weather: sunny

Time: 1213

Review Signature and Date: [illegible] 10/11/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.62" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/10/11 1213	0	0	.78	18.92	983	
1215	2	0	.78	19.02	1003	
1217	4	0	.78	19.00	1018	
1219	6	0	.78	18.97	1022	
1221	8	0	.78	18.96	1021	

Values Prior to Sampling

1221	8	0	.78	18.96	1021	

Sample ID: VA0723

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SUMW-09-266

Field Crew: TN

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: [signature]

Weather: sunny

Time: 1243

Review Signature and Date: [signature] 10/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
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	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):	.37 ft^3	(J) Filter Pack Volume (F x G)	.40 ft^3
(D) Depth to Top of Screen	266 ft	(K) One Purge Volume (C + J)	.77 ft^3
(E) Depth to Bottom of Screen	268.5 ft	(L) 10 Purge Volumes (K*10)	7.7 ft^3

Static Pressure: −.64 " H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/10/11 1243	0	0	1.10	18.59	7930	
1245	2	0	1.24	18.43	7260	
1247	4	0	1.24	18.40	7170	
1249	6	0	1.24	18.37	7060	
1251	8	0	1.24	18.39	7000	

Values Prior to Sampling

1251	8	0	1.24	18.39	7000	

Sample ID: VA0724

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~KAFB-MB~~ SVMW-10-50

Field Crew: RB

Site / SWMU No.: 106

Date: 11-1-11

Crew Signature:

Weather: Sunny

Time: 1243

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ 57.9 ppm - VOC (open)

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: +.20" H_2O **Purge Flow Rate:** 1 cfm

PURGE DATA

11-1-11 Date/Time 2min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1243	0	0.0	8.10	10.86		21900 inst
1245	2	0.0	6.72	11.11		22860 inst
1247	4	0.0	7.34	11.54		18260 inst
1249	6	0.0	6.82	11.18	11,106	14950 inst
					1234x9	By dilution

Values Prior to Sampling

1249	6	0.0	6.82	11.18	11,106	By Dilution

Sample ID: VA0725

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: R.B
Site / SWMU No.: 106
Date: 11-1-11
Crew Signature:
Weather: Sunny 60s
Time: 1330
Review Signature and Date: 11/15/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ 1 468.ppm VOC (open)

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): x 13	~~31~~ ft³	(J) Filter Pack Volume (F x G)	40 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.53 ~~.71~~ ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10) 5.3	~~7.1~~ ft³

Static Pressure: + .34" H_2O **Purge Flow Rate:** 1 cfm

PURGE DATA

11-1-11 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1330	0	0	8.90	10.61		21,930 ins
	2	0	~~8.88~~	~~10.09~~		~~26,400 ins~~
1334	4	0	8.22	8.09		26400 ins.
	6			~~8~~		
1338	8	0	8.66	8.56	17019	27560 inst
					1891 x9	By dilution

Values Prior to Sampling

1338	8	0	8.66	8.56	17019	By dilution

Sample ID: VA0726

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: RB
Site / SWMU No.: 106
Date: 11-1-11
Crew Signature:
Weather: Sunny
Time:
Review Signature and Date: 11/8/11

WELL OBSERVATIONS

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

Notes: Bkgd 0
Bz - 179 ppm VOC (open)

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	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: + .65" H_2O
Purge Flow Rate: 1.0

PURGE DATA

11-1-11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1410	0	0.0	5.82	11.80		18110
1413	3	0.0	4.96	12.36		20504
1416	6	0.0	5.34	12.13	14202	19100
					1578 x9	By dilution

Values Prior to Sampling

1416	6	0.0	5.34	12.13	14202	By dilution

Sample ID: VA0727

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: RB

Site / SWMU No.: 106

Date: 11-1-11

Crew Signature:

Weather: Sunny, 60s

Time: 1450

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd 0.0
Bz - 82.3 - open

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: +1.0 "H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1450	0	0.00	1.50	17.06	7340	
1454	4	0.00	1.56	17.47	7790	
1458	8	0.00	1.54	17.44	7890	

Values Prior to Sampling

1458	8	0.00	1.54	17.44	7890	

Sample ID: VA0728

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW 11-50

Field Crew: RB

Site / SWMU No.: 106

Date: 11-2-11

Crew Signature: RB

Weather: Ptly Cldy 50s

Time: 1145

Review Signature and Date: 11/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark (Yes) - No

Notes: BkgD - 0.0
BZ - 0.0

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)	.4 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: -.52" H_2O

Purge Flow Rate: 1 cfm

PURGE DATA

2 min Date/Time 11-2-11	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1145	0	0.0	8.24	10.71	4560	
1147	2	0.0	8.28	10.70	4870	
1149	4	0.0	8.31	10.68	5120	
1151	6	0.0	8.38	10.61	5320	

Values Prior to Sampling

1151	6	0.0	8.38	10.61	5320	

Sample ID: VA0729

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: RB
Site / SWMU No.: 106
Date: 11-2-11
Crew Signature:
Weather: Sunny 50s
Time: 1212
Review Signature and Date: 11/3/11

WELL OBSERVATIONS

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

Notes: BKgd 0.0
BZ 0.0

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):	.13 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	100 ft	(K) One Purge Volume (C + J)	.53 ft³
(E) Depth to Bottom of Screen	102.5 ft	(L) 10 Purge Volumes (K*10)	5.3 ft³

Static Pressure: -.78
Purge Flow Rate: 1 Cfm

PURGE DATA

11-2-11 Date/Time 2 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1212	0	0.0	9.44	8.57		27270 inst
1214	2	0.0	9.06	8.62		27050 inst
1216	4	0.0	8.76	8.97		27620 inst
1218	6	.0.0	9.76	7.14	20250	26790 inst.
					2250x9	by dilution

Values Prior to Sampling

1218	6	0.0	9.76	7.14	20250	by dilution

Sample ID: VA0730
VA0731

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: RB
Site / SWMU No.: 106
Date: 11-2-11
Crew Signature:
Weather: Sunny 50s
Time: 1308
Review Signature and Date: 11/3/11

WELL OBSERVATIONS

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

Notes: BKd 0.0
B2 0.0

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: -1.6" H_2O **Purge Flow Rate:** 1 cfm

PURGE DATA

11-2-11 Date/Time 4min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1308	0	0	4.02	14.11		16070
1312	4	0	3.40	15.16		15090
1316	8	0	3.06	15.08	1780x9	INST 16260

Values Prior to Sampling

1316	8	0	3.06	15.08	16070	by dilution

Sample ID: VA0732

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: RB.

Site / SWMU No.: 106

Date: 11.2.11

Crew Signature:

Weather: Sunny 50s

Time: 1400

Review Signature and Date: 11/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd @ BZ 0

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):	.35 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	260 ft	(K) One Purge Volume (C + J)	.75 ft³
(E) Depth to Bottom of Screen	262.5 ft	(L) 10 Purge Volumes (K*10)	7.5 ft³

Static Pressure: -1.4" H_2O

Purge Flow Rate: 1 cfm

PURGE DATA

4 min Date/Time 11-2-11	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1400	0	0.0	2.36	16.48		inst 10990
1404	4	0.0	3.14	15.29		inst 16250
1408	8	0.0	3.16	14.21	11592	inst 17220
					1288 x 9	by dilution

Values Prior to Sampling

1408	8	0.0	3.16	14.21	11592	by dilution

Sample ID: VA0733

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: TN, AT

Site / SWMU No.: 106

Date: 12/6/11

Crew Signature: [signature]

Weather: sunny, cold

Time: 1342

Review Signature and Date: [signature] 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.21 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	150.0 ft	(K) One Purge Volume (C + J)	.61 ft³
(E) Depth to Bottom of Screen	152.5 ft	(L) 10 Purge Volumes (K*10)	6.1 ft³

Static Pressure: +.99" H_2O

Purge Flow Rate: 1.0

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/6/11 1342	0	0	.06	20.10	1	
1344	2	0	.04	20.31	1	
1346	4	0	.06	20.33	1	
1348	6	0	.06	20.34	1	
1350	8	0	.08	20.29	2	

Values Prior to Sampling

1350	8	0	.08	20.29	2	

Sample ID: VA0734

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~106~~ SVMW-12-250

Field Crew: AT, JN

Site / SWMU No.: 106

Date: 12/6/11

Crew Signature: Antonio Jule

Weather: Sunny, Cold

Time: 1410

Review Signature and Date: 12/6/11

WELL OBSERVATIONS

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

Notes: B2 locks ✓

B11 locks ✓

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 ft	(L) 10 Purge Volumes (K*10)	7.4 ft³

Static Pressure: +1.08" H2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2nm ~~Date~~/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/6/11 1410	0	0	.14	20.31	88	
1412	2	0	.16	20.32	87	
1414	4	0	.16	20.33	87	
1416	6	0	.18	20.35	87	
1418	8	0	.16	20.37	89	

Values Prior to Sampling

1418	8	0	.16	20.37	89	

Sample ID: MA0735

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: AT, TN
Site / SWMU No.: 106
Date: 12/6/11
Crew Signature:
Weather: Sunny, Cold
Time: 1436
Review Signature and Date: 12/6/11

WELL OBSERVATIONS

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

Notes: BZ VOCs ND
BH VOCs ND

CALCULATIONS

(A) Depth to Well Bottom	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):	.479 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	.89 ft³
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.9 ft³

Static Pressure: + .95 "H₂O

Purge Flow Rate: 1.0 CFM

PURGE DATA

2nd Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/6/11 1436	0	0	.50	18.42	9	
1438	2	0	.68	18.86	19	
1440	4	0	.64	18.95	22	
1442	6	0	.60	19.03	26	
1444	8	0	.58	19.09	27	
1446	10	0	.56	19.12	30	

Values Prior to Sampling

1446	10	0	.56	19.12	30	

Sample ID: VA0736

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** SWMU-82-450	**Field Crew:** AT, TN
Site / SWMU No.: 106	**Date:** 12/6/11	**Crew Signature:**
Weather: Sunny Cold	**Time:** 1503	**Review Signature and Date:** TW Nagle 12/6/11

WELL OBSERVATIONS

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

Notes: BZ VOCs Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	452.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.62 ft³	(J) Filter Pack Volume (F x G)	.408 ft³
(D) Depth to Top of Screen	450 ft	(K) One Purge Volume (C + J)	1.02 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10.2 AT ft³

Static Pressure: +1.09 "H_2O

Purge Flow Rate: 1.0 CFM

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/6/11 1503	Ø	Ø	.18	20.56	120	
1505	2	Ø	.18	20.51	121	
1507	4	Ø	.20	20.49	124	
1509	6	Ø	.20	20.47	124	
1511	8	Ø	.20	20.46	125	
1513	10	Ø	.22	20.46	125	

Values Prior to Sampling

1503 AT	10	Ø	.22	20.46	125	

Sample ID: VA0737

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW 13 -150 | Field Crew: TN

Site / SWMU No.: 106 | Date: 12/14/11 | Crew Signature: [signature]

Weather: cloudy | Time: 1400 | Review Signature and Date: [signature] 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOC's 124.8 ppm open
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	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: +.50" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/14/11 1400	0	0	.56	18.57	1365	
1402	2	0	.78	18.00	2170	
1404	4	0	.80	18.06	2190	
1406	6	0	.78	18.22	2150	

Values Prior to Sampling

1406	6	0	.78	18.22	2150	

Sample ID: VA0738

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: TN

Site / SWMU No.: 106

Date: 12/14/11

Crew Signature: Tim Nogan

Weather: cloudy

Time: 1430

Review Signature and Date: [illegible] 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOC's 124.8 ppm open
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	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
12/14/11 1430	0	0	.58	18.73	5	
1432	2	0	.52	18.68	0	
1434	4	0	.54	18.66	0	
1436	6	0	.38	19.28	0	
1438	8	0	.38	19.28	0	

Values Prior to Sampling

1438	8	0	.38	19.28	0	

Sample ID: VA0739
VA0740

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: TN

Site / SWMU No.: 106 | Date: 12/14/11 | Crew Signature: Tim Nagy

Weather: cloudy | Time: 1516 | Review Signature and Date: [illegible] 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOC's 124.8 ppm open

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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	352.5 ft	(L) 10 Purge Volumes (K*10)	8.8 ft³

Static Pressure: +.45" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/14/11 1516	0	0	.58	19.36	20	
1518	2	0	.66	19.33	21	
1520	4	0	.74	19.21	23	
1522	6	0	.80	19.14	24	
1524	8	0	.82	19.09	25	
1526	10	0	.84	19.08	25	

Values Prior to Sampling

1526	10	0	.84	19.08	25	

Sample ID: VA07041

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: SVMW 13-450 | Field Crew: TN

Site / SWMU No.: 106 | Date: 12/14/11 | Crew Signature: Tim Nagy

Weather: cloudy | Time: 1540 | Review Signature and Date: 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOC's 124.8 ppm open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	452.5 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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: +.53" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1540	0	0	.18	19.79	415	
1542	2	0	.20	19.71	459	
1544	4	0	.20	19.71	461	
1546	6	0	.22	19.65	486	
1548	8	0	.22	19.60	502	
1550	10	0	.24	19.58	512	

Values Prior to Sampling

1550	10	0	.24	19.58	512	

Sample ID: VA0742

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: TN
Site / SWMU No.: 106
Date: 11/28/11
Crew Signature: Tim Nogle
Weather: sunny
Time: 850
Review Signature and Date: 11/29/11

WELL OBSERVATIONS

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

Notes: Bkgd VOCs 0
B2 VOCs 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	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" H2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/28/11 850	0	0	.10	20.25	2	
852	2	0	.12	20.34	2	
854	4	0	.12	20.34	2	
856	6	0	.14	20.41	3	

Values Prior to Sampling

856	6	0	.14	20.41	3	

Sample ID: VA0743

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: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: TN

Weather: sunny 40's

Time: 922

Review Signature and Date: 11-29-11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -1.0" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/28/11 922	0	0	.14	20.16	2	
924	2	0	.14	20.21	0	
926	4	0	.14	20.35	1	
928	6	0	.16	20.47	1	
930	8	0	.16	20.31	1	

Values Prior to Sampling

930	8	0	.16	20.31	1	

Sample ID: VA0744

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: SVMW-14-350

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: TN

Weather: sunny

Time: 948

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.47 ft³	(J) Filter Pack Volume (F x G)	.40 ft³
(D) Depth to Top of Screen	350 ft	(K) One Purge Volume (C + J)	.87 ft³
(E) Depth to Bottom of Screen	352.5 ft	(L) 10 Purge Volumes (K*10)	8.7 ft³

Static Pressure: −1.2" H20

Purge Flow Rate: 100 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/28/11 948	0	0	.12	21.16	1	
950	2	0	.14	21.03	0	
952	4	0	.16	20.73	1	
954	6	0	.14	20.80	1	
956	8	0	.16	21.45	1	
958	10	0	.16	21.53	0	

Values Prior to Sampling

958	10	0	.16	FR 21.53	0	

Sample ID: VA0745

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: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: Tim Nagler

Weather: sunny

Time: 1020

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	452.5 ft (TVS)	(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):	.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)	1.0 ft³
(E) Depth to Bottom of Screen	452.5 ft	(L) 10 Purge Volumes (K*10)	10.0 ft³

Static Pressure: -1.4" H20

Purge Flow Rate: 1.0 cfm

PURGE DATA

2in Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/28/11 1020	0	0	.10	20.40	11	
1022	2	0	1.24	16.00	105	
1024	4	0	1.36	15.50	112	
1026	6	0	1.40	15.33	112	
1028	8	0	1.40	16.38	106	
1030	10	0	1.42	15.32	106	

Values Prior to Sampling

1030	10	0	1.42	15.32	106	

Sample ID: VA0746

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVMW-15-150

Field Crew: TN

Site / SWMU No.: 106

Date: 11/16/11

Crew Signature: Tim Nagle

Weather: sunny

Time: 1142

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: BKgd VOC's 0

BZ VOCs 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	150 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: -1.0" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2nm Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/16/11 1142	0	0	.08	19.76	154	initial HC was high but then it dropped
1144	2	0	.34	18.76	14	
1146	4	0	.36	18.72	10	
1148	6	0	.36	18.76	8	

Values Prior to Sampling

1148	6	0	.36	18.76	8	

Sample ID: VA0747

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: FN
Site / SWMU No.: 106
Date: 11/16/11
Crew Signature: Tim Nagle
Weather: sunny
Time: 1212
Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's @
BZ VOCs @

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: −1.0 " H_2O
Purge Flow Rate: 1.0 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/16/11 1212	0	0	.22	19.30	389	
1214	2	0	.40	18.75	122	
1216	4	0	.40	18.71	100	
1218	6	0	.40	18.67	88	
1220	8	0	.40	18.73	78	

Values Prior to Sampling

1220	8	0	.40	18.73	78	

Sample ID: VA0748
VA0749

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: 11/16/11

Crew Signature: T Nogen

Weather: sunny

Time: 1306

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: Bkgd 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	352.5 ft	(L) 10 Purge Volumes (K*10)	8.8 ft³

Static Pressure: – 1.2" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1256	0	0	.64	17.78	6110	
1258	2	0	.72	17.87	7000	
1300	4	0	.74	17.88	7050	
1302	6	0	.76	17.93	7100	
1304	8	0	.74	17.97	7090	
1306	10	0	.74	18.00	7100	

Values Prior to Sampling

1306	10	0	.74	18.00	7100	

Sample ID: VA0750

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: 11/16/11

Crew Signature: Tim Noger

Weather: sunny

Time: 1326

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

BZ VOC's 0

CALCULATIONS

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

Static Pressure: −1.2" H_2O

Purge Flow Rate: 1.0 cfm

PURGE DATA

2 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/16/11 1326	0	0	1.28	19.07	15170	inst.
1328	2	0	1.32	19.67	15310	inst.
1330	4	0	1.32	20.15	15650	inst.
1332	6	0	1.32	20.11	15860	inst.
1334	8	0	1.34	19.87	15930	inst.
1336	10	0	1.34	19.79	16340	inst.
					1483 x 9	
					=13347	by dilution

Values Prior to Sampling

1336	10	0	1.34	19.79	13347	by dilution

Sample ID: VA0751

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	Well ID No/Interval: KAFB 106028 150	Field Crew: RB
Site / SWMU No.: 106	Date: 11/1/11	Crew Signature: [signature]
Weather: Sunny	Time: 0900	Review Signature and Date: [signature] 11/2/11

WELL OBSERVATIONS

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

Notes: BZgd ~~0.0~~ 0.0
BZ 0.0

Sod on top of well pad + vault.

CALCULATIONS

(A) Depth to Well Bottom	151.25 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):	.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: + .32" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
0900	0	0.0	.10	19.92	6	
903	4.5	0.0	.10	19.97	5	
906	9.0	0.0	.08	19.71	6	

Values Prior to Sampling

906	9.0	0.0	.08	19.71	6	

Sample ID: VA0752

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106028-250

Field Crew: RB.

Site / SWMU No.: 106

Date: 11-1-11

Crew Signature:

Weather: Sunny

Time: 928

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
Bz - 6.2 ppm · voc (open)

CALCULATIONS

(A) Depth to Well Bottom	251.25 ft	(F) Filter Pack Length (E –D)	2.5 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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)	.40 ft³
(D) Depth to Top of Screen	248.75 ft	(K) One Purge Volume (C + J)	1.16 ft³
(E) Depth to Bottom of Screen	251.25 ft	(L) 10 Purge Volumes (K*10)	11.6 ft³

Static Pressure: +.45" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

11-1-11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
928	0	0.0	.16	20.20	4	
931	4.5	0.0	.18	20.16	5	
934	9.0	0.0	.16	20.13	6	
937	13.5	0.0	.18	20.13	5	

Values Prior to Sampling

937	13.5	0.0	.18	20.13	5	

Sample ID: VA0753

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB - 106028-350
Field Crew: KB
Site / SWMU No.: 106
Date: 11-1-11
Crew Signature: KB
Weather: Sunny
Time: 958
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: BKgd 0.0
BZ 0.0

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: +.44" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

11-1-11 Date/Time #3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
958	0	0.0	.36	19.99	74	
1001	4.5	0.0	.32	20.03	103	
1004	9.0	0.0	.32	20.07	105	
1007	13.5	0.0	.32	20.11	103	
1010	18.0	0.0	.32	20.13	103	

Values Prior to Sampling

1010	18.0	0.0	.32	20.13	103	

Sample ID: VA0754

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB106028-450
Field Crew: RB
Site / SWMU No.: 106
Date: 11-1-11
Crew Signature:
Weather: Sunny
Time: 1020
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

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	~~450.44~~ ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen 451.25	~~453.01~~ ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

Static Pressure: + .42" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

11-1-11 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1026	0	0.0	.54	19.32	1102	
1029	4.5	0.0	.54	19.30	1131	
1032	9.0	0.0	.56	19.29	1185	
1035	13.5	0.0	.56	19.28	1177	
1038	18.0	0.0	.58	19.28	1170	

Values Prior to Sampling

1038	18.0	0.0	.58	19.28	1170	

Sample ID: VA0755

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB106028

Field Crew: TN

Site / SWMU No.: 106

Date: 11/15/11

Crew Signature: TN

Weather: sunny

Time: 1101

Review Signature and Date: 11/16/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: Yes (No)

Notes: Bkgd VOC's 24.3 ppm
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	451.25 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):	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: +.74" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3rd)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/15/11 1101	0	0	.46	19.58	650	
1104	4.5	0	.50	19.50	647	
1107	9	0	.50	19.47	649	
1110	13.5	0	.52	19.41	656	
1113	18	0	.54	19.45	660	

Values Prior to Sampling

1113	18	0	.54	19.45	660	

Sample ID: VA0755R

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: DR, TN
Site / SWMU No.: 106
Date: 10/4/11
Crew Signature: Tim Nagel
Weather: cloudy
Time: 1151
Review Signature and Date: 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 0

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1151	0	3.30	15.19	11500	
				1192 * 9	

VA0756

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:** DR, TN
Site / SWMU No.: 106	**Date:** 10/4/11	**Crew Signature:** Tim Nagle
Weather: cloudy	**Time:** 1230	**Review Signature and Date:** 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: 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)	
10/3/11 1230	0	11.22	6.61	14300	
				1427x9	
			=		

XVA0757X

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-03-160

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/4/11

Crew Signature: Tan Nagy

Weather: rain

Time: 1343

Review Signature and Date: 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: + .10 " H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1343	0	10.98	4.80	17410	
				1629 x9	
				=	

VA0758

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-04-313

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 11/30/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 900

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - No n/a

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	313 ft	(F) Filter Pack Length (E –D)	15 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):	.43 ft³	(J) Filter Pack Volume (F x G)	2.45 ft³
(D) Depth to Top of Screen	298 ft	(K) One Purge Volume (C + J)	2.88 ft³
(E) Depth to Bottom of Screen	313 ft	(L) 10 Purge Volumes (K*10)	28.8 ft³

Static Pressure: −.40

Purge Flow Rate: 1.5 cfm

PURGE DATA

5 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
900	0	0	.60	18.83	5110	
905	7.5	0	.50	19.66	4630	
910	15	0	.51	20.20	4700	
915	22.5	0	.54	20.09	4710	
920	30	0	.56	20.14	4750	

Values Prior to Sampling

920	30	0	.56	20.14	4750	

Sample ID: VA0759 VA0760

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: 10/4/11

Crew Signature: TC ND

Weather: rain

Time: 1430

Review Signature and Date: 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure:

+.32" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1430	0	1.02	18.39	6740	

VA0761

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-06-060 | **Field Crew:** TN, DR

Site / SWMU No.: 106 | **Date:** 10/4/11 | **Crew Signature:** Tn Nyer

Weather: rain | **Time:** 1454 | **Review Signature and Date:** 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +.18 " H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1454	0	9.52	7.23	3520	

VA0762

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: 10/4/11

Crew Signature: TN Nagra

Weather: rain

Time: 1516

Review Signature and Date: DR 10-4-11

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +.40" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1516	0	2.62	15.96	4810	

VA0763

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-08-260

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 11/30/11

Crew Signature: [signature]

Weather: Sunny

Time: 955

Review Signature and Date: [signature] 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - No n/a

Well ID Mark: (Yes) - No

Notes: BKgd VOC's @ BS.2 (open)
BZ VOC's @

CALCULATIONS

(A) Depth to Well Bottom	260 ft	(F) Filter Pack Length (E –D)	15 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):	3.35 ft³	(J) Filter Pack Volume (F x G)	2.45 ft³
(D) Depth to Top of Screen	245 ft	(K) One Purge Volume (C + J)	5.78 ~~5.80~~ ft³
(E) Depth to Bottom of Screen	260 ft	(L) 10 Purge Volumes (K*10)	57.8 ~~58~~ ft³

Static Pressure: +.16 "H20

Purge Flow Rate: 65 cfm

PURGE DATA

5 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
955	0	0	.86	19.20	623	
1000	7.5	0	.72	20.04	283	high HC initially then droped
1005	15	0	.56	20.38	213	
1010	22.5	0	.60	20.40	222	
1015	30	0	.62	20.45	214	
1025	45	0	.62	20.50	211	
1035	60	0	.68	20.49	214	

Values Prior to Sampling

1035	30	0	.68	20.49	214	

Sample ID: VA0764

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-09-460

Field Crew: TN

Site / SWMU No.: 106

Date: 11/30/11

Crew Signature: Tim Nagle

Weather: Sunny

Time: 1050

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: Yes - No n/a

Well ID Mark: (Yes) No

Notes: Bkgd VOCs 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	460 ft	(F) Filter Pack Length (E –D)	15 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):	9.81 ft³	(J) Filter Pack Volume (F x G)	2.45 ft³
(D) Depth to Top of Screen	435 ft	(K) One Purge Volume (C + J)	12.26 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	122.6 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

25 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1050	0	0	.64	19.85	176	
1115	37.5	0	.44	20.25	142	
1140	75	0	.44	19.63	137	
1205	112.5	0	.42	19.60	133	
1230	150	0	.48	19.76	142	

Values Prior to Sampling

1230	150	0	.48	19.76	142	

Sample ID: VA0765

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVEW-10-410
Field Crew: AT, JW
Site / SWMU No.: 106
Date: 12/6/11
Crew Signature: Antonio Tyler
Weather: Sunny Cold
Time: 1529
Review Signature and Date: [illegible] 12/6/11

WELL OBSERVATIONS

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

Notes: B2 VOCs Ø
B4 VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	410	ft	(F) Filter Pack Length (E –D)	10	ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		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):	8.9	ft^3	(J) Filter Pack Volume (F x G)	1.635	ft^3
(D) Depth to Top of Screen	400	ft	(K) One Purge Volume (C + J)	10.5	ft^3
(E) Depth to Bottom of Screen	410	ft	(L) 10 Purge Volumes (K*10)	105	ft^3

Static Pressure: −1.10 "H_2O

Purge Flow Rate: 12 CFm

PURGE DATA

2m Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/6/11 1529	Ø	Ø	.06	20.89	8	
1531	24	Ø	.08	20.87	9	
1533	48	Ø	.10	20.83	11	
1535	72	Ø	.10	20.80	17	
1537	96	Ø	.10	20.80	17	
1538	108	Ø	.10	20.79	19	

Values Prior to Sampling

1538	108	Ø	.10	20.79	19	

Sample ID: VA07166

Shaw · 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: TN, AT

Site / SWMU No.: 106

Date: 12/15/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 832

Review Signature and Date: 12/15/11

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	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)	10.56 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	105.6 ft³

Static Pressure: -.84" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
12/15/11 832	0	0	0	21.58	3	
834	24	0	.10	21.32	157	
836	48	0	.16	21.19	272	
838	72	0	.18	21.17	279	
840	96	0	.18	21.15	282	
↓ (1min) 841	108	0	.18	21.15	282	

Values Prior to Sampling

841	108	0	.18	21.15	282	

Sample ID: VA0767

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: SVEW-12-410

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: T. Nagel

Weather: sunny

Time: 1055

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	410 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	8.94 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)	9.57 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	95.7 ft³

Static Pressure: -1.2" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

2min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/28/1055	0 0	0	.14	20.19	6	
1057	2 24	0	.09	20.22	8	
1059	TN 4 48	0	.12	20.05	39	
1101	6 72	0	.12	19.97	56	
1103	8 96	0	.12	19.95	61	

Values Prior to Sampling

1103	96	0	.12	19.95	61	

Sample ID: VA0768

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: SVEW-13-410
Field Crew: TN
Site / SWMU No.: 106
Date: 11/16/11
Crew Signature: Tim Nagel
Weather: sunny
Time: 1350
Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	(TN) 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):	8.94 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)	1057 ft³
(E) Depth to Bottom of Screen	410 ft	(L) 10 Purge Volumes (K*10)	105.7 ft³

Static Pressure: −1.2 "H₂O
Purge Flow Rate: 12 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/16/11 1408	0	0	.12	21.17	44	
1411	36	0	1.14	18.07	12310	inst
1414	72	0	1.30	16.93	13620	inst
1417	108	0	1.36	16.70	13730	inst
					1207 x9	
					= 10863	by dilution
					~~KAB~~ (TN)	
					*	

Values Prior to Sampling

1417	108	0	1.36	16.70	10863	by dilution

Sample ID: VA0769

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB 106108 -25
Field Crew: RB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 1429
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: Bkgd 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	25.34 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	15.34 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25.34 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

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

PURGE DATA

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1429	0	0.0	1.54	19.01	7	
1432	4.5	0.0	1.12	19.63	7	
1435	9.0	0.0	.82	19.79	8	
1438	13.5	0.0	.82	19.80	8	
1441	18.0	0.0	.80	19.88	8	

Values Prior to Sampling

1441	18.0	0.0	.80	19.88	8	

Sample ID: VA0770

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB 106108-50
Field Crew: RB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 1503
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

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

Notes: BKgd - 0.0
BZ - 0.0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.153 ft^3	(J) Filter Pack Volume (F x G)	1.63 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: +.24" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1503	0	0.0	3.20	17.57	9	
1506	4.5	0.0	3.22	17.58	7	
1509	9.0	0.0	3.24	17.62	8	
1512	13.5	0.0	3.26	17.61	6	
1515	18.0	0.0	3.24	17.57	7	

Values Prior to Sampling

1515	18.0	0.0	3.24	17.57	7	

Sample ID: VA0771
VA0772

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	**Well ID No/Interval:** KAFB 106108 150	**Field Crew:** RB
Site / SWMU No.: 106	**Date:** 10/24/11	**Crew Signature:**
Weather: Sunny	**Time:** 1549	**Review Signature and Date:** 10/25/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	150.17 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):	.45 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	140.17 ft	(K) One Purge Volume (C + J)	2.08 ft³
(E) Depth to Bottom of Screen	150.17 ft	(L) 10 Purge Volumes (K*10)	20.8 ft³

Static Pressure: + .16" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1549	0	0.0	4.12	16.04	170	
1552	4.5	0.0	4.16	15.98	184	
1555	9.0	0.0	4.14	16.00	183	
1557	13.5	0.0	4.10	16.06	181	
1600	18.0	0.0	4.08	16.06	179	
1603	22.5	0.0	4.06	16.12	181	

Values Prior to Sampling

1603	22.5	0.0	4.06	16.12	181	

Sample ID: VA0773

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106108-250
Field Crew: RB
Site / SWMU No.: 106
Date: 10/25/11
Crew Signature:
Weather: Sunny
Time: 1219
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	250.27 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	240.27 ft	(K) One Purge Volume (C + J)	2.39 ft³
(E) Depth to Bottom of Screen	250.27 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: + .26 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

10/25/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1219	0	0.0	.42	19.99	247	
1222	4.5	0.0	.44	20.02	259	
1225	9.0	0.0	.42	19.42	260	
1228	13.5	0.0	.44	19.48	261	
1231	18.0	0.0	.44	19.68	260	
1234	27.0	0.0	.44	19.93	256	

Values Prior to Sampling

1234	18.0	0.0	.44	19.93	256	

Sample ID: VA0774

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106/108-350
Field Crew: RB
Site / SWMU No.: 106
Date: 10/25/11
Crew Signature: RB
Weather: Pt Cldy, Wind
Time: 1308
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 38.0 ppm VOC (max)

CALCULATIONS

(A) Depth to Well Bottom	350.27 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	340.27 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350.27 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: +.26" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1308	0	0.0	.26	19.77	668	
1314	9	0.0	.24	19.91	688	
1320	18	0.0	.26	19.91	689	
1326	27	0.0	.26	19.77	690	

Values Prior to Sampling

1326	27	0.0	.26	19.77	690	

Sample ID: VA0775

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106108-450
Field Crew: RB
Site / SWMU No.: 106
Date: 10/25/11
Crew Signature:
Weather: Pt ly Cldy
Time: 1356
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: Bkgd-0.0
BZ - ~~37.8 ppm VOC (open)~~

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.63 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: +.18
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1356 ~~1308~~	0	0.0 ~~0.0~~	.46 .26	19.01 19.77	950 ~~668~~	
1400	48	0.0	.48	18.97	923	
1404	96	0.0	.48	18.99	908	
1408	144	0.0	.48	18.65	898	
1412	192	0.0	.48	18.78	873	
1416	240	0.0	.50	18.77	860	

Values Prior to Sampling

1416	240	0.0	.50	18.77	860	

Sample ID: VA0776

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106109-025

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: Tim Nagle

Weather: sunny

Time: 1244

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
13% 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

3m Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/28/11 1244	0	0	.52	20.31	1	
1247	4.5	0	.56	20.32	3	
1250	9	0	.56	20.09	3	
1253	13.5	0	.56	20.17	2	
1256	18	0	.56	20.25	3	

Values Prior to Sampling

1256	18	0	.56	20.25	3	

Sample ID: VA0777

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106109-050

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1315

Review Signature and Date: [illegible] 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: +.06" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

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
11/28/11 1315	0	0	.64	19.79	1	
1318	4.5	0	.68	19.74	1	
1321	9	0	.70	19.76	1	
1324	13.5	0	.70	20.80	1	
1327	18	0	.70	20.68	1	

Values Prior to Sampling

1327	18	0	.70	20.68	1	

Sample ID: VA0778

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106109-150

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: [signature]

Weather: sunny

Time: 1343

Review Signature and Date: [signature] 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -.40" 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
1343	0	0	.20	20.53	6	
1346	4.5	0	.16	20.58	4	
1349	9	0	.16	20.59	5	
1352	13.5	0	.14	20.55	4	
1355	18	0	.16	20.39	4	
1358	22.5	0	.14	20.40	4	

Values Prior to Sampling

1358	22.5	0	.14	20.40	4	

Sample ID: VA0779

VA0780

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KATB 106109-250

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: Tim Nagel

Weather: cloudy

Time: 1432

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -.64" H2O

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
11/28/11 1432	0	0	.28	19.79	4	
1438	9	0	.28	19.83	4	
1444	18	0	.28	19.92	5	
1450	27	0	.28	20.04	5	

Values Prior to Sampling

1450	27	0	.28	20.04	5	

Sample ID: VA0781

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106109-350

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: T. Nagar

Weather: cloudy

Time: 1507

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) / No

Well ID Mark: (Yes) - No

Notes: BKgd 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 ft³

Static Pressure: -.76" H2O

Purge Flow Rate: 1.5 lpm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1507	0	0	.14	20.00	75	
1513	9	0	.14	20.16	81	
1519	18	0	.14	20.09	79	
1525	27	0	.14	20.35	79	

Values Prior to Sampling

1525	27	0	.14	20.35	79	

Sample ID: VA0782

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 -450

Field Crew: TN

Site / SWMU No.: 106

Date: 11/28/11

Crew Signature: Tim Neger

Weather: cloudy

Time: 1542

Review Signature and Date: 11/29/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: Bkgd VOC's 0
B2 VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: −1.0 "H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4hr Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/28/1542	0	0	.14	20.32	61	
1546	48	0	.64	18.34	128	
1550	96	0	.80	17.41	151	
1554	144	0	.84	17.16	153	
1558	192	0	.96	16.57	143	
1602	240	0	1.00	16.35	132	

Values Prior to Sampling

1602	240	0	1.00	16.35	132	

Sample ID: VA0783

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB 106110/25
Field Crew: RB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 0900
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ - 0.0

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):	.076 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

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0900	0	0	.44	20.15	8	
0903	4.5	0	.49	20.04	8	
0906	9.0	0	.58	19.90	9	
0909	13.5	0	.62	19.78	9	
0912	18.0	0	.64	19.77	12	

Values Prior to Sampling

912	18.0	0	.64	19.77	12	

Sample ID: VA0784

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF	**Well ID No/Interval:** KAFB 106110-50	**Field Crew:** RB
Site / SWMU No.: 106	**Date:** 10/24/11	**Crew Signature:**
Weather: Sunny	**Time:** 937	**Review Signature and Date:** 10/25/11

WELL OBSERVATIONS

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

Notes: BKgd 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	50.11 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	40.11 ft	(K) One Purge Volume (C + J)	1.78 ft³
(E) Depth to Bottom of Screen	50.11 ft	(L) 10 Purge Volumes (K*10)	17.8 ft³

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

PURGE DATA

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
937	0	0	.84	19.32	6	
940	4.5	0	.96	19.20	5	
943	9.0	0	.96	19.17	5	
946	13.5	0	.98	19.07	3	
949	18.0	0	.98	19.03	4	

Values Prior to Sampling

949	18.0	0	.98	19.03	4	

Sample ID: VA0785

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB 106110-150
Field Crew: RB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 1015
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	150.32 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	140.32 ft	(K) One Purge Volume (C + J)	2.08 ft³
(E) Depth to Bottom of Screen	150.32 ft	(L) 10 Purge Volumes (K*10)	20.8 ft³

Static Pressure: -.88" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

10/24/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1015	0	0.0	1.08	18.55	137	
1018	4.5	0.0	.94	18.82	99	
1021	9.0	0.0	.94	18.82	99	
1024	13.5	0.0	.94	18.90	101	
1027	18.0	0.0	.94	19.00	105	
1030	22.5	0.0	.96	19.02	108	

Values Prior to Sampling

1030	22.5	0.0	.96	19.02	108	

Sample ID: VA0786

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106110-250

Field Crew: RB

Site / SWMU No.: 106

Date: 10/24/11

Crew Signature:

Weather: Sunny

Time: 1059

Review Signature and Date: 10/25/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 0.0
B2 0.0

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: −.90" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

10/24/11 Date/Time 6 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1059	0	0.0	.46	19.89	15	
1105	9.0	0.0	.48	19.75	16	
1111	18.0	0.0	.50	19.85	14	
1117	27.0 RAB	0.0	.50	19.98	17	

Values Prior to Sampling

1117	27.0 RAB	0.0	.50	19.98	17	

Sample ID: VA0787

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106110-350
Field Crew: JRB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 1142
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

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

Notes: BKgd - 0.0
BZ - 0.0

CALCULATIONS

(A) Depth to Well Bottom	350.23 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	340.23 ft	(K) One Purge Volume (C + J)	2.70 ft³
(E) Depth to Bottom of Screen	350.23 ft	(L) 10 Purge Volumes (K*10)	27.0 ft³

Static Pressure: -1.0" H_2O **Purge Flow Rate:** 1.5

PURGE DATA

10/24/11 Date/Time 6 min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1142	0	0.0	.14	19.91	22	
1148	9.0	0.0	.22	19.86	88	
1154	18.0	0.0	.22	19.71	99	
1200	27.0	0.0	.22	19.74	111	

Values Prior to Sampling

1200	27.0	0.0	.22	19.74	111	

Sample ID: VA0788

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106110-450
Field Crew: RB
Site / SWMU No.: 106
Date: 10/24/11
Crew Signature:
Weather: Sunny
Time: 1241
Review Signature and Date: 10/25/11

WELL OBSERVATIONS

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

Notes: BKgd 0.0
BZ 0.0
Trouble removing new cap.

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.63 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: −1.0" H_2O
Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1241	0	0.0	.04	20.69	82	
1245	48	0.0	.12	20.03	827	
1249	96	0.0	.12	19.77	1180	
1253	144	0.0	.18	19.52	1635	
1257	192	0.0	.18	19.48	1615	
1301	240	0.0	.18	19.43	1637	

Values Prior to Sampling

1301	240	0.0	.18	19.43	1637	

Sample ID: VA0789

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
Field Crew: TN
Site / SWMU No.: 106
Date: 11/15/11
Crew Signature: T Nogen
Weather: sunny
Time: 1330
Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 18.9 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

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

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/15/11 1347	0	0	1.56	18.36	3	
1350	4.5	0	1.48	18.73	5	
1353	9	0	1.42	18.92	8	
1356	13.5	0	1.30	19.30	11	
1359	18	0	1.28	19.42	13	

Values Prior to Sampling

1359	18	0	1.28	19.42	13	

Sample ID: VA0790

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106111-050
Field Crew: TN
Site / SWMU No.: 106
Date: 11/15/11
Crew Signature: Tim Nagel
Weather: Sunny
Time: 1423
Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 18.7ppm open
Bz VOC's 0

CALCULATIONS

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

Static Pressure: +.36" H20
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/15/11 1423	0	0	2.22	17.93	18	
1426	4.5	0	2.22	17.87	29	
1429	9	0	2.22	17.84	29	
1432	13.5	0	2.22	17.77	28	
1435	18	0	2.22	17.73	30	

Values Prior to Sampling

1435	18	0	2.22	17.73	30	

Sample ID: VA0791

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF | **Well ID No/Interval:** KAFB 106 111 - 150 | **Field Crew:** TN

Site / SWMU No.: 106 | **Date:** 11/15/11 | **Crew Signature:** TN

Weather: sunny | **Time:** 14.54 | **Review Signature and Date:** 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 18.3 open
BZ VOC's 0 ppm

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.45ft³	(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: NR | **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
11/15/11 1454	0	0	.88	19.49	7	
1457	4.5	0	.90	19.38	9	
1500	9	0	.92	19.27	8	
1503	13.5	0	.92	19.24	9	
1506	18	0	.92	19.31	9	
1509	22.5	0	.92	19.30	9	

Values Prior to Sampling

1509	22.5	0	.92	19.30	9	

Sample ID: VA0792

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106 III - 250

Field Crew: TN

Site / SWMU No.: 106

Date: 11/15/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1522

Review Signature and Date: 11/16/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 18.7 ppm (area)
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: NR

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/15/11 1522	0	0	.66	19.47	42	
1528	9	0	.66	19.32	41	
1534	18	0	.66	19.25	39	
1540	27	0	.68	19.31	39	

Values Prior to Sampling

1540	27	0	.68	19.31	39	

Sample ID: VA0793

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 106 111-350

Date: 11/16/11

Time: 848

Field Crew: TN

Crew Signature:

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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: −.90" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/16/11 848	0	0	.06	21.03	32	
854	9	0	.16	20.66	251	
900	18	0	.20	20.89	257	
906	27	0	.20	21.28	260	

Values Prior to Sampling

906	27	0	.20	21.28	260	

Sample ID: VA0794

VA0795

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106111-450

Field Crew: TN

Site / SWMU No.: 106

Date: 11/16/11

Crew Signature: Tim Nolan

Weather: sunny

Time: 941

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) No

Well ID Mark: (Yes) No

Notes: Bk & VOC's

BZ VOC's

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	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 ft³

Static Pressure: -.94" H20

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time (4 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/16/11 941	0	0	.92	17.34	4180	
945	48	0	1.96	13.21	4220	
949	96	0	2.00	13.08	4550	
953	144	0	1.96	13.19	4630	
957	192	0	2.00	13.05	4760	
1001	240	0	2.00	13.10	4790	

Values Prior to Sampling

1001	240	0	2.00	13.10	4790	

Sample ID: VA0796

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, GP

Site / SWMU No.: 106 | Date: 11/8/11 | Crew Signature: TN Nogr

Weather: cloudy 40's | Time: 1210 | Review Signature and Date: 11/9/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's
BZ VOCs .2ppm

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 " 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
11/7/11 1235	0	0	.44	20.96	21	
1238	4.5	0	.46	20.91	20	
1241	9	0	.40	19.69	16	
1244	13.5	0	.40	19.71	13	
1247	18	0	.40	19.67	13	

Values Prior to Sampling

1247	18	0	.40	19.67	13	

Sample ID: VA0797

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106112-050

Field Crew: TN, GP

Site / SWMU No.: 106

Date: 11/8/11

Crew Signature: TN

Weather: cloudy + cold

Time: 1310

Review Signature and Date: 11/9/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOCs 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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: -.08" 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
11/7/11 1310	0	0	.52	19.28	13	
1313	4.5	0	.56	19.45	18	
1316	9	0	.60	19.55	20	
1319	13.5	0	.60	19.59	22	
1322	18	0	.60	19.58	27	

Values Prior to Sampling

1322	18	0	.60	19.58	27	

Sample ID: VA0798

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106112-150

Field Crew: TN, GP

Site / SWMU No.: 106

Date: 11/8/11

Crew Signature: T. Nagar

Weather: cloudy 30's

Time: 1330

Review Signature and Date: 11/9/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.78" 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
11/7/11 1343	0	0	.62	17.52	34	
1346	4.5	0	0.64	17.43	33	
1349	9	0	0.64	17.42	31	
1352	13.5	0	0.64	17.44	29	
1355	18	0	0.66	17.40	31	
1358	22.5	0	0.66	17.44	27	

Values Prior to Sampling

1358	22.5	0	0.66	17.44	27	

Sample ID: VA0799

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106112-250
Field Crew: TN, GP
Site / SWMU No.: 106
Date: 11/8/11
Crew Signature: TC Nag
Weather: sunny
Time: 1429
Review Signature and Date: 11/9/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.85" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/7/11 1429	0	0	1.08	16.88	4440	
1435	9	0	1.12	16.93	5400	
1441	18	0	1.14	16.84	5190	
1447	27	0	1.18	16.48	4490	

Values Prior to Sampling

1447	27	0	1.18	16.48	4490	

Sample ID: VA0800 (FV)

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB10611 2-350

Field Crew: TN, GP

Site / SWMU No.: 106

Date: 11/8/11

Crew Signature: [signature]

Weather: cloudy 30's

Time: 1508

Review Signature and Date: [signature] 11/9/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

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

Static Pressure: −.88" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/7/11 1508	0	0	.10	20.55	25	
1514	9	0	1.02	17.47	7610	
1520	18	0	1.02	17.23	7560	
1526	27	0	1.02	17.35	7540	

Values Prior to Sampling

1526	27	0	1.02	17.35	7540	

Sample ID: VA0801

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106112-450

Field Crew: TN, GP

Site / SWMU No.: 106

Date: 11/8/11

Crew Signature: TN Nagle

Weather: sunny + cold

Time: 1546

Review Signature and Date: 11/9/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	2207 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: −.96" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1546	0	0	.12	20.20	206	
1550	48	0	1.18	17.90	9150	
1554	96	0	1.30	18.46	10310	inst.
1558	144	0	1.32	19.20	10540	inst.
1602	192	0	1.26	18.97	10370	inst.
1606	240	0	1.26	19.01	10410	inst.
					934 x 9	
					= 8406	by dilution

Values Prior to Sampling

1606	240	0	1.26	19.01	8406	b.d.

Sample ID: VA0802

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF	**Well ID No/Interval:** KAFB 106113-20	**Field Crew:** RB
Site / SWMU No.: 106	**Date:** 10/26/11	**Crew Signature:**
Weather: Rain	**Time:** 855	**Review Signature and Date:** 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ 7.2 ppm VOC - Open

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

PURGE DATA

10/26/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0855	0	0	.42	21.24	0	
0858	4.5	0	.42	21.28	9	
0901	9.0	0	.44	21.25	9	
0904	13.5	0	.44	21.17	8	
0907	18.0	0	.36	20.06	0	

Values Prior to Sampling

0907	18.0	0	.36	20.06	0	

Sample ID: VA0803

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106113-50

Field Crew: RB

Site / SWMU No.: 106

Date: 10/26/11

Crew Signature: RB

Weather: Rain Cloudy

Time: 928

Review Signature and Date: 10/27/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: Bkd 0
BZ 14.8 ppm VOC (open)

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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

10/26/11 Date/Time 3min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
928	0	0.0	.28	19.46	2	
931	4.5	0.0	.28	19.48	4	
934	~~13.5~~ 9.0	0.0	.30	19.49	4	
937	13.5	0.0	.32	19.48	5	
940	18.0	0.0	.32	19.48	5	

Values Prior to Sampling

940	18.0	0.0	.32	19.48	5	

Sample ID: VA0804
VA0805

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106113-150
Field Crew: RB
Site / SWMU No.: 106
Date: 10/26/11
Crew Signature:
Weather: Ptly Cldy
Time: 1015
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0 VOC
B2 3.5 ppm VOC (open)

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	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: +.50" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1015	0	0.0	.32	18.90	1	
1018	4.5	0.0	.32	18.96	3	
1021	9.0	0.0	.32	19.01	2	
1024	13.5	0.0	.32	19.03	0	
1027	18.0	0.0	.32	19.05	1	
1030	22.5	0.0	.34	19.08	0	

Values Prior to Sampling

1030	22.5	0.0	.34	19.08	0	

Sample ID: VA0806

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB-106113
Field Crew: RB
Site / SWMU No.: 106
Date: 10/26/11
Crew Signature:
Weather: Pt ly Cldy 60s
Time: 1052
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
Bkgd 18.2 - PPM. VOC (Open)

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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

10/26/11 Date/Time 6 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1052	0	0.0	1.12	16.97	11	
	4.5					
1058	9.0	0.0	.98	17.55	9	
	13.5					
1104	18.0	0.0	.94	17.82	8	
	22.5					
1110	27.0	0.0	.92	17.98	8	

Values Prior to Sampling

1110	27.0	0.0	.92	17.98	8	

Sample ID: VA0807

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106113 - 350

Field Crew: RB

Site / SWMU No.: 106

Date: 10-26-11

Crew Signature:

Weather: Partly Cldy 60s

Time: 1143

Review Signature and Date: 10/27/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 0.0
BZ 399 ppm

CALCULATIONS

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

Static Pressure: +2.8" H_2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

Date/Time 10/26/11 6 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1143	0	0.0	.52	18.19	1187	
1149	9	0.0	.52	18.28	1191	
1155	18	0.0	.52	18.28	1196	
1201	27	0.0	.48	17.88	1201	

Values Prior to Sampling

1201	27	0.0	.48	17.88	1201	

Sample ID: VA0808

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106113-450
Field Crew: RB
Site / SWMU No.: 106
Date: 10/26/11
Crew Signature:
Weather: Pt/y Cldy Windy
Time: 1231
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
B2 217.ppm Voc (open)

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	236 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	236 ft³

Static Pressure: + 1.0
Purge Flow Rate: 12 cfm

PURGE DATA

10/26/11 Date/Time 4 min	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1231	0	0.0	.34	18.09	3240	
1235	48	0.0	.32	18.38	3330	
1239	96	0.0	.30	18.21	3370	
1243	144	0.0	.30	18.10	3420	
1247	192	0.0	.28	17.73	3490	
1251	240	0.0	.30	17.71	3510	

Values Prior to Sampling

1251	240	0.0	.30	17.71	3510	

Sample ID: VA0809

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF	**Well ID No/Interval:** KAFB 106114-25	**Field Crew:** RB
Site / SWMU No.: 106	**Date:** 10/31/11	**Crew Signature:**
Weather: Sunny	**Time:** 0900	**Review Signature and Date:** 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ - 0.0

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

10/31/11 Date/Time 3 min	Volume Purged (ft³)	Horiba Mexa – 584 L - 1st Op in field				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
900	0	0	.28	21.36	6	
903	4.5	0	.52	21.10	6	
906	9.0	0	.52	20.02	4	after zeroing
909	13.5	0	.52	20.02	5	
912	18.0	0	.54	20.04	5	

Values Prior to Sampling

912	18.0	0	.54	20.04	5	

Sample ID: VA0810

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106114-50

Field Crew: RB

Site / SWMU No.: 106

Date: 10/31/11

Crew Signature:

Weather: Sunny

Time: 933

Review Signature and Date: 01/12/14

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: Bkgd 0.0
BZ 0.0

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

10/31/11 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
933	0	0	.14	20.81	3	
936	4.5	0	.42	20.54	6	
939	9.0	0	.50	20.32	6	
942	13.5	0	.50	20.29	5	
945	18.0	0	.52	20.21	5	

Values Prior to Sampling

945	18.0	0	.52	20.21	5	

Sample ID: VA0811
VA0812

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BTF
Well ID No/Interval: KAFB106114-050
Field Crew: TN
Site / SWMU No.: 106
Date: 11/15/11
Crew Signature: T Nagy
Weather: sunny
Time: 1220
Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOCs 18.7
BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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)	1.63 ft³
(D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.77 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.7 ft³

Static Pressure: + .20" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/15/11 1238	0	0	.56	19.05	452	
1241	4.5	0	.64	18.54	456	
1244	9	0	.64	18.92	462	
1247	13.5	0	.64	18.93	466	
1250	18	0	.64	18.98	477	

Values Prior to Sampling

1250	18	0	.64	18.98	477	

Sample ID: VA0811R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB-106114-150

Field Crew: RB

Site / SWMU No.: 106

Date: 10/31/11

Crew Signature: RB

Weather: Sunny

Time: 1020

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes:

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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: -.62" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

10/31/11 Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
6 min 1020	0	0	.16	20.32	5	
1026	9	0	.24	20.12	5	
1032	18	0	.22	20.07	4	
3 min 1035	22.5	0	.24	20.04	5	

Values Prior to Sampling

1035	22.5	0	.24	20.04	5	

Sample ID: VA0813

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106114-250
Field Crew: RB
Site / SWMU No.: 106
Date: 10/31/11
Crew Signature:
Weather: Sunny
Time: 1055
Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ - 0.0

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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.74 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	235 ft	(K) One Purge Volume (C + J)	2.37 ft³
(E) Depth to Bottom of Screen	245 ft	(L) 10 Purge Volumes (K*10)	23.7 ft³

Static Pressure: -.70" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

10/31/11 Date/Time 6 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1055	0	0.0	0.0	20.84	4	
1104	9	0.0	.68	19.74	3	
1110	18	0.0	.80	19.54	5	
1116	27	0.0	.88	19.48	8	

Values Prior to Sampling

1116	27	0.0	.88	19.48	8	

Sample ID: VA0814

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: ~~KAFB~~ 106114-350

Field Crew: RB

Site / SWMU No.: 106

Date: 10/31/11

Crew Signature:

Weather: Sunny

Time: 1238

Review Signature and Date: 11/2/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

CALCULATIONS

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

Static Pressure: -.82" H_2O Purge Flow Rate: 1.5 cfm

PURGE DATA

10/31/11 Date/Time 6/Min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1238	0	0.0	.46	19.20	411	
1244	9	0.0	.46	19.04	471	
1250	18	0.0	.46	18.05	487	
1256	27	0.0	.44	18.96	496	

Values Prior to Sampling

1256	27	0.0	.44	18.96	496	

Sample ID: VA0815

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106114-450

Field Crew: [illegible]

Site / SWMU No.: 106

Date: 10/31/11

Crew Signature: KB

Weather: Sunny

Time: 1331

Review Signature and Date: [illegible] 11/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Blood 0.0
BZ 0.0

CALCULATIONS

(A) Depth to Well Bottom	449.6 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):	22.05 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	439.6 ft	(K) One Purge Volume (C + J)	23.68 ft³
(E) Depth to Bottom of Screen	449.6 ft	(L) 10 Purge Volumes (K*10)	236 ft³

Static Pressure: -.76" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time 10/31/11 4min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1331	0	0.0	.12	20.58	1093	
1335	48	0.0	.24	20.35	2820	
1339	96	0.0	.36	20.10	6020	
1343	144	0.0	.36	20.08	6110	
1347	192	0.0	.38	20.07	6580	
1351	240	0.0	.42	20.34	7180	

Values Prior to Sampling

1351	240	0.0	.42	20.34	7180	

Sample ID: VA0816

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106115-025

Date: 11/30/11

Time: 1503

Field Crew: TN, AT

Crew Signature: T Noger

Review Signature and Date: [signature] 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BKgd VOC's

CALCULATIONS

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

Static Pressure: +.34" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/30/11 1503	0	0	.64	19.80	3	
1506	4.5	0	.64	19.80	3	
1509	9	0	.64	19.84	3	
1512	13.5	0	.66	19.86	4	
1515	18	0	.66	19.88	4	

Values Prior to Sampling

1515	18	0	.66	19.88	4	

Sample ID: VA0817

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: VAFB-BFF

Well ID No/Interval: 106115-050

Field Crew: AT, TW

Site / SWMU No.: 106

Date: 11/30/11

Crew Signature:

Weather: Sunny

Time: 1532

Review Signature and Date: 12/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) No

Notes: VOCs BG 33 ppm
VOCs BZ 0 ppm

CALCULATIONS

(A) Depth to Well Bottom TW	050 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾") = .00306, 2" = .0218, 3" = .04906	.15 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	40 ft	(K) One Purge Volume (C + J)	1.79 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: +.50 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/30/11 1532	0	0	0.62	19.46	2	
1535	4.5	0	0.66	19.40	2	
1538	9	0	0.60	19.42	0	
1541	13.5	0	0.60	19.50	2	
1544	18	0	0.60	19.51	1	

Values Prior to Sampling

1544	18	0	0.60	19.51	1	

Sample ID: VA0818

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106/15-150

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 12/1/11

Crew Signature:

Weather: windy

Time: 830

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 3.9 ppm open

BZ VOC's 0

CALCULATIONS

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

Static Pressure: + 2.00" 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
12/1/11 830	0	0	.30	19.68	1	
833	4.5	0	.24	19.34	4	
836	9	0	.28	19.59	3	
839	13.5	0	.30	19.74	4	
842	18	0	.30	19.76	2	
845	22.5	0	.30	19.79	4	

Values Prior to Sampling

845	22.5	0	.30	19.79	4	

Sample ID: VA0819

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106115-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 12/1/11 | Crew Signature: TN

Weather: windy | Time: 905 | Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BKgd VOC's 17.7 open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

12 Gmin

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/1/11 905	0	0	.20	19.79	1	
911 ~~908~~	9	0	.24	19.64	4	
917	18	0	.24	19.64	2	
923	27	0	.24	19.67	1	

Values Prior to Sampling

923	27	0	.24	19.67	1	

Sample ID: VA0820

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106 115-350

Field Crew: TN

Site / SWMU No.: 106

Date: 12/1/11

Crew Signature: Tim Nagy

Weather: windy but sunny

Time: 950

Review Signature and Date:

WELL OBSERVATIONS

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

Notes: BKgd VOC's 160 ppm open

BZ VOC's 0

CALCULATIONS

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

Static Pressure: +2.2" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/1/11 950	0	0	.30	19.91	1175	
956	9	0	.24	19.48	1338	
1002	18	0	.22	19.50	1318	
1008	27	0	.24	19.48	1350	

Values Prior to Sampling

1008	27	0	.24	19.48	1350	

Sample ID: VA0821

VA0822

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106 115-450

Field Crew: TN

Site / SWMU No.: 106

Date: 12/1/11

Crew Signature: TN Nga

Weather: windy

Time: 1056

Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 230 ppm open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: + 2.0" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
12/1/11 1056	0	0	.82	17.13	3900	
1100	48	0	.88	16.97	4130	
1104	96	0	.90	16.88	4260	
1108	144	0	.90	16.91	4250	
1112	192	0	.92	16.88	4280	
1116	240	0	.92	16.82	4350	

Values Prior to Sampling

1116	240	0	.92	16.82	4350	

Sample ID: VA0823

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106116-025

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: Tim Nogen

Weather: sunny

Time: 910

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft^3

Static Pressure: −.32" 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
11/9/11 910	0	0	.34	21.14	9	
913	4.5	0	.36	21.36	8	
916	9	0	.40	21.36	9	
919	13.5	0	.40	21.36	7	
922	18	0	.42	21.36	16	not within 10% from last reading
925	22.5	0	.44	21.35	16	
928	27	0	.44	21.34	16	

Values Prior to Sampling

928	27	0	.44	21.34	16	

Sample ID: VA0824

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106116-050

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: [signature]

Weather: sunny 40's

Time: 945

Review Signature and Date: [signature] 11/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: −.61" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/9/11 945	0	.01	.70	20.59	17	
948	4.5	.01	.82	20.12	13	
951	9	0	.62	18.93	6	
954	13.5	0	.62	18.94	8	
957	18	0	.62	18.93	6	

Values Prior to Sampling

957	18	0	.62	18.93	6	

Sample ID: VA0825

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106116-150

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: TN Nop

Weather: sunny

Time: 1015

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: −1.80 " 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
11/9/11 1015	0	0	.32	18.24	11	
1018	4.5	0	.42	18.07	10	
1021	9	0	.44	18.01	12	
1024	13.5	0	.42	17.98	10	
1027	18	0	.44	17.94	9	
1030	22.5	0	.44	17.91	10	

Values Prior to Sampling

1030	22.5	0	.44	17.91	10	

Sample ID: VA0826

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106116-250

Field Crew: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1052

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

132 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: −2.60 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/9/11 1052	0	0	.40	18.43	50	
1058	9	0	.52	18.17	1150	
1104	18	0	.52	18.13	1154	
1110	27	0	.54	18.04	1169	

Values Prior to Sampling

1110	27	0	.54	18.04	1169	

Sample ID: VA0827

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: TN

Site / SWMU No.: 106

Date: 11/9/11

Crew Signature: TN Nap

Weather: Sunny

Time: 1143

Review Signature and Date: 11/10/11

WELL OBSERVATIONS

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

Notes: Bkgd 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 ft³

Static Pressure: −3.60 " 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
11/9/11 1143	0	0	.82	17.92	4180	
1149	9	0	.82	17.83	5030	
1155	18	0	.82	17.82	5030	
1201	27	0	.82	17.82	4980	

Values Prior to Sampling

1201	27	0	.82	17.82	4980	

Sample ID: VA0828 VA0829

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106116-450
Field Crew: TN
Site / SWMU No.: 106
Date: 11/9/11
Crew Signature: T. Noga
Weather: sunny
Time: 1230
Review Signature and Date: 11/10/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
B2 VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: −3.60" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1230	0	0	0	20.59	44	
1234	48	0	.10	20.70	168	
1238	96	0	.32	20.37	2510	
1242	144	0	.58	19.62	6780	
1246	192	0	.88	18.89	13140	inst.
1248	240	0	.96	18.45	15900	inst.
					1617 x9	
					=14553	by dilution

Values Prior to Sampling

1248	240	0	.96	18.45	14553	

Sample ID: VA0830

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106117-025
Field Crew: TN
Site / SWMU No.: 106
Date: 10/11/11
Crew Signature: Tim Nagy
Weather: sunny
Time: 1443
Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: Bkgd 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 ft³

Static Pressure: + .20" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/11/11 1443	0	0	2.16	18.29	144	
1446	4.5	0	2.10	18.43	121	
1449	9	0	2.08	18.64	108	
1452	13.5	0	2.08	18.76	103	
1455	18	0	2.06	18.78	104	

Values Prior to Sampling

1455	18	0	2.06	18.78	104	

Sample ID: VA0831

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106117-050
Field Crew: TN
Site / SWMU No.: 106
Date: 10/4/11
Crew Signature: T. Nap
Weather: sunny + windy
Time: 1511
Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: Bkgd 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):	.14 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)	1.77 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.7 ft³

Static Pressure: +.50 "H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/4/11 1511	0	0	2.76	17.29	655	
1514	4.5	0	2.98	16.90	871	
1517	9	0	2.94	16.86	945	
1520	13.5	0	2.94	16.90	977	
1523	18	0	2.92	16.92	984	

Values Prior to Sampling

1523	18	0	2.92	16.92	984	

Sample ID: VA0832

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106117-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/11/11

Crew Signature: Tim Nogen

Weather: windy

Time: 1546

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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)	20.90 ft³

Static Pressure: +1.40 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/11/11 1546	0	0	1.38	17.89	12	
1549	4.5	0	1.78	17.71	11	
1552	9	0	1.76	17.79	10	
1555	13.5	0	1.78	17.87	9	
1558	18	0	1.76	17.77	10	
1601	22.5	0	1.76	17.73	9	

Values Prior to Sampling

1601	22.5	0	1.76	17.73	9	

Sample ID: VA0833

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: ~~KAFB-BFF~~

Well ID No/Interval: KAFB 106117-250

Field Crew: ~~TN~~

Site / SWMU No.: 106

Date: 10/12/11

Crew Signature: ~~Tim Nagy~~

Weather: sunny

Time: 837

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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)	23.90 ft³

Static Pressure: -.54" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/12/11 837	0	0	.02	21.28	6	
843	9	0	1.36	18.88	2340	
849	18	0	1.76	18.06	3300	not within 10% of last reading
855	27	0	1.88	17.85	3360	
901	36	0	1.94	17.74	3380	

Values Prior to Sampling

TN ~~855~~ 901	~~27~~ TN 36	0	1.94	17.74	3380	

Sample ID: VA0834

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106117-350

Field Crew: TN

Site / SWMU No.: 106

Date: 10/12/11

Crew Signature: Tri Ngo

Weather: sunny

Time: 921

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
BZ VOC's 0

CALCULATIONS

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

Static Pressure: -.62" H_2O

Purge Flow Rate: 1.5 dm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/12/11 921	0	0	.02	21.31	12	
927	9	0	3.68	14.95	15020	inst.
933	18	0	4.32	13.35	18110	inst. not within 10% from last
939	27	0	4.22	13.19	18410	inst.
945	36	0	4.18	13.24	18500	inst.
					1568 x 9	
					= 14112	by dilution

Values Prior to Sampling

~~939~~ 945 TN	~~27~~ 36 TN	0	4.18	13.24	14112	by dilution

Sample ID: VA0835
VA0836

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106117-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/12/11

Crew Signature: T Nagel

Weather: sunny

Time: 1028

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	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):	22.0 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)	23.7 ft^3
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft^3

Static Pressure: −.80" H_2O

Purge Flow Rate:

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
10/12/11 1028	0	0	0	20.65	125	
1032	48	0	1.34	17.14	26000	inst.
1036	96	0	1.38	15.88	27020	inst.
1040	144	0	1.38	15.65	26500	inst
1044	192	0	1.38	15.39	26800	inst.
1048	240	0	1.34	15.42	26480	inst.
					2530 x 9	
					= 22770	by dilution

Values Prior to Sampling

1048	240	0	1.34	15.42	22770	by dilution

Sample ID: VA0837

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB106118-025 | Field Crew: TN, DR

Site / SWMU No.: 106 | Date: 11/10/11 | Crew Signature: [signature]

Weather: sunny | Time: 1410 | Review Signature and Date: [signature] 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd 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 ft³

Static Pressure: +.03" H_2O | Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/10/11 1413	0	0	.66	20.22	17	
1416	4.5	0	.62	19.95	16	
1419	9	0	.62	19.95	10	
1422	13.5	0	.62	19.96	10	
1425	18	0	.64	19.92	10	

Values Prior to Sampling

1425	18	0	.64	19.92	10	

Sample ID: VA0838

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106118-050
Field Crew: TN, DR
Site / SWMU No.: 106
Date: 11/10/11
Crew Signature: Tim Nagy
Weather: sunny 40's
Time: 1450
Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: BKgd 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: 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):	.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
(TN ~~2.5"~~ H_2O)

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/10/11 1450	0	0	1.12	19.34	8	
1453	4.5	0	1.16	19.31	9	
1456	9	0	1.20	19.72	10	
1459	13.5	0	1.24	20.33	9	
1502	18	0	1.26	20.56	8	

Values Prior to Sampling

1502	18	0	1.26	20.56	8	

Sample ID: VA0839

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB106 118-160 | Field Crew: TN, DR

Site / SWMU No.: DG | Date: 11/10/11 | Crew Signature: Tim Nagel

Weather: sunny | Time: 1520 | Review Signature and Date: [illegible] 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC'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: −1.60 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/16/11 1520	0	0	1.48	17.55	30	
1523	4.5	0	1.38	17.60	33	
1526	9	0	1.32	17.68	35	
1529	13.5	0	1.30	17.64	37	
1532	18	0	1.30	17.68	37	
1535	22.5	0	1.28	17.65	37	

Values Prior to Sampling

1535	22.5	0	1.28	17.65	37	

Sample ID: VA0840

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106118-265

Field Crew: TN

Site / SWMU No.: 106

Date: 11/10/11

Crew Signature: Tim Wagner

Weather: sunny

Time: 1552

Review Signature and Date: 11/16/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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	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: −1.60" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1552	0	0	.42	18.30	260	
1558	9	0	.46	18.22	361	
1604	18	0	.46	18.48	368	
1610	27	0	.46	18.45	368	

Values Prior to Sampling

1610	27	0	.46	18.45	368	

Sample ID: VA0841

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106 118-350
Field Crew: TN
Site / SWMU No.: 106
Date: 11/15/11
Crew Signature: Tim Nagle
Weather: Sunny
Time: 852
Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd 54.6 (open)
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 ft³

Static Pressure: +.62" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/15/1151	0	0	.20	19.68	140	
858	9	0	.24	19.91	168	
904	18	0	.24	19.88	167	
910	27	0	.26	19.74	167	

Values Prior to Sampling

910	27	0	.26	19.74	167	

Sample ID: VA0842

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BF7 | Well ID No/Interval: KAFB 106 118-450 | Field Crew: TN

Site / SWMU No.: 106 | Date: 11/15/11 | Crew Signature: Tim Nagel

Weather: sunny | Time: 932 | Review Signature and Date: 11/16/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 69.5 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), 3" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	220 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 ft³

Static Pressure: +.64 "H_2O

Purge Flow Rate: 18 CFM

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/15/11 932	0	0	.82	18.27	346	
936	48	0	.82	18.67	358	
940	96	0	.82	18.78	362	
944	144	0	.82	19.27	365	
948	192	0	.82	19.20	372	
952	240	0	.82	19.18	372	

Values Prior to Sampling

952	240	0	.82	19.18	372	

Sample ID: VA0843

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106119-025

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: TN

Weather: sunny

Time: 910

Review Signature and Date: 10-19-2011

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/19/11 910	0	0	.36	20.98	TMP 3	
913	4.5	0	.40	20.56	3	
916	9	0	.46	20.97	2	
919	13.5	0	.48	21.10	1	
922	18	0	.52	21.11	0	

Values Prior to Sampling

922	18	0	.52	21.11	0	

Sample ID: VA0844

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106119-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 942

Review Signature and Date: Debra 10-19-2011

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd VOC's 0

B2 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: −.12" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
10/19/11 942	0	0	2.60	18.23	12	
945	4.5	0	3.50	17.49	11	
948	9	0	3.70	17.25	10	
951	13.5	0	3.88	16.99	9	
954	18	0	3.92	16.91	7	

Values Prior to Sampling

954	18	0	3.92	16.91	7	

Sample ID: VA08045

VA08046

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106119-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1032

Review Signature and Date: 10-19-2011

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0
B Z 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

3 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/19/11 1032	0	0	6.70	12.15	5	
1035	4.5	0	6.28	10.95	277	
1038	9	0	6.18	11.03	269	
1041	13.5	0	6.14	11.00	269	
1044	18	0	6.16	10.96	270	
1047	22.5	0	6.18	11.01	275	

Values Prior to Sampling

1047	22.5	0	6.18	11.01	275	

Sample ID: VA0847

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106119-250

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: Tim Nogen

Weather: Sunny

Time: 1108

Review Signature and Date: 10-19-2011

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: −1.0" H₂O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
10/19/11 1108	0	0	.02	20.67	7	
1114	9	0	1.34	16.61	298	
1120	18	0	1.34	16.53	309	
1126	27	0	1.36	16.44	317	

Values Prior to Sampling

1126	27	0	1.36	16.44	317	

Sample ID: VA0848

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106119-350
Field Crew: TN
Site / SWMU No.: 106
Date: 10/19/11
Crew Signature: Tim Nagel
Weather: windy
Time: 1146
Review Signature and Date: 10-19-2011

WELL OBSERVATIONS

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

Notes: Bkgd 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 ft³

Static Pressure: ~~+1.0~~ -1.0 **Purge Flow Rate:** 1.5 L/min

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/19/11 1146	0	0	.02	20.60	59	
1152	9	0	.80	18.31	5210	
1158	18	0	.80	18.16	5260	
1204	27	0	.80	18.10	5270	

Values Prior to Sampling

1204	27	0	.80	18.10	5270	

Sample ID: VA08491

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106119-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/19/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1247

Review Signature and Date: 10-19-201

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

B2 VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -1.0" H_2O

Purge Flow Rate: 1.5 scfm

PURGE DATA

Date/Time (4 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
10/19/11 1247	0	0	.10	20.61	8	
1251	48	0	1.32	18.11	2010	
1255	96	0	2.34	15.13	8510	
1259	144	0	2.56	14.77	9070	
1303	192	0	2.60	14.67	9230	
1307	240	0	2.62	14.64	9300	

Values Prior to Sampling

1307	240	0	2.62	14.64	9300	

Sample ID: VA0850

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: TN

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: [signature]

Weather: sunny

Time: 1503

Review Signature and Date: [signature] 10/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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 ft³

Static Pressure: +.14" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/10/11 1503	0	0	.54	20.28	41	
1506	4.5	0	.56	20.30	46	
1509	9	0	.60	20.38	38	
1512	13.5	0	.62	20.36	37	
1515	18	0	.64	20.34	36	

Values Prior to Sampling

1515	18	0	.64	20.34	36	

Sample ID: VA0851

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106120-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/10/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1538

Review Signature and Date: 10/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.153 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: +.28" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3mm Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/10/11 1538	0	0	1.06	19.05	55	
1541	4.5	0	1.10	19.03	58	
1544	9	0	1.14	19.10	60	
1547	13.5	0	1.16	19.09	59	
1550	18	0	1.16	19.14	59	

Values Prior to Sampling

1550	18	0	1.16	19.14	59	

Sample ID: VA0852

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106 120-150
Field Crew: TN
Site / SWMU No.: 106
Date: 10/10/11
Crew Signature: Tim Vogt
Weather: sunny
Time: 1606
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd 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: +.45" H_2O **Purge Flow Rate:** 1.5 cfm

PURGE DATA

3mm Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/10/11 1606	0	0	.28	19.55	26	
1609	4.5	0	.28	19.63	21	
1612	9	0	.28	19.73	21	
1615	13.5	0	.30	19.67	19	
1618	18	0	.28	19.61	19	
1621	22.5	0	.28	19.62	19	

Values Prior to Sampling

1621	22.5	0	.28	19.62	19	

Sample ID: VA0853

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB106120-250 | Field Crew: TN

Site / SWMU No.: 106 | Date: 10/11/11 | Crew Signature: [signature]

Weather: sunny | Time: 924 | Review Signature and Date: [signature] 10/13/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: +.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/11/11 924	0	0	.20	20.19	13	
930	9	0	.32	20.41	13	
936	18	0	.38	20.43	13	
942	27	0	.38	20.47	12	

Values Prior to Sampling

942	27	0	.38	20.47	12	

Sample ID: VA 0854

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:** TN
Site / SWMU No.: 106	**Date:** 10/11/11	**Crew Signature:** Tim Nolan
Weather: sunny	**Time:** 1007	**Review Signature and Date:** 10/13/11

WELL OBSERVATIONS

Protective Casing / Vault: (ntact) - Damaged **Locked:** (es) - No **Well ID Mark:** (es) - No

Notes: BZ VOC's 0
Bkgd 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)	270 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: +.48" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Time Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1007	0	0	.28	19.43	327	
1013	9	0	.30	19.24	413	
1019	18	0	.34	19.20	428	
1025	27	0	.32	19.22	428	

Values Prior to Sampling

1025	27	0	.32	19.22	428	

Sample ID: VA0855

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 120-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/11/11

Crew Signature: Tim Nagel

Weather: sunny

Time: 1045

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.44" 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
1045	0	0	.34	18.97	1997	
1049	48	0	.36	18.90	2070	
1053	96	0	.36	18.86	2090	
1057	144	0	.38	18.95	2100	
1101	192	0	.38	19.01	2100	
1105	240	0	.36	18.99	2100	

Values Prior to Sampling

1105	240	0	.36	18.99	2100	

Sample ID: VA0856

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106121-025

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature: TN Nagra

Weather: cloudy

Time: 1456

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft^3
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft^3

Static Pressure: +.24" 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
10/5/11 1456	0	0	1.02	19.35	17	
1459	4.5	0	1.02	19.39	14	
1502	9	0	1.04	19.42	12	
1505	13.5	0	1.02	19.41	13	
1508	18	0	1.04	19.44	13	

Values Prior to Sampling

1508	18	0	1.04	19.44	13	

Sample ID: VA0857

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB106121-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 10/5/11 | Crew Signature: Tim Unger

Weather: cloudy | Time: 1547 | Review Signature and Date: 10/6/11

WELL OBSERVATIONS

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

Notes: Bkgd 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):	.14 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)	1.77 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.7 ft³

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

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/5/11 1547	0	0	1.08	19.40	16	
1550	4.5	0	1.08	19.50	15	
1553	9	0	1.10	19.52	14	
1556	13.5	0	1.12	19.54	13	
1559	18	0	1.10	19.58	11	

Values Prior to Sampling

1559	18	0	1.10	19.58	11	

Sample ID: VA0858
VA0859

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106121-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/6/11

Crew Signature: TN Dog

Weather: windy

Time: 1135

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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):	.53 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)	2.16 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21.6 ft³

Static Pressure: +2.6" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
10/6/11 1135	0	0	.24	19.95	11	
1138	4.5	0	.28	20.03	13	
1141	9	0	.28	20.08	15	
1144	13.5	0	.30	20.11	13	
1147	18	0	.30	20.15	11	
1150	22.5	0	.32	20.20	9	

Values Prior to Sampling

1150	22.5	0	.32	20.20	9	

Sample ID: VA0860

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB 106 121-250
Field Crew: TN
Site / SWMU No.: 106
Date: 10/6/11
Crew Signature: Tim Unger
Weather: Windy
Time: 1210
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 1.4 (open)
BZ VOC's 0.0

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: +2.4" H_2O

Purge Flow Rate:

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/6/11 1210	0	0	TV 19.20	TV ~~20~~ 19.29	25	
1216	9	0	.22	19.43	19	
1222	18	0	.20	19.50	15	
1228	27	0	.22	19.59	13	

Values Prior to Sampling

1228	27	0	.22	19.59	13	

Sample ID: VA0861

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106121-350
Field Crew: TN
Site / SWMU No.: 106
Date: 10/6/11
Crew Signature: T Nagel
Weather: windy
Time: 1254
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 30(open)
Bz VOC's 0

CALCULATIONS

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

Static Pressure: +4.0" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/6/11 1254	0	0	.22	19.04	927	
1300	9	0	.22	18.99	927	
1306	18	0	.22	19.04	919	
1312	27	0	.20	19.01	926	

Values Prior to Sampling

1312	27	0	.20	19.01	926	

Sample ID: VA0862

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF
Well ID No/Interval: KAFB 106 121-450
Field Crew: FN
Site / SWMU No.: 106
Date: 10/6/11
Crew Signature: [signature]
Weather: windy
Time: 1332
Review Signature and Date:

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 36 (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: +3.6" H_2O **Purge Flow Rate:** 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/6/11 1332	0	0	.08	19.78	415	
1336	48	0	.08	19.82	426	
1340	96	0	.08	19.84	445	
1344	144	0	.10	19.86	459	
1348	192	0	.10	19.86	474	
1352	240	0	.08	19.86	490	

Values Prior to Sampling

1352	240	0	.08	19.86	490	

Sample ID: VA0863

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106122-025

Field Crew: TN

Site / SWMU No.: 106

Date: 10/18/11

Crew Signature: TN Nga

Weather: sunny

Time: 1233

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	17.0 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/18/11 1233	0	0	.80	19.75	10	
1236	4.5	0	1.08	20.30	10	
1239	9	0	1.20	20.19	11	
1242	13.5	0	1.26	19.31	7	
1245	18	0	1.28	19.80	5	

Values Prior to Sampling

1245	18	0	1.28	19.80	5	

Sample ID: VA0864

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: KAFB 106 122-050 | Field Crew: TN

Site / SWMU No.: 106 | Date: 10/18/11 | Crew Signature: Tim Nagy

Weather: sunny | Time: 1307 | Review Signature and Date: [illegible] 10/20/11

WELL OBSERVATIONS

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

Notes: Bkgd 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):	.153 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)	TN ~~2.163~~ 1.783 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

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/18/11 1307	0	0	.94	19.31	7	
1310	4.5	0	1.36	19.06	9	
1313	9	0	1.36	18.97	8	
1316	13.5	0	1.34	18.89	6	
1319	18	0	1.34	19.18	8	

Values Prior to Sampling

1319	18	0	1.34	19.18	8	

Sample ID: VA0865

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 122-150

Field Crew: FN

Site / SWMU No.: 106

Date: 10/18/11

Crew Signature: Tim Nagel

Weather: sunny

Time: 1337

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

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

Notes: Bkgd 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):	.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: – 1.2" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/18/11 1337	0	0	.28	TM 21.29	12	
1340	4.5	0	.26	20.75	12	
1343	9	0	.28	20.60	10	
1346	13.5	0	.28	20.03	12	
1349	18	0	.28	20.14	9	
1352	22.5	0	.28	19.89	11	

Values Prior to Sampling

1352	22.5	0	.28	19.89	11	

Sample ID: VA0866

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106122-250

Field Crew: TN

Site / SWMU No.: 106

Date: 10/18/11

Crew Signature: Tim Nopper

Weather: sunny

Time: 1410

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

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

Notes: BKgd 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: -1.5 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1410	0	0	0.12	20.53	11	
1416	9	0	.30	19.38	10	
TN 1422/1416	18	0	.32	19.64	6	
TN 1428/1419	27	0	.32	21.84	7	

Values Prior to Sampling

1428	27	0	.32	21.84	7	

Sample ID: VA0867

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - B77

Well ID No/Interval: KAFB 106 122 -350

Field Crew: TN

Site / SWMU No.: 106

Date: 10/18/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1458

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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 ft³

Static Pressure: -1.5" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1458	0	0	.04	19.97	9	
1504	9	0	.26	18.64	796	
1510	18	0	.26	18.80	800	
1516	27	0	.28	1881	807	

Values Prior to Sampling

1516	27	0	.28	18.81	807	

Sample ID: VA0868

VA0869

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: TN

Site / SWMU No.: 106

Date: 10/18/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1548

Review Signature and Date: 12/02/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOCs 0

BZ VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 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	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
1548	0	0	.02	21.41	4	
1552	48	0	.10	21.52	41	
1556	96	0	.22	2060	491	
1600	144	0	.26	20.31	9032 TN	
1604	192	0	.28	19.71	1470	
1608	240	0	.28	19.30	1756	
1612	288	0	.30	18.81	1850	
1616	336	0	.30	18.83	1977	

Values Prior to Sampling

1616	336	0	.30	18.83	1977	

Sample ID: VA0870

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: KAFB106123-025
Field Crew: TN
Site / SWMU No.: 106
Date: 10/5/11
Crew Signature: [signature]
Weather: Sunny
Time: 1045
Review Signature and Date: [signature] 10/6/11

WELL OBSERVATIONS

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

Notes: BKgd VOC's @ 0.7 ppm
BZ VOC's @

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/5/11 1045	0	0	1.68	20.01	62	
1048	4.5	0	1.72	20.13	65	
1051	9	0	1.72	20.24	63	
1054	13.5	0	1.68	20.22	61	
1057	18	0	1.62	20.47	58	

Values Prior to Sampling

1057	18	0	1.62	20.47	58	

Sample ID: VA0871

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 123-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature: Tim Nagar

Weather: sunny

Time: 1118

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0.8 ppm

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):	.140 TN ~~1.40~~ 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)	1.77 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	17.7 ft³

Static Pressure: +.02" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/5/11 1118	0	0	2.08	19.83	57	
1121	4.5	0	2.08	19.63	55	
1124	9	0	2.10	19.42	52	
1127	13.5	0	2.06	19.51	86	
1130	18	0	2.06	19.85	91	

Values Prior to Sampling

1130	18	0	2.06	19.85	91	

Sample ID: VA0872

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106123-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature: TN Nagy

Weather: prtl. cloudy

Time: 1153

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (ntact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's .7ppm
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	.53 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)	2.16 ft^3
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21.6 ft^3

Static Pressure: +1.00 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/5/11 1153	0	0	.12	19.38	33	
1156	4.5	0	.22	19.23	35	
1159	9	0	.22	19.31	34	
1202	13.5	0	.22	18.96	30	
1205	18	0	.22	18.91	27	
1208	22.5	0	.22	18.96	27	

Values Prior to Sampling

1208	22.5	0	.22	18.96	27	

Sample ID: VA0873

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106123-250

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature: TN Nop

Weather: Cloudy

Time: 1228

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0.8 ppm

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 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/5/11 1228	0	0	.28	19.89	23	
1234	9	0	.28	19.92	33	
1240	18	0	.30	20.42	25	
1246	27	0	.28	20.56	22	

Values Prior to Sampling

1246	27	0	.28	20.56	22	

Sample ID: VA0874

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106123-350

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature:

Weather: Sunny

Time: 1308

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 1.4 ppm

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

Date/Time (military)	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/5/11 1308	0	0	.46	18.44	89	
1314	9	0	.46	18.60	135	
1320	18	0	.44	18.69	138	
1326	27	0	.44	18.47	143	

Values Prior to Sampling

1326	27	0	.44	18.47	143	

Sample ID: VA0875

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106123-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/5/11

Crew Signature:

Weather: windy / sunny

Time: 1348

Review Signature and Date: 10/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 2.4 ppm (Corem)

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)	2370 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 (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/5/11 1348	0	0	.30	18.32	3240	
1352	48	0	.32	18.52	3280	
1356	96	0	.28	18.06	3290	
1400	144	0	.28	18.03	3310	
1404	192	0	.30	18.07	3310	
1408	240	0	.28	18.06	3310	

Values Prior to Sampling

1408	240	0	.28	18.06	3310	

Sample ID: VA08-76

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-877 | Well ID No/Interval: 106124-025 | Field Crew: TN

Site / SWMU No.: 106 | Date: 12/5/11 | Crew Signature: Tim Nogen

Weather: Cold | Time: 900 | Review Signature and Date: Catina Joseph 12/5/11

WELL OBSERVATIONS

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

Notes: BKgd 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~~ ft³

Static Pressure: −.04 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
900	0	0	.18	20.80	25	
903	4.5	0	.64	20.80	49	
906	9	0	.64	20.98	25	
909	13.5	0	.68	21.05	20	
912	18	0	.76	21.15	18	

Values Prior to Sampling

912	18	0	.76	21.15	18	

Sample ID: VA0877

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: AF SKAFB-BFT

Well ID No/Interval: 106124-050

Field Crew: AT, TD

Site / SWMU No.: 106

Date: 12/5/11

Crew Signature: Antonio Trujillo

Weather: Cold, windy

Time: 0931

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark: (Yes) - No

Notes: BZ VOC's Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	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)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: -.28

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/5/11 0931	Ø	Ø	.56	20.25	18	
0934	4.5	Ø	.58	20.24	7	
0937	9	Ø	.48	20.35	7	
0940	13.5	Ø	.58	20.34	6	
0943	18	Ø	.52	20.37	5	

Values Prior to Sampling

12/5/11 0943	18	Ø	.52	20.37	5	

Sample ID: VA0878

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, AT

Site / SWMU No.: 106 | Date: 12/5/11 | Crew Signature: TN Nagra

Weather: cold | Time: 1008 | Review Signature and Date: [illegible] 12/7/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.12" H_2O

Purge Flow Rate: ~~1.5 cfm~~ 1.0 cfm *

PURGE DATA

4.5 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/5/11 1008	0	0	0	20.95	1	
1012	4.5	0	.04	20.70	3	
1017	9	0	0	20.82	4	
1021	13.5	0	.08	20.47	5	
1026	18	0	.04	20.67	6	
1030	22.5	0	.04	20.69	6	

Values Prior to Sampling

1030	22.5	0	.04	20.69	6	

* Due to weather conditions the flowrate peakes only at 1.0 cfm, because metal nozzles keep freezing up

Sample ID: VA0879
VA0880

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: 12/6/11 | Crew Signature: Tim Nagy

Weather: cold + cloudy | Time: 850 | Review Signature and Date: 12/7/11

WELL OBSERVATIONS

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

Notes: Bkgd VOCs 0
B2 VOCs 0

CALCULATIONS

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

Static Pressure: 0"H20 **Purge Flow Rate:** 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/6/11 850	0	0	.02	20.63	2	
856	9	0	.06	21.01	1	
902	18	0	.12	21.02	8	
908	27	0	.08	21.03	8	

Values Prior to Sampling

908	27	0	.08	21.03	8	

Sample ID: VA0881

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: 12/6/11

Crew Signature: Tim Nagel

Weather: cloudy + cold

Time: 928

Review Signature and Date: 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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: 0" H 20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/6/11 928	0	0	.04	21.30	21	
934	9	0	.18	20.79	645	
940	18	0	.20	20.84	647	
946	27	0	.22	20.83	657	

Values Prior to Sampling

946	27	0	.22	20.83	657	

Sample ID: VA0882

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: T.N

Site / SWMU No.: 106

Date: 12/6/11

Crew Signature: Tim Nagy

Weather: sunny; cold

Time: 10.23

Review Signature and Date: 12-7-11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd VOCs @

BZ VOCs @

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 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 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 12 cfm

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
12/6/11 1023	0	0	0	21.24	22	
1027	48	0	.04	21.19	86	
1031	96	0	.10	20.74	507	
1035	144	0	.14	20.44	945	
1039	192	0	.20	20.07	1700	
1043	240	0	.22	19.96	1951	
1047	288	0	.22	19.89	2120	

Values Prior to Sampling

1047	288	0	.22	19.89	2120	

Sample ID: VA0883

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 + cold

Well ID No/Interval: 106125-025

Date: 12/7/11

Time: 910

Field Crew: TN, AT

Crew Signature: Tim Nagel

Review Signature and Date: Antonio Trujillo 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOCs 0

3 Z VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 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: -.03" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/7/11 910	0	0	.72	20.54	0	
913	4.5	0	1.34	20.22	1	
916	9	0	1.46	20.24	3	
919	13.5	0	1.52	20.37	4	
922	18	0	1.56	20.45	3	

Values Prior to Sampling

922	18	0	1.56	20.45	3	

Sample ID: VA0884

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, AT

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature: Tim Nagy

Weather: sunny 20's

Time: 940

Review Signature and Date: Matthew Trujillo 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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: −.05 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
940	0	0	1.90	18.98	0	
943	4.5	0	1.92	18.97	0	
946	9	0	1.92	18.96	0	
949	13.5	0	1.94	18.95	0	
952	18	0	1.98	18.93	0	

Values Prior to Sampling

952	18	0	1.98	18.93	0	

Sample ID: VA0885

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106125-150

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature: Tim Nace

Weather: sunny 20's

Time: 1024

Review Signature and Date: Christine Lyle 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0

Bz VOC's 0

CALCULATIONS

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

Static Pressure: -1.80" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1024	0	0	.04	19.94	0	
1027	4.5	0	.06	20.10	0	
1030	9	0	.04	20.07	0	
1033	13.5	0	.06	20.09	0	
1036	18	0	.04	20.13	0	
1039	22.5	0	.08	20.14	0	

Values Prior to Sampling

1039	22.5	0	.08	20.14	0	

Sample ID: VA0886

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106125-250

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature: TC Nagel

Weather: sunny 20's

Time: 1058

Review Signature and Date: Anthony J. Lee 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -2.17" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1058	0	0	0	20.45	0	
1104	9	0	.02	20.47	0	
1110 ~~1058~~	18	0	.02	20.48	0	
1116	27	0	.04	20.46	0	

Values Prior to Sampling

1116	27	0	.04	20.46	0	

Sample ID: VA0887

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, AT

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature: Tim Nagy

Weather: sunny 30's

Time: 1130

Review Signature and Date: Christine Lyle 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes: Bkgd 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 ft³

Static Pressure: -2.32" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1130	0	0	0.06	20.21	702	
1136	9	0	.06	20.28	720	
1142	18	0	.08	20.28	734	
1148	27	0	.08	20.28	735	

Values Prior to Sampling

1148	27	0	.08	20.28	735	

Sample ID: VA0888

VA0889

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 1016

Weather: Sunny 30's

Well ID No/Interval: 106125-450

Date: 12/7/11

Time: 1222

Field Crew: AT, TN

Crew Signature:

Review Signature and Date: [illegible] Roger 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: BZ VOC's Ø

BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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 ft³

Static Pressure: -2.24 " H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/7/11 1222	Ø	0	.16	19.27	4170	
1226	48	0	.14	19.30	4100	
1230	96	0	.16	19.28	4100	
1234	144	0	.16	19.25	4160	
1238	192	0	.16	19.23	4230	
1242	240	0	.18	19.22	4280	

Values Prior to Sampling

1242	240	0	.18	19.22	4280	

Sample ID: UA0890

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: 12/8/11

Crew Signature: Tim Nagel

Weather: sunny

Time: 910

Review Signature and Date: 12/8/11

WELL OBSERVATIONS

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

Notes: BZ & VOCs
BH & VOCs

CALCULATIONS

(A) Depth to Well Bottom	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: – .06" 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
12/8/11 913	0	0	.34	20.77	9	
916	4.5	0	.76	20.56	80	
919	9	0	.84	20.65	113	
922	13.5	0	.88	20.73	124	
925	18	0	.92	20.89	129	

Values Prior to Sampling

925	18	0	.92	20.89	129	

Sample ID: VA0891

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BTF

Site / SWMU No.: 106

Weather: sunny

Well ID No/Interval: 106126-050

Date: 12/8/11

Time: 946

Field Crew: TN

Crew Signature: Tim Nagy

Review Signature and Date: 12/8/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BZ & VOC's
BH & 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: -.08 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/8/11 946	0	0	.26	20.80	5	
949	4.5	0	.30	20.77	8	
952	9	0	.30	20.83	11	
955	13.5	0	.32	20.85	9	
958	18	0	.34	20.86	10	

Values Prior to Sampling

958	18	0	.34	20.86	10	

Sample ID: VA0892

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106 125 - 150

Field Crew: TN

Site / SWMU No.: 106

Date: 12/8/11

Crew Signature: Tim Nagle

Weather: sunny

Time: 1025

Review Signature and Date: 12/8/11

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	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: Ø " H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/8/11 1025	0	0	.04	20.07	0	
1028	4.5	0	.04	20.38	0	
1031	9	0	.04	20.40	0	
1034	13.5	0	.04	20.40	0	
1037	18	0	.04	20.39	0	
1040	22.5	0	.06	20.40	0	

Values Prior to Sampling

1040	22.5	0	.06	20.40	0	

Sample ID: VA0893

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: 12/8/11

Crew Signature: Tim Nogan

Weather: sunny 30's

Time: 1055

Review Signature and Date: 12/8/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

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

CALCULATIONS

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

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1055	0	0	0	20.86	0	
1101	9	0	.02	20.85	0	
1107	18	0	.02	20.83	0	
1113	27	0	.04	20.81	0	

Values Prior to Sampling

1113	27	0	.04	20.81	0	

Sample ID: VA0894

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: 12/8/11

Crew Signature: Tim Nagy

Weather: sunny 30's

Time: 1130

Review Signature and Date: 12/8/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BZ & VOC's
BH & 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: -.07" 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
12/8/11 1130	0	0	0	20.68	236	
1136	9	0	0	20.71	261	
1142	18	0	0	20.73	290	
1148 TM ~~1150~~	27	0	0	20.75	305	

Values Prior to Sampling

1148	27	0	0	20.75	305	

Sample ID: VA0895

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: 12/12/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1100

Review Signature and Date: 12-13-11

WELL OBSERVATIONS

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

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

CALCULATIONS

(A) Depth to Well Bottom	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 ft³

Static Pressure: +1.2" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1100	0	0	0	21.24	56	
1104	48	0	0	21.38	66	
1108	96	0	0	21.46	70	
1112	144	0	.02	21.52	74	
1116	192	0	.02	21.55	81	
1120	240	0	.04	21.58	85	

Values Prior to Sampling

1120	240	0	.04	21.58	85	

Sample ID: VA0896

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106127-025

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1210

Review Signature and Date: 12/14/11

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	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/13/11 1210	0	0	.52	20.41	0	
1213	4.5	0	.54	20.53	2	
1216	9	0	.54	20.56	1	
1219	13.5	0	.62	20.58	0	
1222	18	0	.62	20.55	0	

Values Prior to Sampling

1222	18	0	.62	20.55	0	

Sample ID: VA0897

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106127-025
Field Crew: FN, AT
Site / SWMU No.: 106
Date: 12/22/11
Crew Signature: [signature]
Weather: cloudy
Time: 1503
Review Signature and Date: [signature] 12/27/11

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

Static Pressure: +.12" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1503	0	0	.44	20.33	6	
1506	4.5	0	.46	20.42	9	
1509	9	0	.50	20.51	6	
1512	13.5	0	.52	20.54	5	
1515	18	0	.54	20.68	3	

Values Prior to Sampling

1515	18	0	.54	20.68	3	

Sample ID: VA0897R

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106127-050

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagel

Weather: rain

Time: 1241

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

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

Notes: BH VOC's 4.1 ppm (open)
BZ " 0

CALCULATIONS

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

Static Pressure: +.10 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/13/11 1241	0	0	.32	20.25	2	
1244	4.5	0	.36	20.23	2	
1247	9	0	.36	20.23	3	
1250	13.5	0	.36	20.21	3	
1253	18	0	.38	20.20	4	

Values Prior to Sampling

1253	18	0	.38	20.20	4	

Sample ID: VA0898
VA0899

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: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1325

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 20.2 ppm open

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	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: +1.00" 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
12/13/11 1325	0	0	.06	20.10	0	
1328	4.5	0	.06	20.35	0	
1331	9	0	.06	20.44	0	
1334	13.5	0	.06	20.48	0	
1337	18	0	.08	20.52	0	
1340	22.5	0	.08	20.53	0	

Values Prior to Sampling

1340	22.5	0	.08	20.53	0	

Sample ID: VA0900

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106 127-250

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1405

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 6.0ppm open
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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: +1.40" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1405	0	0	0	20.58	2	
1411	9	0	.02	20.70	0	
1417	18	0	.02	20.73	2	
1423	27	0	.04	20.72	2	

lues Prior to Sampling

1423	27	0	.04	20.72	2	

Sample ID: VA0901 TN

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: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1446

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 147 ppm (open)
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +1.00" 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
12/13 1446	0	0	0	20.36	485	
1452	9	0	.04	20.45	558	
1458	18	0	.04	20.50	566	
1504	27	0	.06	20.54	577	

Values Prior to Sampling

1504	27	0	.06	20.54	577	

Sample ID: VA0902

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106127 -450

Field Crew: TN

Site / SWMU No.: 106

Date: 12/13/11

Crew Signature: TN

Weather: rain

Time: 1526

Review Signature and Date: 12/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 341 ppm open
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +1.30" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/13/11 1526	0	0	.06	19.93	1911	
1530	48	0	.08	19.92	2030	
1534	96	0	.08	19.90	2130	
1538	144	0	.12	19.86	2210	
1542	192	0	.12	19.84	2280	
1546	240	0	.12	19.85	2320	

Values Prior to Sampling

1546	240	0	.12	19.85	2320	

Sample ID: VA0903

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 128-025

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: Tin Ng

Weather: sunny

Time: 1227

Review Signature and Date: 10/22/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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 ft³

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/20/11 1231	0	0	1.16	19.33	23	
1234	4.5	0	1.18	19.24	25	
1237	9	0	1.18	19.34	29	
1240	13.5	0	1.14	19.26	27	
1243	18	0	1.14	19.30	24	

Values Prior to Sampling

1243	18	0	1.14	19.30	24	

Sample ID: VA0904

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 128-050

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: Tim Nad

Weather: sunny

Time: 1303

Review Signature and Date: 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's TN @ 8.9 ppm (open)
BZ VOCs 0

CALCULATIONS

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

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/20/11 1305	0	0	1.24	19.14	114	
1308	4.5	0	1.44	18.94	119	
1311	9	0	1.64	18.72	114	
1314	13.5	0	1.72	18.66	102	
1317	18	0	1.76	18.67	96	

Values Prior to Sampling

1317	18	0	1.76	18.67	96	

Sample ID: VA0905

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106128-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: Tim Unger

Weather: sunny

Time: 1356

Review Signature and Date: [illegible] 10/24/11

WELL OBSERVATIONS

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

Notes: Bkgd VOCs 23.8 ppm (open)

BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	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: 0" H2O Purge Flow Rate: 1.5CFM

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/24/11 1356	0	0	2.08	17.93	54	
1359	4.5	0	2.10	17.94	57	
1402	9	0	2.10	17.95	58	
1405	13.5	0	2.10	17.96	60	
1408	18	0	2.12	17.98	61	
1411	22.5	0	2.12	17.98	64	

Values Prior to Sampling

1411	22.5	0	2.12	17.98	64	

Sample ID: VA0906

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106128-250

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: T Nagel

Weather: sunny

Time: 1430

Review Signature and Date: 10-28-11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 3.6ppm Copelen)
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: 0" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
10/20/11 1435	0	0	2.02	17.85	11	
1441	9	0	2.02	17.64	9	
1447	18	0	2.02	17.60	8	
1453	27	0	2.02	17.65	8	

Values Prior to Sampling

1453	27	0	2.02	17.65	8	

Sample ID: VA0907

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: KAFB 106 128-350

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: [signature]

Weather: Sunny

Time: 1516

Review Signature and Date: [signature] 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: Bkgd VOC's 19.9 ppm (open)
BZ VOC's 0

CALCULATIONS

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

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmi Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/20/11 1516	0	0	.58	19.03	1641	
1522	9	0	.42	18.79	2360	
1528	18	0	.42	18.93	2360	
1534	27	0	.40	18.73	2360	

Values Prior to Sampling

1534	27	0	.40	18.73	2360	

Sample ID: VA0908

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106128-450

Field Crew: TN

Site / SWMU No.: 106

Date: 10/20/11

Crew Signature: [signature]

Weather: sunny

Time: 1550

Review Signature and Date: [signature] 10/20/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: Bkgd VOC's 25.3 ppm (open)

BZ VOC's 0

CALCULATIONS

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

Static Pressure: 0" H_2O

Purge Flow Rate: 1.5 CFM 12

PURGE DATA

4min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1551	0	0	.24	19.79	2040	
1555	48	0	.54	19.20	9340	
1559	96	0	.54	19.35	9620	
1603	144	0	.54	19.35	9990	
1607	192	0	1.20	17.47	21870	inst.
1611	240	0	1.20	16.89	22910	inst.
					2020	×9
					= 18180	by dilution

Values Prior to Sampling

1611	240	0	1.20	16.89	18180	by dilution

Sample ID: VA0909

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106129-025

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: Tin Nagel

Weather: sunny

Time: 843

Review Signature and Date: 11/17/11

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

Static Pressure: -.06 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (3 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/17/11 843	0	0	.10	20.63	8	
846	4.5	0	.14	20.56	9	
849	9	0	.14	20.58	6	
852	13.5	0	.16	20.66	7	
855	18	0	.16	20.79	7	

Values Prior to Sampling

855	18	0	.16	20.79	7	

Sample ID: VA0910

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106129-050

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: Ian Noger

Weather: sunny

Time: 910

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -.13" 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
11/17/11 910	0	0	.20	21.07	12	
913	4.5	0	.20	21.05	12	
916	9	0	.20	21.01	12	
919	13.5	0	.22	20.97	11	
922	18	0	.20	20.95	12	

Values Prior to Sampling

922	18	0	.20	20.95	12	

Sample ID: UA0911

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106129-150

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 940

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: Bkgd VOCs 0
B2 VOCs 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.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: – 1.20" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/17/11 940	0	0	.12	19.48	0	
943	4.5	0	.14	19.46	1	
946	9	0	.16	19.46	1	
949	13.5	0	.16	19.44	1	
952	18	0	.16	19.45	0	
955	22.5	0	.16	19.46	0	

Values Prior to Sampling

955	22.5	0	.16	19.46	0	

Sample ID: VA0912
VA0913

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106129-250

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: Tyler Nogen

Weather: sunny

Time: 1028

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

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

Notes: Bkgd 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):	.77 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.40 ft³
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: −1.50" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/17/11 1028	0	0	.26	19.21	231	
1034	9	0	.36	18.88	511	
1040	18	0	.38	18.87	505	
1046	27	0	.38	18.90	492	

Values Prior to Sampling

1046	27	0	.38	18.90	492	

Sample ID: VA0914

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106129-350

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: TN Poff

Weather: sunny

Time: 1110

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
BZ VOCs 0

CALCULATIONS

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

Static Pressure: -1.80" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/17/11 1110	0	0	.46	17.74	1540	
1116	9	0	.46	17.68	1627	
1122	18	0	.44	17.56	1606	
1128	27	0	.44	17.53	1594	

Values Prior to Sampling

1128	27	0	.44	17.53	1594	

Sample ID: VA0915

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106 129 - 450

Field Crew: TN

Site / SWMU No.: 106

Date: 11/17/11

Crew Signature: Tim Nagra

Weather: sunny

Time: 1147

Review Signature and Date: 11/17/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's @

BZ VOC's @

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3") = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	2.37 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -2.00" H_2O

Purge Flow Rate: (TB) 1.2 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/17/11 1147	0	0	.02	20.64	5	
1151	48	0	.12	20.59	35	
1155	96	0	.22	20.05	534	
1159	144	0	.28	19.19	2230	
1203	192	0	.34	18.53	4000	
1207	240	0	.38	18.20	5080	
1211	288	0	.40	18.13	5240	

Values Prior to Sampling

1211	288	0	.40	18.13	5240	

Sample ID: VA0916

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB106130-025

Field Crew: TN

Site / SWMU No.: 106

Date: 10/13/11

Crew Signature: T Nagler

Weather: sunny

Time: 933

Review Signature and Date: 10/18/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's .7ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/13/11 933	0	0	.24	20.24	67	
936	4.5	0	.34	19.98	158	
939	9	0	.34	20.02	181	
942	13.5	0	.34	20.11	201	
945	18	0	.36	20.07	217	

Values Prior to Sampling

945	18	0	.36	20.07	217	

Sample ID: VA0917

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 106130-050

Date: 10/13/11

Time: 1013

Field Crew: TN

Crew Signature: [signature]

Review Signature and Date: [signature] 10/18/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: Bkgd VOC's .9 ppm (open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1013	0	0	.18	20.73	64	
1016	4.5	0	.38	20.35	219	
1019	9	0	.40	20.05	260	not within 10% of last reading
1022	13.5	0	.40	19.92	271	
1025	18	0	.42	19.90	274	
1028	22.5	0	.42	19.92	275	

Values Prior to Sampling

~~1025~~ 1028	~~18~~ 22.5 TN	0	.42	19.92	275	

Sample ID: VA0918

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 130-150

Field Crew: TN

Site / SWMU No.: 106

Date: 10/13/11

Crew Signature:

Weather: sunny

Time: 1052

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 1.2 ppm (Open)
BZ VOC's 0

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306) 2" = .0218, 3" = .04906	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)	208 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	20.8 ft³

Static Pressure: -.94" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
10/13/11 1052	0	0.01	.16	21.50	30	
1055	4.5	0.01	.42	19.68	49	
1058	9	0.01	.44	19.45	52	
1101	13.5	0.02	.46	19.29	51	
1104	18	0.02	.46	19.27	52	
1107	22.5	0.02	.46	19.30	50	

Values Prior to Sampling

1107	22.5	0.02	.46	19.30	50	

Sample ID: VA09 TN 19

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 130-250

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 10/13/11

Crew Signature: TN Dog

Weather: sunny

Time: 1342

Review Signature and Date: 10/19/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's .9 ppm

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: −.20" H_2O

Purge Flow Rate: 1.5 afm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1342	0	0	.02	21.04	57	
1348	9	0	.84	19.23	95	
1354	18	0	1.04	18.89	63	
1400	27	0	1.12	18.91	54	

Values Prior to Sampling

1400	27	0	1.12	18.91	54	

Sample ID: VA0920

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106130-350

Field Crew: AT, TV

Site / SWMU No.: 106

Date: 10/13/11

Crew Signature:

Weather: Sunny

Time: 1421

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

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

Notes: VOCs @ in BH
VOCs @ in BZ

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306, 2") = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft² 1.635
(C) One Well Casing Volume (A x B):	1.071 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: -0.28" H_2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/13/11 1426	0	0	.06	20.19	90	
1432	9	0	1.16	16.66	1295	
1438	18	0	1.24	16.55	1492	
1444	27	0	1.28	16.55	1602	

Values Prior to Sampling

1444	27	0	1.28	16.55	1602	

Sample ID: VA0921 VA0922

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB-106130-450 TN

Field Crew: AT TN

Site / SWMU No.: 106

Date: 10/13/11

Crew Signature:

Weather: Sunny

Time: 1517

Review Signature and Date: 10/13/11

WELL OBSERVATIONS

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

Notes: VOCs @ 0 in BH
VOCs @ 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	(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)	23.70 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: – .30 " H2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

4m Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
10/13/11 1517	0	0	0.08	20.96	27	
1523	48	0	0.94	16.63	9700	
1529	96	0	0.92	16.72	10210	
1535	144	0	0.94	16.55	10530	
1541	192	0	0.92	16.59	10480	
1547	240	0	0.94	16.53	10570	
					840 X 9 =	
					7560	By dilution

Values Prior to Sampling

1547	240	0	0.94	16.53	7560	

Sample ID: VA0923

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No/Interval: KAFB 106131-25

Field Crew: RB

Site / SWMU No.: 106

Date: 10/26/11

Crew Signature:

Weather: Pt ly Cldy Windy

Time: 1424

Review Signature and Date: 10/27/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked (Yes) - No

Well ID Mark (Yes) - No

Notes: Bkgd 0

BZ 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: +.40" H_2O

Purge Flow Rate: 1.5 L/m

PURGE DATA

10/26/11 Date/Time 3 min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1424	0	0.0	.18	19.79	6	
1427	4.5	0.0	.18	19.93	6	
1430	9.0	0.0	.20	20.16	5	
1433	13.5	0.0	.18	19.64	6	
1436	18.0	0.0	.18	19.66	7	

Values Prior to Sampling

1436	18.0	0.0	.18	19.66	7	

Sample ID: VA0924

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Site / SWMU No.: 106
Weather: Windy PHy Cldy.
Well ID No/Interval: KAFB 106131
Date: 10/26/11
Time: 1451
Field Crew: RB
Crew Signature:
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd 0.0
BZ 0.0

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	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	45 ft	(K) One Purge Volume (C + J)	1.79 ft³
(E) Depth to Bottom of Screen	55 ft	(L) 10 Purge Volumes (K*10)	17.9 ft³

Static Pressure: +.60" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

10/26 Date/Time 3min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1451	0	0.0	0.0	20.82	1	
1454	4.5	0.0	.16	19.76	6	
1457	9.0	0.0	.16	19.74	3	
1500	13.5	0.0	.16	19.75	5	
1503	18.0	0.0	.16	19.78	4	

Values Prior to Sampling

1503	18.0	0.0	.16	19.78	4	

Sample ID: VA0925

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 - 150
Field Crew: RB
Site / SWMU No.: 106
Date: 10-26-11
Crew Signature:
Weather: Pt ly Cldy
Time: 1517
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: BKgd 0.0
BZ 0.0

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):	.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: + 3.2" H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time 10/26/11 3min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1517	0	0.0	.38	19.20	8	
1520	4.5	0.0	.40	19.06	5	
1523	9.0	0.0	.40	19.07	4	
1526	13.5	0.0	.38	19.22	5 ~~+7 RSB~~	
1529	18.0	0.0	.38	19.23	4	
1532	22.5	0.0	.38	19.25	4	

Values Prior to Sampling

1532	22.5	0.0	.38	19.25	4	

Sample ID: VA0926

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: KAFB 106131-245
Field Crew: RB
Site / SWMU No.: 106
Date: 10/27/11
Crew Signature:
Weather: Overcast - 50s
Time: 1025
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ - 0.0

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	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.74 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	235 ft	(K) One Purge Volume (C + J)	2.37 ft³
(E) Depth to Bottom of Screen	245 ft	(L) 10 Purge Volumes (K*10)	23.7 ft³

Static Pressure: + 2.8 - 10/26
- .30" H_2O - 10/27

Purge Flow Rate: 1.5 cfm

PURGE DATA

10/27/11 Date/Time 6min	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1025	0	0.0	.04	20.65	8	
1031	9	0.0	.30	20.58	28	
1037	18	0.0	.34	19.83	24	
1043	27	0.0	.40	20.41	17	

Values Prior to Sampling

1043	27	0.0	0.40	20.41	17	

Sample ID: VA0927

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: RB
Site / SWMU No.: 106
Date: 10/27/11
Crew Signature:
Weather: Overcast
Time: 1109
Review Signature and Date: 10/27/11

WELL OBSERVATIONS

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

Notes: Bkgd - 0.0
BZ - ~~67.3 ppb~~ 0.0

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: +3.2 - 10/26
-.08 "H2O 10/27
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (6 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1109	0	0.0	.08	20.09	189	
1115	9	0.0	.12	19.82	409	
1121	18	0.0	.14	19.70	495	
1127	27	0.0	.16	19.66	526	

Values Prior to Sampling

1127	27	0.0	.16	19.66	526	

Sample ID: VA0928

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: RB

Site / SWMU No.: 106

Date: 10/27/11

Crew Signature:

Weather: Overcast

Time: 1148

Review Signature and Date: 10/27/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) No

Well ID Mark (Yes) - No

Notes: Bkgd 0.0 BZ 0.0

~~78.8~~ RSB

CALCULATIONS

(A) Depth to Well Bottom	440 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):	21.58 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	430 ft	(K) One Purge Volume (C + J)	23.21 ft³
(E) Depth to Bottom of Screen	440 ft	(L) 10 Purge Volumes (K*10)	232 ft³

Static Pressure: + 4.2 - 10/26

- .10 - 10/27

Purge Flow Rate: 12 cfm

PURGE DATA

Date/Time 10/27/11 4min	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1148	0	0.0	.38	18.32	~~2150~~	
1152	48	0.0	.36	19.75	3390	
1156	96	0.0	.36	19.54	3390	
1200	~~144~~	0.0	.38	18.55	3370	
1204	192	0.0	.36	18.68	3360	
1208	240	0.0	.38	19.99	3330	

Values Prior to Sampling

1208	240	0.0	.38	19.99	3330	

Sample ID: VA0929

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-025
Field Crew: AT, TN
Site / SWMU No.: 106
Date: 12/19/11
Crew Signature: [signature]
Weather: Snowy
Time: 849
Review Signature and Date: [signature] 12/19/11

WELL OBSERVATIONS

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

CALCULATIONS

A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	0.0765 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.711 ft³
E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: +.16 "H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/19/0849	0	Ø	1.0	19.61	3	
0852	4.5	Ø	.94	19.44	Ø	
0855	9	Ø	.96	19.65	1	
0858	13.5	Ø	.98	20.05	Ø	
0901 [redacted]	18	Ø	.80	19.49	1	

Values Prior to Sampling

0901	18	Ø	.80	19.49	1	

Sample ID: VA0930

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-050
Field Crew: AT, TN
Site / SWMU No.: 106
Date: 12/19/11
Crew Signature:
Weather: Snowy
Time: 922
Review Signature and Date: 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOCs 67.8ppm "open"
132 VOCs 0

CALCULATIONS

A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	~~50~~ 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):	0.153 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
D) Depth to Top of Screen	40 ft	(K) One Purge Volume (C + J)	1.788 ft³
E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: +.25 " 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
12/19/11 0922	0	0	.76	19.43	0	
0925	4.5	0	.80	19.62	1	
0928	9	0	.82	19.78	1	
0931	13.5	0	.84	19.80	0	
0933	18	0	.84	19.85	0	

Values Prior to Sampling

0933	18	0	.84	19.85	0	

Sample ID: VA0931

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132-175
Field Crew: TN, AT
Site / SWMU No.: 106
Date: 12/19/11
Crew Signature: [signature]
Weather: Snow
Time: 0952
Review Signature and Date: [signature] 12/12/11

WELL OBSERVATIONS

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

Notes: BH VOC's 24.3 ppm (open)
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	175 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):	0.5555 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)	2.17 ft³
E) Depth to Bottom of Screen	175 ft	(L) 10 Purge Volumes (K*10)	22 ft³

Static Pressure: +4.95" H_2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/19/11 0952	Ø	Ø	.14	20.42	4	
0955	4.5	Ø	.16	20.36	5	
0958	9	Ø	.18	20.34	4	
1001	13.5	Ø	.18	20.34	3	
1004	18	Ø	.20	20.34	5	
1007	22.5	Ø	.20	20.21	4	

Values Prior to Sampling

1007	22.5	Ø	.20	20.21	4	

Sample ID: VA0932

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Site / SWMU No.: 106
Weather: Smoky
Well ID No/Interval: 106132-250
Date: 12/19/11
Time: 1024
Field Crew: AT, TN
Crew Signature:
Review Signature and Date: 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOCs 23.1 "open"
BZ VOCs 0

CALCULATIONS

A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	0.76 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)	2.4 ft³
E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft³

Static Pressure: +5.17 "H_2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/19/11 1024	0	0	.06	20.01	0	
1027	4.5	0	.06	20.11	0	
1030	9	0	.08	20.12	1	
1033	13.5	0	.08	20.12	0	
1036	AT 18	0	.08	20.10	0	
1039	22.5	0	.08	20.11	1	
1042	27	0	.08	20.11	0	

Values Prior to Sampling

1042	27	0	.08	20.11	0	

Sample ID: UA0933

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No/Interval: 106132 -350
Field Crew: AT, TN
Site / SWMU No.: 106
Date: 12/19/11
Crew Signature:
Weather: Snowy
Time: 1103
Review Signature and Date: 12/19/11

WELL OBSERVATIONS

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

Notes: Bit rocks 44.4 "open"
BZ rocks 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 ft³

Static Pressure: +5.27 " 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
12/19/11 1103	Ø	Ø	.48	19.44	21	
1109	9	Ø	.62	19.61	24	
1115	18	Ø	.64	19.65	24	
1121	27	Ø	.64	19.67	23	

Values Prior to Sampling

1121	27	Ø	.64	19.67	23	

Sample ID: VA0934

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106132 – 450
Field Crew: AT, TN
Site / SWMU No.: 106
Date: 12/19/11
Crew Signature:
Weather: Snowy
Time: 1140
Review Signature and Date: 12/19/11

WELL OBSERVATIONS

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

Notes: BH VOCs 557 ppms "open"
BZ VOCs 0

CALCULATIONS

A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	32.07 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 ft³

Static Pressure: +5.24 " H_2O
Purge Flow Rate: 12 CFM

PURGE DATA

4 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/19/11 1140	0	0	.62	19.00	1174	
1144	48	0	.64	19.19	1180	
1148	96	0	.64	19.19	1208	
1152	144	0	.66	19.17	1201	
1156	192	0	.66	19.18	1199	
1200	240	0	.66	19.20	1200	

Values Prior to Sampling

1200	240	0	.66	19.20	1200	

Sample ID: VA0935

Shaw Environmental Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106133-025

Field Crew: TN

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature: Tim Nagle

Weather: cloudy

Time: 900

Review Signature and Date: 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's
BTEX VOC's

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¾" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/21/11 900	0	0	.96	20.05	0	
903	4.5	0	.94	20.17	1	
906	9	0	.94	20.34	0	
909	13.5	0	.94	20.38	2	
912	18	0	.96	20.47	3	

Values Prior to Sampling

912	18	0	.96	20.47	3	

Sample ID: VA0936
VA0937

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: cloudy

Well ID No/Interval: 106133-050

Date: 11/21/11

Time: 943

Field Crew: TN, AT

Crew Signature: [signature]

Review Signature and Date: [signature] 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: Bkgd 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	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

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/21/11 943	0	0	.60	19.86	2	
946	4.5	0	.64	19.80	2	
949	9	0	.68	19.77	3	
952	13.5	0	.70	19.80	2	
955	18	0	.70	19.80	2	

Values Prior to Sampling

955	18	0	.70	19.80	2	

Sample ID: VA 0938

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: TN, AT

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 1012

Review Signature and Date: 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's @
BZ VOC's @

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: 0" H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/21/11 1012	0	0	.24	19.37	3	
1015	4.5	0	.26	19.30	4	
1018	9	0	.26	19.27	3	
1021	13.5	0	.28	19.26	3	
1024	18	0	.28	19.26	3	
1027	22.5	0	.30	19.26	3	

Values Prior to Sampling

1027	22.5	0	.30	19.26	3	

Sample ID: VA0939

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: AT, TN

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature: [signature]

Weather: Cloudy

Time: 1046

Review Signature and Date: [signature] 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes No

Well ID Mark: Yes - No

Notes: BG VOCs Ø
BZ VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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):	.76 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)	2.40 ft^3
(E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	24 ft^3

Static Pressure: +.02 "H_2O

Purge Flow Rate: 1.5 cFm

PURGE DATA

Date/Time (6 min)	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
	~~0~~ at					
11/21/11 1046	0	Ø	.62	18.63	5	
1052	9	Ø	.66	18.58	4	
1100	18	Ø	.68	18.40	5	
1106	27	Ø	0.28	18.48	2	

Values Prior to Sampling

1106	27	Ø	0.28	18.48	2	

Sample ID: VA0940

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106133-350

Field Crew: TN

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature: [signature]

Weather: cloudy

Time: 1123

Review Signature and Date: [signature] 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: Bkgd 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	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft^3

Static Pressure: NR

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/21/11 1123	0	0	.24	18.29	431	
1129	9	0	.38	18.20	444	
1135	18	0	.26	18.20	442	
1141	27	0	.28	18.17	441	

Values Prior to Sampling

1141	27	0	.28	18.17	441	

Sample ID: VA0941

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106133 – 450

Field Crew: AF, TN

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature:

Weather: Sunny

Time: 1207

Review Signature and Date: 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: B6 160 open ppm
B2 0 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):	22.0 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	257.0 ft³

Static Pressure: +.06 " Hg

Purge Flow Rate: 12 CFM

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/21/11 1207	0	0	.72	17.17	1546	
1211	48	0	.74	17.05	1585	
1215	96	0	.74	17.01	1598	
1219	144	0	.74	16.01	1699	
1223	192	0	.74	17.01	1602	
1227	240	0	.74	17.01	1614	

Values Prior to Sampling

1227	240	0	.74	17.01	1614	VM

Sample ID: AV0942

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106134-025 | Field Crew: TN, AT

Site / SWMU No.: 106 | Date: 11/21/11 | Crew Signature: [signature]

Weather: cloudy | Time: 1427 | Review Signature and Date: [signature] 11/21/11

WELL OBSERVATIONS

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

Notes: BZ VOCs Ø
BG VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft² 1.635
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.705 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: 0 "H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/21/11 1427	0	Ø	.08	20.71	Ø	
1430	4.5	0	.08	20.79	Ø	
1433	9	Ø	0.10	20.84	Ø	
1436	13.5	Ø	0.10	20.84	Ø	
1439	18	0	.10	20.86	0	

Values Prior to Sampling

1439	18	0	.10	20.86	0	

Sample ID: VA0943

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106134-050

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature:

Weather: raining

Time: 1500

Review Signature and Date: 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/21/11 1500	0	0	.04	20.58	0	
1503	4.5	0	.06	20.59	0	
1506	9	0	.06	20.58	0	
1509	13.5	0	.06	20.59	0	
1512	18	0	.06	20.62	0	

Values Prior to Sampling

1512	18	0	.06	20.62	0	

Sample ID: VA0944

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106134-170

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 11/21/11

Crew Signature: Tim Nogar

Weather: rainy

Time: 1531

Review Signature and Date: 11/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd VOC's 0
13 Z 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: +.40 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/21/11 1531	0	0	.14	19.90	0	
1534	4.5	0	.16	19.86	0	
1537	9	0	.18	19.84	0	
1541	13.5	0	.18	19.84	0	
1544	18	0	.18	19.84	0	
1547	22.5	0	.18	19.84	0	

Values Prior to Sampling

1547	22.5	0	.18	19.84	0	

Sample ID: VA0945

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106 134-250

Field Crew: TN, AT

Site / SWMU No.: 106

Date: 11/22/11

Crew Signature: Tim Nagel

Weather: sunny

Time: 900

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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 afm

PURGE DATA

Gmin Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/22/11 900	0	0	.08	19.65	14	
906	9	0	.24	19.45	12	
912	18	0	.28	19.92	13	
918	27	0	.30	20.14	14	

Values Prior to Sampling

918	27	0	.30	20.14	14	

Sample ID: VA0946

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106134-330

Field Crew: AT, TW

Site / SWMU No.: 106

Date: 11/22/11

Crew Signature: 11/22/11

Weather: Sunny

Time: 0940

Review Signature and Date: 11/22/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BZ - VOCs Ø

BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	350 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.7 ft³
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27 ft³

Static Pressure: -2.20 "H2O

Purge Flow Rate: 1.5 CFM

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/22/11 0940	Ø	Ø	2.09 Ø at	21.04	3	
0946	9	Ø	0.34	19.73	63	
0952	18	Ø	0.40	19.70	67	
0958	27	Ø	0.40	19.72	67	

Values Prior to Sampling

0958	27	Ø	0.40	19.72	67	

Sample ID: VA 0947

VA 0948

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: 106134-450

Date: 11/22/11

Time: 1036

Field Crew: TN, AT

Crew Signature: Tim Nager

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd VOC's Ø
BZ VOC's Ø

CALCULATIONS

(A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, (3" = .04906)	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: -2.0" H_2O

Purge Flow Rate: (TN) ~~1.5~~ 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/22/11 1036	0	0	.16	19.35	201	
1040	48	0	.26	19.29	329	
1044	96	0	.28	19.38	331	
1048	144	0	.28	19.40	329	
1052	192	0	.28	19.40	334	
1056	240	0	.30	19.40	339	

Values Prior to Sampling

1056	240	0	.30	19.40	339	

Sample ID: VA0949

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106135-025

Field Crew: TN

Site / SWMU No.: 106

Date: 12/19/11

Crew Signature: Tim Noger

Weather: snowy

Time: 1246

Review Signature and Date: 12/21/11

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"H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1246	0	0	.12	20.50	1	
1249	4.5	0	.14	20.46	1	
1252	9	0	.16	20.45	1	
1255	13.5	0	.16	20.42	1	
1258	18	0	.18	20.40	1	

Values Prior to Sampling

1258	18	0	.18	20.40	1	

Sample ID: VA0950

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106135-050

Field Crew: TN

Site / SWMU No.: 106

Date: 12/19/11

Crew Signature: Tim Nogan

Weather: snowy

Time: 1315

Review Signature and Date: [illegible] 12/21/11

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:

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/19/11 1315	0	0	.10	20.57	0	
1318	4.5	0	.10	20.75	0	
1321	9	0	.10	20.77	0	
1324	13.5	0	.12	20.84	0	
1327	18	0	.12	20.86	0	

Values Prior to Sampling

1327	18	0	.12	20.86	0	

Sample ID: VA0951

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: TN

Site / SWMU No.: 106

Date: 12/19/11

Crew Signature: T Noger

Weather: snowy

Time: 1346

Review Signature and Date: 12/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 3.6ppm (open)
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = 0218, 3" = 04906	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)	20.90 ft³

Static Pressure: TN +.0 +283 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1346	0	0	.06	20.88	0	
1349	4.5	0	.04	20.88	0	
1352	9	0	.06	20.84	0	
1355	13.5	0	.06	20.81	0	
1358	18	0	.06	20.80	0	
1401	22.5	0	.08	20.78	0	

Values Prior to Sampling

1401	22.5	0	.08	20.78	0	

Sample ID: VA0952

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: snowy

Well ID No/Interval: 106135-250

Date: 12/19/11

Time: 1418

Field Crew: TN

Crew Signature: [signature]

Review Signature and Date: [signature] 12/21/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BHVOC's 5.1 ppm (open)
BZVOC'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: +4.72" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (Gmin)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/19/11 1418	0	0	0	20.27	3	
1424	9	0	.02	20.28	2	
1430	18	0	0	20.29	3	
1436	27	0	0	20.29	2	
lues Prior to Sampling						
1436	27	0	0	20.29	2	

Sample ID: VA0953

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106135-350

Field Crew: TN

Site / SWMU No.: 106

Date: 12/19/11

Crew Signature: Tim Nopa

Weather: sunny

Time: 1455

Review Signature and Date: 12/21/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 33.1 ppm (open)
BZ VOC's 0

CALCULATIONS

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

Static Pressure: + 4.84" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1455	0	0	.08	20.44	56	
1501	9	0	.08	20.69	58	
1507	18	0	.08	20.80	57	
1513	27	0	.08	20.83	58	

Values Prior to Sampling

1513	27	0	.08	20.83	58	

Sample ID: VA0954

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: snowy

Well ID No/Interval: 106135-450

Date: 12/19/11

Time: 1530

Field Crew: TN

Crew Signature: [signature] Nagen

Review Signature and Date: [signature] 12/21/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOC's 200 ppm (open)
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	450 ft	(F) Filter Pack Length (E – D)	10 ft
B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	22.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: +4.76" H2O

Purge Flow Rate: ~~1.5~~ 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/19/11 1531	0	0	.14	20.18	244	
1535	48	0	.14	20.13	247	
1539	96	0	.14	20.11	253	
1543	144	0	.16	20.10	257	
1547	192	0	.16	20.14	250	
1551	240	0	.16	20.15	250	

Values Prior to Sampling

1551	240	0	.16	20.15	250	

Sample ID: VA0955

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: 12/21/11

Crew Signature: Tim Nagel

Weather: cloudy

Time: 1253

Review Signature and Date: 12/22/11

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

Static Pressure: +.18" 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
1253	0	0	.08	20.65	1	
1256	4.5	0	.08	20.67	1	
1259	9	0	.08	20.52	2	
1302	13.5	0	.12	20.45	1	
1305	18	0	.10	20.46	2	

Values Prior to Sampling

1305	18	0	.10	20.46	2	

Sample ID: VA0956

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: 12/21/11

Crew Signature: TN Nagra

Weather: cloudy

Time: 1328

Review Signature and Date: [illegible] 12/22/11

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: +.23" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1328	0	0	.06	20.49	0	
1331	4.5	0	.14	20.69	2	
1334	9	0	.14	20.72	3	
1337	13.5	0	.18	20.71	2	
1340	18	0	.16	20.72	3	

Values Prior to Sampling

1340	18	0	.16	20.72	3	

Sample ID: VA0957

VA 0958

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: 12/21/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 1410

Review Signature and Date: 12/28/11

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	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)	2.19 ft³
E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21.9 ft³

Static Pressure: + 1.93" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
12/21/11 1410	0	0	.06	20.69	0	
1413	4.5	0	.06	20.71	1	
1416	9	0	.08	20.73	1	
1419	13.5	0	.08	20.73	0	
1422	18	0	.08	20.74	2	
1425	22.5	0	.08	20.72	2	

Values Prior to Sampling

1425	22.5	0	.08	20.72	2	

Sample ID: VA0959

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: 12/21/11

Crew Signature: TN Nogu

Weather: cloudy

Time: 1440

Review Signature and Date: [illegible] 12/22/11

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, (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):	.96 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +3.09" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time (6 min)	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
12/21/11 1440	0	0	.08	20.45	2	
1446	9	0	.08	20.40	3	
1452	18	0	.10	20.32	2	
1458	27	0	.10	20.43	2	

Values Prior to Sampling

1458	27	0	.10	20.43	2	

Sample ID: VA0960

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: 12/21/11

Crew Signature: TCNagy

Weather: cloudy

Time: 1511

Review Signature and Date: 12/28/11

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, (¼" = .00306), 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	1.07 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	270 ft³
E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	270 ft³

Static Pressure: + 3.15" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 1511	0	0	.14	20.63	1	
1517	9	0	.14	20.69	2	
1523	18	0	.16	20.73	2	
1529	27	0	.16	20.74	2	

Values Prior to Sampling

1529	27	0	.16	20.74	2	

Sample ID: VA0961

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106 136 - 450

Field Crew: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: Tim Nagel

Weather: cloudy

Time: 1544

Review Signature and Date: 12/28/11

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 ft³

Static Pressure: +3.05 "H20

Purge Flow Rate: 12 cfm

PURGE DATA

4 min

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 1544	0	0	.18	20.72	2	
1548	48	0	.18	20.71	2	
1552	96	0	.18	20.73	3	
1556	144	0	.18	20.78	3	
1600	192	0	.18	20.77	3	
1604	240	0	.18	20.76	3	

Values Prior to Sampling

1604	240	0	.18	20.76	3	

Sample ID: VA0962

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-025

Field Crew: TN

Site / SWMU No.: 106

Date: 12/22/11

Crew Signature: TN Nogle

Weather: snowy

Time: 846

Review Signature and Date: [signature] 12/28/11

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: 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)	1.63 ft³
D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.70 ft³
E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17.0 ft³

Static Pressure: ~.08" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/22/11 846	0	0	.02	21.21	2	
849	4.5	0	.08	21.36	0	
852	9	0	.10	21.59	0	
855	13.5	0	.12	21.76	0	
858	18	0	.12	22.09	0	

Values Prior to Sampling

858	18	0	.12	22.09	0	

Sample ID: VA0963

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106137-050
Field Crew: TN
Site / SWMU No.: 106
Date: 12/22/11
Crew Signature: Tim Nogen
Weather: cloudy
Time: 923
Review Signature and Date: 12/22/11

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: -.25" H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

3min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/22/11 923	0	0	.08	20.67	0	
926	4.5	0	.12	20.84	0	
929	9	0	.12	20.86	0	
932	13.5	0	.12	20.90	0	
935	18	0	.14	20.92	0	

Values Prior to Sampling

935	18	0	.14	20.92	0	

Sample ID: VA0964

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106137-150

Field Crew: TN

Site / SWMU No.: 106

Date: 12/22/11

Crew Signature: TN Noger

Weather: snowy

Time: 1000

Review Signature and Date: 12/22/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes BH VOC's 4.8 ppm (open)
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +.03" 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
12/22/11 1000	0	0	.12	19.92	6	
1003	4.5	0	.12	20.15	6	
1006	9	0	.14	20.20	5	
1009	13.5	0	.14	20.21	5	
1012	18	0	.14	20.22	5	
1015	22.5	0	.16	20.21	5	

alues Prior to Sampling

1015	22.5	0	.16	20.21	5	

Sample ID: VA0965

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 196

Weather: cloudy

Well ID No/Interval: 106137-250

Date: 12/22/11

Time: 1038

Field Crew: TN

Crew Signature: Tim Nop

Review Signature and Date: 12/22/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOC's 2.7ppm open
BZ VOC's 0

CALCULATIONS

A) Depth to Well Bottom	250 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ½" = .00136, 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: +.18 "H2O
~~+2.7" H2O~~ TN

Purge Flow Rate: 1.5 cfm

PURGE DATA

Gmin Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/22/11 1038	0	0	.22	19.76	1	
1044	9	0	.22	19.82	0	
1050	18	0	.22	19.79	0	
1056	27	0	.24	19.82	1	

alues Prior to Sampling

1056	27	0	.24	19.82	1	

Sample ID: VA0966

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106137-350
Field Crew: TN
Site / SWMU No.: 106
Date: 12/22/11
Crew Signature: T. Nagler
Weather: snowy
Time: 1115
Review Signature and Date: 12/22/11

WELL OBSERVATIONS

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

Notes: BH VOC's 20.1 ppm open
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +.45" H2O
Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
1115	0	0	.16	19.99	149	
1121	9	0	.18	20.13	165	
1127	18	0	.18	20.08	168	
1133	27	0	.18	20.10	168	
Values Prior to Sampling						
1133	27	0	.18	20.10	168	

Sample ID: VA0967

VAPOR PURGE LOG
Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No/Interval: 106137-450
Field Crew: TN
Site / SWMU No.: 106
Date: 12/22/11
Crew Signature: Tim Nagle
Weather: sunny
Time: 1150
Review Signature and Date: [illegible] 1/6/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged
Locked: (Yes) - No
Well ID Mark: (Yes) - No
Notes: BH VOC's 1062 ppm open
BZ VOC's 0

CALCULATIONS

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

Static Pressure: +.42" 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
12/22/11 1150	0	0	.56	19.41	956	
1154	48	0	.58	19.41	967	
1158	96	0	.58	19.40	978	
1202	144	0	.58	19.40	978	
1206	192	0	.58	19.38	979	
1208	240	0	.58	19.39	974	

Values Prior to Sampling

1208	240	0	.58	19.39	974	

Sample ID: VA0968

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: AT, TN

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature:

Weather: Sunny

Time: 1421

Review Signature and Date: 12/7/11

WELL OBSERVATIONS

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

Notes: BZ VOCs Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	25 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (¼" = .00306), 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.07 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	15 ft	(K) One Purge Volume (C + J)	1.7 ft³
(E) Depth to Bottom of Screen	25 ft	(L) 10 Purge Volumes (K*10)	17 ft³

Static Pressure: +.35" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

8mm Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/7/11 1421	Ø	Ø	1.12	19.30	Ø	
1424	4.5	Ø	1.20	19.33	Ø	
1427	9	Ø	1.04	19.21	Ø	
1430	13.5	Ø	1.06	19.23	Ø	
1433	18	Ø	1.08	19.24	1	

Values Prior to Sampling

1433	18	Ø	1.08	19.24	1	

Sample ID: VA-0969

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: AJ TN

Site / SWMU No.: 106

Date: 12/7/11

Crew Signature:

Weather: Sunny

Time: 1450

Review Signature and Date: 12/7/11

WELL OBSERVATIONS

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

Notes: BZ VOCs Ø

BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	50 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, (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)	1.78 ft³
(E) Depth to Bottom of Screen	50 ft	(L) 10 Purge Volumes (K*10)	18 ft³

Static Pressure: +.22 "H_2O

Purge Flow Rate: 1.5 CFm

PURGE DATA

2nm Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/7/11 1450	Ø	Ø	1.56	19.46	Ø	
1453	4.5	Ø	1.70	19.62	Ø	
1456	9	Ø	1.68	19.63	Ø	
1459	13.5	Ø	1.72	19.61	Ø	
1502	18	Ø	1.74	19.60	1	

Values Prior to Sampling

1502	18	Ø	1.74	19.60	1	

Sample ID: VA0970

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: 106138-150

Date: 12/7/11

Time: 1522

Field Crew: AT, TW

Crew Signature:

Review Signature and Date: 12/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) · Damaged

Locked: (Yes) · No

Well ID Mark: (Yes) · No

Notes: BZ VOCs Ø
BH VOCs Ø

CALCULATIONS

(A) Depth to Well Bottom	150 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136 (¾" = .00306) 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	0.46 ft³	(J) Filter Pack Volume (F x G)	1.635 ft³
(D) Depth to Top of Screen	140 ft	(K) One Purge Volume (C + J)	2.09 ft³
(E) Depth to Bottom of Screen	150 ft	(L) 10 Purge Volumes (K*10)	21 ft³

Static Pressure: –.66 "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
12/7/11 1522	Ø	Ø	Ø	20.88	Ø	
1525	4.5	Ø	.02	20.07	1	
1528	9	Ø	.02	20.07	Ø	
1531	13.5	Ø	.04	20.05	Ø	
1534	18	Ø	.04	20.03	1	
1537	22.5	Ø	.04	20.03	1	

Values Prior to Sampling

1537	22.5	Ø	.04	20.03	1	

Sample ID: MA097

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: KAFB 106 138-250

Field Crew: TN

Site / SWMU No.: 106

Date: 12/12/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1330

Review Signature and Date: 12/13/11

WELL OBSERVATIONS

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

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

CALCULATIONS

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

Static Pressure: +1.2" 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
12/12/11 1330	0	0	.02	21.07	0	
1336	9	0	.06	21.19	0	
1342	18	0	.06	21.31	0	
1348	27	0	.10	21.38	0	

Values Prior to Sampling

1348	27	0	.10	21.38	0	

Sample ID: VA 0972
VA 0973

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: 12/12/11

Crew Signature: Tim Nagy

Weather: rain

Time: 1425

Review Signature and Date: 12/13/11

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	ft^2	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft^2
(C) One Well Casing Volume (A x B):	1.07 ft^3	(J) Filter Pack Volume (F x G)	1.63 TV ft^3
(D) Depth to Top of Screen	340 ft	(K) One Purge Volume (C + J)	2.70 ft^3
(E) Depth to Bottom of Screen	350 ft	(L) 10 Purge Volumes (K*10)	27.0 ft^3

Static Pressure: +1.2" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1425	0	0	0	20.93	0	
1431	9	0	0	21.26	0	
1437	18	0	0	21.29	0	
1443	27	0	.02	21.25	0	

Values Prior to Sampling

1443	27	0	.02	21.25	0	

Sample ID: VA0974

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106138-450

Field Crew: TN

Site / SWMU No.: 106

Date: 12/12/11

Crew Signature: [signature]

Weather: rain

Time: 1512

Review Signature and Date: [signature] 12-13-11

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

PURGE DATA

4 min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1512	0	0	.04	20.85	1	
1516	48	0	.04	21.03	1	
1520	96	0	.04	21.08	1	
1524	144	0	.04	21.11	1	
1528	192	0	.04	21.11	2	
1532	240	0	.06	21.10	3	

Values Prior to Sampling

1532	240	0	.06	21.10	3	

Sample ID: VA0975

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

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tina Nagel

Weather: sunny

Time: 1327

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

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

Static Pressure: 0 " H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

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
11/29/11 1327	0	0	.40	20.23	2	
1330	4.5	0	.40	20.60	3	
1333	9	0	.42	20.47	0	
1336	13.5	0	.42	20.42	1	
1339	18	0	.42	20.48	1	

Values Prior to Sampling

1339	18	0	.42	20.48	1	

Sample ID: VA0976

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

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: T. Nagel

Weather: sunny

Time: 1355

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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: +.03" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/29/11 1355	0	0	.58	19.09	3	
1358	4.5	0	.60	18.56	4	
1401	9	0	.62	18.39	3	
1404	13.5	0	.62	19.29	5	
1407	18	0	.62	19.27	5	

Values Prior to Sampling

1407	18	0	.62	19.27	5	

Sample ID: VA0977

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

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1423

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

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

Notes: Bkgd VOC's 0

13.2 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: -.50" 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
11/29/11 1423	0	0	.26	19.53	4	
1426	4.5	0	.28	19.22	5	
1429	9	0	.30	19.31	6	
1432	13.5	0	.30	19.39	6	
1435	18	0	.28	19.70	5	
1438	22.5	0	.30	19.28	5	

Values Prior to Sampling

1438	22.5	0	.30	19.28	5	

Sample ID: VA09178

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

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nogan

Weather: sunny

Time: 1457

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -.54

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/29/11 1457	0	0	.42	19.77	1	
1503	9	0	.50	19.56	3	
1509	18	0	.48	19.61	2	
1515	27	0	.50	20.06	3	

Values Prior to Sampling

1515	27	0	.50	20.06	3	

Sample ID: VA0979

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: 11/29/11

Crew Signature: Tim Nash

Weather: sunny

Time: 1530

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

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

Notes: BKgd VOC's 0
BZ VOC's 0

CALCULATIONS

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

Static Pressure: -.08 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/29/11 1530	0	0	.48	19.92	0	
1536	9	0	.52	19.85	0	
1542	18	0	.54	19.86	0	
1548	27	0	.56	19.88	0	

Values Prior to Sampling

1548	27	0	.56	19.88	0	

Sample ID: VA09180 (FD)

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

Site / SWMU No.: 106 | Date: 11/29/11 | Crew Signature: Tn Nga

Weather: sunny | Time: 1600 | Review Signature and Date: [illegible] 11/30/11

WELL OBSERVATIONS

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

Notes: Bkgd 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)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -.45" H_2O

Purge Flow Rate: 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
11/29/11 1602	0	0	.26	20.70	0	
1606	48	0	.68	19.46	0	
1610	96	0	.72	19.51	0	
1614	144	0	.74	19.54	0	
1618	192	0	.76	19.56	0	
1622	240	0	.78	19.57	0	

Values Prior to Sampling

1622	240	0	.78	19.57	0	

Sample ID: VA0981

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF | Well ID No/Interval: 106140-025 | Field Crew: TN

Site / SWMU No.: 106 | Date: 11/29/11 | Crew Signature: Tim Nogen

Weather: cloudy | Time: 834 | Review Signature and Date: 11/30/11

WELL OBSERVATIONS

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

Notes: Bkgd 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 " H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/29/11 834	0	0	.02	21.26	3	
837	4.5	0	.06	21.51	2	
840	9	0	.08	21.69	2	
843	13.5	0	.10	21.73	2	
846	18	0	.10	21.72	2	

Values Prior to Sampling

846	18	0	.10	21.72	2	

Sample ID: VA0982

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106140-050

Field Crew: TN

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 906

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

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

Notes: Bkgd 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: -.03" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
11/29/11 906	0	0	.04	20.84	1	
909	4.5	0	.06	20.87	1	
912	9	0	.08	20.82	1	
915	13.5	0	.10	20.82	2	
918	18	0	.10	20.85	3	

Values Prior to Sampling

918	18	0	.10	20.85	3	

Sample ID: VA0983

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106140-150

Field Crew: TN

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 935

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: −1.00" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

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
11/29/11 935	0	0	.08	20.25	1	
938	4.5	0	.08	20.47	2	
941	9	0	.10	20.57	1	
944	13.5	0	.10	20.61	1	
947	18	0	.10	20.66	1	
950	22.5	0	.12	20.67	1	

Values Prior to Sampling

950	22.5	0	.12	20.67	1	

Sample ID: VA0984

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106140-250

Field Crew: TN

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1020

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: Bkgd 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: -1.0 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/29/11 1020	0	0	0	20.96	2	
1026	9	0	.04	20.28	5	
1032	18	0	.04	20.27	6	
1038	27	0	.04	20.26	7	

Values Prior to Sampling

1038	27	0	.04	20.26	7	

Sample ID: VA0985

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106140-350

Field Crew: TN

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: TN Nagra

Weather: sunny

Time: 1057

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BKgd 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 ft³

Static Pressure: – 1.0 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/29/11 1057	0	0	.18	19.55	718	
1103	9	0	.18	19.75	747	
1109	18	0	.20	19.78	742	
1115	27	0	.20	19.81	742	

Values Prior to Sampling

1115	27	0	.20	19.81	742	

Sample ID: VA0986

Shaw Shaw Environmental Inc

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106 140-450

Field Crew: TN

Site / SWMU No.: 106

Date: 11/29/11

Crew Signature: Tim Nagy

Weather: sunny

Time: 1136

Review Signature and Date: 11/30/11

WELL OBSERVATIONS

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

Notes: Bkgd 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)	23.7 ft³
(E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237 ft³

Static Pressure: -1.0" H2O

Purge Flow Rate: 12 cfm

PURGE DATA

4min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
11/29/11 1136	0	0	.02	20.82	6	
1140	48	0	.18	20.66	138	
1144	96	0	.28	20.36	323	
1148	144	0	.36	20.10	479	
1152	192	0	.42	19.89	670	
1156	240	0	.52	19.56	984	
1158 ~~1200~~ (TV)	~~288~~ 264	0	.54	19.44	1097	
1200 ~~1202~~ (TV)	~~312~~ 288	0	.56	19.38	1195	
Values Prior to Sampling						
1200	288	0	.56	19.38	1195	

Sample ID: VA0987

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106141-025

Field Crew: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: [signature]

Weather: cloudy

Time: 905

Review Signature and Date: [signature] 12/22/11

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	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: +.02" H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 905	0	0	.06	20.87	1	
908	4.5	0	.08	21.09	0	
911	9	0	.10	21.29	0	
914	13.5	0	.10	21.33	0	
917	18	0	.12	21.42	0	

Values Prior to Sampling

917	18	0	.12	21.42	0	

Sample ID: VA0988

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No/Interval: 106141-050

Field Crew: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: TN Nagra

Weather: cloudy

Time: 933

Review Signature and Date: [illegible] 12/22/11

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 "H2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 933	0	0	0	20.99	2	
936	4.5	0	0	21.08	0	
939	9	0	0	21.03	0	
942	13.5	0	0	21.04	0	
945	18	0	0	21.08	0	

Values Prior to Sampling

945	18	0	0	21.08	0	

Sample ID: VA0989
VA0990

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: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: T. Noga

Weather: cloudy

Time: 1016

Review Signature and Date: [illegible] 12/22/11

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	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: +1.96" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 1016	0	0	.04	20.87	0	
1019	4.5	0	.08	20.99	0	
1022	9	0	.06	21.00	0	
1025	13.5	0	.10	21.00	0	
1028 TV	18	0	.10	21.02	0	
1031	22.5	0	.10	21.03	0	

Values Prior to Sampling

1031	22.5	0	.10	21.03	0	

Sample ID: VA0991

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: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: T Nagy

Weather: cloudy

Time: 1045

Review Signature and Date: [illegible] 12/22/11

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	250 ft	(F) Filter Pack Length (E –D)	10 ft
B) Casing Factor: ⅛" = .00136, ¼" = .00306, 2" = 0218. 3" = 04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
C) One Well Casing Volume (A x B):	.76 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	240 ft	(K) One Purge Volume (C + J)	2.39 ft³
E) Depth to Bottom of Screen	250 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: +2.02" H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 1045	0	0	.06	20.85	1	
1051 TP 1048	9	0	.06	20.97	0	
1057 1051	18	0	.08	21.03	0	
1103	27	0	.09	21.05	0	

Values Prior to Sampling

1103	27	0	.08	21.05	0	

Sample ID: VA0992

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: TN

Site / SWMU No.: 106 | Date: 12/21/11 | Crew Signature: T Nager

Weather: cloudy | Time: 1118 | Review Signature and Date: 12/28/11

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: +2.09" 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
12/21/11 1118	0	0	0	20.83	0	
1124	9	0	0	20.87	0	
1130	18	0	0	20.85	0	
1136	27	0	0	20.84	0	

Values Prior to Sampling

1136	27	0	0*	20.84	0*	

* checked the gauge to make sure I was purging at 1.5 cfm; also made sure there was [redacted] vapors entering the hose and flask from the well into the pvc pipe where vapors are sampled by the Horiba, but the readings were a suprising reading of zero of CO_2 & HC. TNager

Sample ID: VA0993

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: TN

Site / SWMU No.: 106

Date: 12/21/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 1155

Review Signature and Date: [illegible] 12/22/11

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):	2207 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
D) Depth to Top of Screen	440 ft	(K) One Purge Volume (C + J)	23.70 ft³
E) Depth to Bottom of Screen	450 ft	(L) 10 Purge Volumes (K*10)	237.0 ft³

Static Pressure: +2.09" H2O

Purge Flow Rate: TN 1.5 cfm 12 cfm

PURGE DATA

4 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO₂ (%)	O₂ (%)	HC (ppmv)	Comments
12/21/11 1155	0	0	.06	20.63	0	
1159	48	0	.06	20.78	0	
1203	96	0	.06	20.78	0	
1207	144	0	.08	20.78	0	
1211	192	0	.08	20.80	0	
1215	240	0	.08	20.79	0	

Values Prior to Sampling

1215	240	0	.08	20.79	0	

Sample ID: VA0994

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: 12/14/11

Crew Signature: Tim Nogen

Weather: snow

Time: 900

Review Signature and Date: 12/19/2011

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH VOCs 0
BZ

CALCULATIONS

(A) Depth to Well Bottom	30 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft²	(G) Casing/Borehole Factor: .545 sq. ft (10" Casing at 30% porosity)	0.1635 ft²
(C) One Well Casing Volume (A x B):	.09 ft³	(J) Filter Pack Volume (F x G)	1.63 ft³
(D) Depth to Top of Screen	20 ft	(K) One Purge Volume (C + J)	1.72 ft³
(E) Depth to Bottom of Screen	30 ft	(L) 10 Purge Volumes (K*10)	17.2 ft³

Static Pressure: −.13"H_2O

Purge Flow Rate: 1.5cfm

PURGE DATA

3min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/14/11 902	0	0	.02	21.26	1	
905	4.5	0	.10	21.52	0	
908	9	0	.12	22.09	1	
911	13.5	0	.14	22.26	0	
914	18	0	.16	22.33	0	

Values Prior to Sampling

914	18	0	.16	22.33	0	

Sample ID: VA0995

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: 12/14/11

Crew Signature: Tim Nagle

Weather: snow

Time: 937

Review Signature and Date: 12/19/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

Notes: BH 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: −.15 "H20

Purge Flow Rate: 1.5 cfm

PURGE DATA

Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L				Comments
		CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
937	0	0	0	20.80	1	
940	4.5	0	0	21.02	1	
943	9	0	.02	21.04	1	
946	13.5	0	0	21.06	0	
949	18	0	.02	21.07	1	

Values Prior to Sampling

949	18	0	.02	21.07	1	

Sample ID: VA0996

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: snow

Well ID No/Interval: 106142-170

Date: 12/14/11

Time:

Field Crew: TN

Crew Signature: Tom Nagan

Review Signature and Date: [signature] 12/19/11

WELL OBSERVATIONS

Protective Casing / Vault: Intact - Damaged

Locked: Yes - No

Well ID Mark: Yes - No

Notes: BH VOC's 0
BZ

CALCULATIONS

(A) Depth to Well Bottom	170 ft	(F) Filter Pack Length (E –D)	10 ft
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	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: +.70" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

3 min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
12/14/11 1010	0	0	.06	20.62	1	
1013	4.5	0	.08	20.83	1	
1016	9	0	.08	20.86	1	
1019	13.5	0	.08	20.92	0	
1022	18	0	.08	20.92	1	
1025	22.5	0	.08	20.96	1	

Values Prior to Sampling

1025	22.5	0	.08	20.96	1	

Sample ID: VA0997

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 - 250 | Field Crew: FN

Site / SWMU No.: 106 | Date: 12/14/11 | Crew Signature: Tim Nagel

Weather: snow | Time: 1045 | Review Signature and Date: [illegible] 12/19/11

WELL OBSERVATIONS

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

Notes: BH 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	290 ft	(L) 10 Purge Volumes (K*10)	23.9 ft³

Static Pressure: **Purge Flow Rate:** 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft³)	Horiba Mexa – 584 L CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	Comments
1045	0	0	.10	20.98	0	
1051	9	0	.12	20.94	1	
1057	18	0	.10	20.89	0	
1103	27	0	.10	20.89	1	

Values Prior to Sampling

1103	27	0	.10	20.89	1	

Sample ID: VA0998

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 106142-350

Field Crew: TN

Site / SWMU No.: 106

Date: 12/14/11

Crew Signature: Tim Naper

Weather: snow

Time: 1126

Review Signature and Date: 12/19/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged

Locked: (Yes) - No

Well ID Mark: (Yes) - No

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

CALCULATIONS

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

Static Pressure: +.70" H_2O

Purge Flow Rate: 1.5 cfm

PURGE DATA

6min Date/Time	Volume Purged (ft^3)	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
1126	0	0	.04	20.51	0	
1132	9	0	.04	20.81	1	
1138	18	0	.04	20.91	0	
1144	27	0	.04	20.99	0	

Values Prior to Sampling

1144	27	0	.04	20.99	0	

Sample ID: VA0999

VA 1000

Shaw · Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/Interval: 10642-450

Field Crew: TN

Site / SWMU No.: 106

Date: 12/14/11

Crew Signature: Tim Nagy

Weather: cloudy

Time: 1222

Review Signature and Date: [illegible] 12/19/11

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	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 ft³

Static Pressure: +.63" H_2O

Purge Flow Rate: 12 cfm

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
12/14/1222	0	0	.04	20.57	34	
1226	48	0	.06	20.63	40	
1230	96	0	.08	20.64	40	
1234	144	0	.06	20.63	40	
1238	192	0	.04	20.42	44	
1242	240	0	.06	20.43	45	

Values Prior to Sampling

1242	240	0	.06	20.43	45	

Sample ID: VA 1001

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: DR, TN

Site / SWMU No.: 106

Date: 10/4/11

Crew Signature:

Weather: cloudy

Time:

Review Signature and Date: 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: -.25" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1034	.01	5.18	13.91	5270	

X VA9043 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: ST106-Post C1
Field Crew: DR, TN
Site / SWMU No.: 106
Date: 10/4/11
Crew Signature: TN
Weather: cloudy
Time: 1104
Review Signature and Date: DR 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +3.0" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1104	.08	13.66	.08	194	

VA 9044

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 - PostC2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/4/11

Crew Signature: [signature]

Weather: cloudy

Time: 1120

Review Signature and Date: [signature] 10-4-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +.88" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 1120	0	10.44	4.87	39	

VA 9045

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 1065-1u

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature: TN

Weather: cloudy

Time: 1320

Review Signature and Date: 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: -2.0" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
~~10/3/11 1210~~	~~.25~~	~~6.02~~	~~12.47~~	~~205~~ TN	
10/3/11 1320	0	5.40	12.02	5650	

VA9046

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 Post C1

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature:

Weather: sunny

Time: 1210

Review Signature and Date: 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +.08" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/3/11 1210	.25	6.02	12.47	205	

VA9097

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Site / SWMU No.: 106

Weather: Sunny 80's

Well ID No/ICE: KAFB 1065-PostC2

Date: 10/3/11

Time: 1242

Field Crew: TN, DR

Crew Signature: [signature]

Review Signature and Date: [signature] 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +.70" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/3/11 1242	.11	7.64	9.17	62	

VA 9048

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB1066-1u

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature: TN Nogle

Weather: raining

Time: 1458

Review Signature and Date: 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0.7

Static Pressure: −2.0 "H2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
	0	2.16	15.77	15780	Inst.
10/3/11 1458				1655 × 9	
				= 14895	by dilution

VA 9049

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 1066-PostC1

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature: TN Nagy

Weather: cloudy

Time: 1410

Review Signature and Date: 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: + 1.4" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/3/11 1410	.68	8.50	5.93	355	

VA 9050

Shaw Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No/ICE: KAFB106G-PostC2

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature: TN

Weather: raining

Time: 1418

Review Signature and Date: 10-3-2011

Background VOC:

Breathing Zone VOC:

Static Pressure: + 1.4" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/3/11 TN 1418	.70	11.46	1.79	161	

VA 9051

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 1068-In

Field Crew: TN, DR

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature: [signature]

Weather: Sunny

Time: 1610

Review Signature and Date: [signature] 10-3-2011

Background VOC: 0

Breathing Zone VOC: 2.3 ppm

Static Pressure:
−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)	
10/3/11 1610	0	1.60	16.18	7260	

VA 9052

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 1068-PostC1

Field Crew: DR, TN

Site / SWMU No.: 106

Date: 10/3/11

Crew Signature:

Weather: Sunny

Time: 1538

Review Signature and Date: 10-3-2011

Background VOC: 0

Breathing Zone VOC: 0

Static Pressure: +1.4" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/3/11 1538	.10	8.46	6.09	274	

VA9053

Shaw™ Shaw Environmental, Inc.

SVE ICE VAPOR LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BTF	**Well ID No/ICE:** KAFB 1068 - Post C2	**Field Crew:** TN, DR
Site / SWMU No.: 106	**Date:** 10/4/11	**Crew Signature:** TN
Weather: cloudy	**Time:** 905	**Review Signature and Date:** DR 10-4-2011

Background VOC: Ø

Breathing Zone VOC: Ø

Static Pressure: .72" H_2O

Dilution Ratio (air/vapor): 2700/300

VAPOR DATA

Date/Time	Horiba Mexa – 584 L				Comments
	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
10/4/11 905	.03	9.48	8.82	20	

VA 9055
VA 9054