APPENDIX G-3

Soil-Vapor Purge Logs

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Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-01 (50)

Field Crew: RB, AT, ML

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 0815

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ~~50.5~~ 34 ft	Horiba Mexa-584L	
(B) Casing Factor: ½"(.00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	0.0714 ~~.422~~ ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ~~.422~~ at ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.363 ft^3		
(K) One Purge Volume (C + J)	1.434 ~~1.78~~ ft^3		
(L) Conversion to Liters (K x 28.316)	L		

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VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: KAFB SVMW-1(50')

Notes: Screen Interval 50'-52.5', SVE-106 ICE is shut down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	~~H_2S (%)~~ ppm	LEL (%)	~~CO (%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0845	~~-3.0~~ -.3	1cfm	~~4~~ 0 gr	10.4	10.3	~~0~~	0	—	0	7.30	—	0	
0849	↓	↓	4	4.5	10.3	↓	0	↓	0	6.92	↓	0	
0853	↓	↓	8	2.7	10.1	↓	0	↓	0	6.98	↓	1	
0857	↓	↓	12	1.8	10.0	↓	0	↓	0	7.02	↓	0	
0901	↓	↓	16	1.4	10.0	↓	0	↓	0	7.04	↓	0	
			PAM Pump Sample										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW 01 (100)

Field Crew: AT, RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: sunny

Time: 0930

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

Screen Interval 100 - 102.5

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	0.13 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-01 (100')

Notes: SVE 106 ICE shut down 100-102.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%/ppm)	LEL (%)	CO (%/ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0930	~~-3.8~~ -.38 ar	1	0	>2000	6.7		33		0	9.26		2510	
0934	↓	↓	4	>2000	5.9		70		0	9.24		2620	
0938			8	>2000	5.7		76		0	9.24		2626	
0942			12	>2000	5.6		78		0	9.28		2630	
0946			16	>2000	5.6	↓	78	↓	0	9.30	↓	2640	
		PPM Pump to Sample											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW 01 (250.7)

Field Crew: AT, RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 1005

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Screen Interval 250.7 - 253.2

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	253.2	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.344	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250.7	ft	GilAir -5	
(E) Depth to Bottom of Screen	253.2	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.71	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-01 (250.7')

Notes: SVE ICE Unit 106 Shut Down 250.7-253.2

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1033	-1.8	1.5	0	85.0	19.4		0		0	.66		51	
1037			6	48.0	19.4		0		0	1.0		8	
1041			12	43.7	19.4		0		0	1.0		8	
1045			18	39.0	19.5		0		0	1.02		7	
		PAM Pump - Sample											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-01 (308.5)

Field Crew: AT, RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 1050

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Screen Interval 308.5 - 311

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	311	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.423	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	308.5	ft	GilAir -5	
(E) Depth to Bottom of Screen	311	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.78	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

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VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-01 (308.5')

Notes: ST 106 ICE shut Dam 308.5-311

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1102	-2.0	1.5	0	15.7	20.8		0		0	.70		308	
1106	↓	↓	6	406 ~~404~~	19.2	↓	6	↓	0	.72	↓	325	
1110	↓	↓	12	414	19.2	↓	7	↓	0	.74	↓	330	
1114	↓	↓	18	416	19.2	↓	6	↓	0	.74	↓	332	
		Sample - PAM		Pump									

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-02

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: cloudy, windy

Time: 1402

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ice sheet down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.0714 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

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VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-02

Notes: 50-52.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
~~1404~~	+.06 -.006	4.5	0	239	10.9		0		0	6.96		102	
1407			6	261	10.6		1		0	6.98		108	
1410			12	207	15.5		1		0	6.98		111	
1413			18	265	11.9		1		0	6.98		114	
			Sample	PAM	Pump								

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-02

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: cloudy, very windy

Time: 1440

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	99.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.1353 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	97 ft	GilAir -5	
(E) Depth to Bottom of Screen	99.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

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VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-02

Notes: 97-99.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1441	.12	1.5	0	>2000	8.3		100		0	8.16		4480	
1444			6	>2000	9.1		100		0	8.16		4490	
1447			12	>2000	9.6		100		0	8.18		4490	
1450			18	>2000	10.6		100		0	8.18		4500	
			Connected		Pump	pump							

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB -13FT

Well ID No.: SVMW = 02

Field Crew: RT KS

Site / SWMU No.: 106

Date: ~~3/15~~ 3/4/11

Crew Signature:

Weather: Cloudy, Very windy

Time: 1515

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE shut off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.2074 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150 ft	GilAir -5	
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.56 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-02

Notes: Screen Interval 150' – 152.5'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1517	.08	1.5	0	>2000	16.7		26		0	1.54		1585	
1520	↓	↓	6	>2000	16.3	↓	19	↓	0	1.58	↓	1627	
1523	↓	↓	12	>2000	16.1	↓	32	↓	0	1.58	↓	1655	
1526	↓	↓	18	>2000	15.9	↓	40	↓	0	1.58	↓	1669	
			Sample	PPM	Pump								

Shaw™ Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 03 (50)

Field Crew: RB - AT

Site / SWMU No.: 106

Date: 3/11/11

Crew Signature: [signature]

Weather: Sunny 40s

Time: 0830

Review Signature and Date: [signature] 3/14/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ice that down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.07 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 03 (50)

Notes:

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
0830	-.06	1.5	0						.0	6.80	10.09	15	
0834			6						.0	6.82	10.08	13	
0838			12						.0	6.84	10.09	11	
0842			18	31.7			0		.0	6.70	10.02	13	
		Connect	to	Pump									

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No.: SVMW 03
Field Crew: RB AT
Site / SWMU No.: 106
Date: 03/11/11
Crew Signature: RBB
Weather: Sunny 40s
Time: 0856
Review Signature and Date: 3/11/11

WELL OBSERVATIONS

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

Notes: ST 106 ST ICE shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.14 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 03 (100)

Notes: STE 106 ICE Shut Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
856	-.10	1.5	0						-.02	9.34	2.55	5730	
900			6						-.02	9.34	2.46	5830	
904			12						-.02	9.34	2.46	5470	
908			16	>2000		0	100		-.02	9.34	2.44	5880	
		Connect to Horn pump											

Shaw™ Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF
Well ID No.: SVMW-03 (250)
Field Crew: RB AT
Site / SWMU No.: 106
Date: 3/11/11
Crew Signature:
Weather: Sunny 50s
Time:
Review Signature and Date: 3/16/11

WELL OBSERVATIONS

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

Notes: ST 106 ICE shutdown

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.34 ft^3		
(K) One Purge Volume (C + J)	1.70 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 03 (250)

Notes: STE 106 ICE Shut Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
0924	-.7	1.5	0						0.00	0.00	20.93	633	
928			6						0.00	0.00	21.01	586	
932			12						0.00	0.0	21.21	365	
936			18	916			7		0.00	0.02	21.37	395	
		Connect to Hm pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 03

Field Crew: AT RB

Site / SWMU No.: 106

Date: 3/11/11

Crew Signature:

Weather: Sunny 50s

Time: 1001

Review Signature and Date: 3/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: STE106 Ice shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	302.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.41 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	300 ft	GilAir -5	
(E) Depth to Bottom of Screen	302.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.77 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 3 (300)

Notes: ST 106 ICE Shut down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1001	-.9	1.5	0						0.0	.40	18.66	3050	
1005			6						0.0	.62	18.74	3060	
1009			12						0.0	.62	19.74	3070	
1013			18	>2000			58		0	.62	19.43	3076	
		Connected from Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-04 (52.5)

Field Crew: AT, RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature: AT, RB, MC

Weather: Sunny

Time: 1209

Review Signature and Date: RBB 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE start down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.0714	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50	ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	~~1.36~~	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.43	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-04 (50-52.5')
Notes:

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (~~%~~ ppm)	LEL (%)	CO (~~%~~ ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1211	.36	1 cfm	0	1381	8.5	—	5	—	0.0	8.18	—	551	
1215	↓	↓	4	1394	7.8	↓	5	↓	0	8.22	↓	530	
1219	↓	↓	8	1427	7.9	↓	6	↓	0	8.22	↓	551	
1223	↓	↓	12	1372	8.1	↓	5	↓	0	8.20	↓	566	
1227	↓	↓	16	1502	7.9	↓	6	↓	0	8.22	↓	576	
		Sample using PAM Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-04

Field Crew: AT, ICB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 12:57

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Screen interval 98-100.5 ST 106 ICE shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	100.5 ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.1366 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	98 ft	GilAir -5	
(E) Depth to Bottom of Screen	100.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-04 (98')

Notes: 98-100.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%/ppm)	LEL (%)	CO (%/ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1257	.24	1	0	>2000	7.0	–	67	–	-0.01	8.90	–	4910	
1301	↓	↓	4	>2000	5.6	–	100	–	0	8.96	–	4960	
1305			8	>2000	6.2	↓	100	↓	0	8.88	↓	4970	
1309			12	>2000	5.4		100		0	8.90		4970	
1313	↓	↓	16	>2000	5.3	↓	100	↓	0	8.88	↓	4980	
		Sample PAM Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-04 (250-252.5)

Field Crew: AT, RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 1333

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Screen Interval 250-252.5

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.3434	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250	ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.70	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: (250') 250-252.5

Notes: Bent Barb Valve on sampler unit / ST 106 is shut Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1336	-1.2	1.5	0	>2000	18.5	—	22	—	0	1.36	—	694	
1340	↓	↓	6	1972	18.5	↓	13	↓	0	1.38	↓	697	
1344	↓	↓	12	1966	18.4	↓	14	↓	0	1.40	↓	698	
1349	↓	↓	18	1943	18.4	↓	13	↓	0	1.44	↓	695	
		Sample	RAM Pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW-04

Field Crew: AT/RB, MC

Site / SWMU No.: 106

Date: 3/2/11

Crew Signature:

Weather: Sunny

Time: 1400

Review Signature and Date: 3/2/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: Screen Interval 297.5-300

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	300 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.408 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	297.5 ft	GilAir -5	
(E) Depth to Bottom of Screen	300 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.77 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SBMW-04 (297.5')

Notes: ST 106 shutdown 297.5-300

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (~~%~~ ppm)	LEL (%)	CO (~~%~~ ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1409	-1.4	1.5	0	127.6	19.0	-	1	-	0	.72	-	75	
1413	↓	↓	6	136.4	19.0	↓	1	↓	0	.74	↓	83	
1417	↓	↓	12	135.2	19.0	↓	1	↓	0	.74	↓	82	
1421	↓	↓	18	136.5	19.0	↓	1	↓	0	.74	↓	83	
		Sample Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-05 (50)

Field Crew: RB AT ML

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny, 50s lt. brz

Time: 1220

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE Shut off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.07 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-05 (50') 50-52.5

Notes: ST 106 ICE - Shut off

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1220	+.25	1 cfm	0	2.8	14.9	n/m	0	n/m	0	4.26	n/m	0	
1223	↓	↓	3	4.1	14.7	↓	0	↓	0	4.28	↓	0	
1226	↓	↓	6	5.0	14.7	↓	0	↓	0	4.22	↓	0	
1229	↓	↓	9	6.1	14.6	↓	0	↓	0	4.26	↓	0	
1231	↓	↓	12	7.1	14.6	↓	0	↓	0	4.28	↓	0	
1234	↓	↓	15	7.9	14.6	↓	0	↓	0	4.28	↓	0	
		Connect PAm pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW-05 (100)

Field Crew: RB AT ML

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny lt brz 50s

Time: 1254

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 Ice Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5	ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	~~.14~~	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.14	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100	ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5	ft		
(F) Filter Pack Length (E –D)		ft		
(G) Casing/Borehole Factor (10 in)		.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.49	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 05 (100)

Notes: ST 106 ICE Shut down 100-102.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1254	+0.41	1	0	157.8	12	n/m	1	n/m	0	6.22	n/m	90	
1257	↓	↓	3	220.0	11.5	↓	2	↓	0	6.20	↓	109	
1300			6	225.0	11.5		2		0	6.20		109	
1303			9	227	11.5		2		0	6.22		109	
1306			12	228	11.5		2		0	6.22		109	
1309	↓	↓	15	220	11.5	↓	2	↓	0	6.22	↓	108	
			Connect to GI Air 5 Pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW-05 (229)

Field Crew: AT RB ML

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny

Time: 1332

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) No

Notes: ST 106 ECE Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	231.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.31	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	229.5 per	ft	GilAir -5	
(E) Depth to Bottom of Screen	231.5 per 3/8/11	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)		.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.67	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-05 (229)

Notes: ST 106 ICE shut down 229.5-231 ~~229-231.5~~

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1332	-1.9	1.5	0	0	19.5	n/m	0	n/m	0	.72	n/m	1	
1336	↓	↓	6	0	19.5	↓	0	↓	0	.72	↓	2	
1340	↓	↓	12	0	19.4	↓	0	↓	0	.72	↓	2	
1344	↓	↓	18	0	19.4	↓	0	↓	0	.72	↓	1	
			Connect to GA Air						5				

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW-85 (287.5)

Field Crew: AT, RB, ML

Site / SWMU No.: 106

Date: 3-1-11

Crew Signature:

Weather: Sunny 1t bra

Time: 1405

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE - Shut off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	~~291.5~~ 290 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	~~.39~~ ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.39 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	~~289~~ 287.5 ft	GilAir -5	
(E) Depth to Bottom of Screen	~~291.5~~ 290 ft		
(F) Filter Pack Length (E –D)	~~2.5~~ 2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.75 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 05 (287.5)

Notes: ST 106 ICE Shut off 287.5-290

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1405	-2	1.5	0	77.4	19.0	n/m	0	n/m	0	1.08	n/m	70	
1409	↓	↓	6	135.2	19.0	↓	2	↓	.0	1.00	↓	96	
1413	↓	↓	12	144.6	19.0	↓	2	↓	0	.96	↓	104	
1417	↓	↓	18	150.0	19.0	↓	2	↓	0	.96	↓	107	
			Connect to Gil Air 5 PAM										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 06 (50)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 8/7/11

Crew Signature:

Weather: Cloudy breezy 50s

Time: 1243

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.07 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 6 (50)

Notes: ST1066 ICE down 50-52.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1243 ~~1238~~	+.85	1	0	142.3	20.8		*1		0.0	1.14	↓	79	
1247	↓	↓	4	65.2	20.8	↓	-2	↓	.0	1.34		33	
1251			8	55.8	20.5		-3		0	1.36		31	
1255			12	62.2	20.8		-3		6	1.36		36	
1259	↓	↓	16	67.6	20.8	↓	-3	↓	0	1.50	↓	43	
			Connect			to	PAM						

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 06 (99.5)

Field Crew: AT RB

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: Pt/y Cloudy, 50s

Time:

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 1066 ICE down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102	ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.13	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	99.5	ft	GilAir -5	
(E) Depth to Bottom of Screen	102	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.49	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 6

Notes: ST1066 IEE off 99.5-102

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1314	+.78	1	0	59.4	14.8		-4		0	.02		188	
1318			4	47.9	14.5		-4		0	4.82		145	
1322			8	37.3	14.3		-4		0	5.18		21	
1326			12	28.0	14.8		-4		0	5.06		15	
1330			16	21.5	14.6		-4		0	5.18		13	
		Pam	Pump	connected									

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 06 (252)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature: [signature]

Weather: Pt ly Cloudy 50s

Time: 1351

Review Signature and Date: [signature] July 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) No

Notes: ST 1066 shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	254.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	252 ft	GilAir -5	
(E) Depth to Bottom of Screen	254.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.71 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 06

Notes: ST 1066 off 252-254.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1351	† 1.0	1.5	0	1908	14.5		81		0.00	1.28		2980	
1355	↓	↓	6	1995	15.5	↓	96	↓	0	1.44	↓	2970	
1359	↓	↓	12	1891	16.2	↓	85	↓	0	1.54	↓	2990	
1403	↓	↓	18	1916	14.2	↓	81	↓	0	1.54	↓	2960	
		Pump annuked											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFP

Well ID No.: SVMW 06 (302)

Field Crew: AT - RB

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: Pt ly Cloudy, 50s

Time: 1436

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 Ice Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	305	ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.41	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	302.5	ft	GilAir -5	
(E) Depth to Bottom of Screen	305	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.77	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-06

Notes: ST 1066 ICE off 302.5-305

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1424	75.1	1.5	0	>2000	16.7		100		0.00	.96		3580	
1428	↓	↑	6	>2000	16.8		100		0	1.00		3600	
1432			12	>2000	16.7		100		0	1.02		3630	
1436	↓	↓	18	>200	16	↓	100	↓	0	1.02	↓	3640	
			Connect to Pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-07 at ~~SB~~ (49.5-52')

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/3/11 (mel 3/3/11)

Crew Signature:

Weather: Sunny, Breezy

Time: 0815

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 ICE shut down, needed permission to unlock gate to reach well-07
Contacted Berry Baks, head of security # 505-853-9268 or 853-9202

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52 ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.0707 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	49.5 ft	GilAir -5	
(E) Depth to Bottom of Screen	52 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-07

Notes: Screen intervals 49.5–52'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0835	-.70	1	0	116	17.8		0		0	.86		58	
0839	↓	↓	4	136.1	17.1		0		0	.84		53	
0843			8	149.3	17.6		0		0	.84		53	
0847			12	129	17.8		0		0	.84		51	
0851	↓	↓	14	159.9	17.1	↓	0	↓	0	.84	↓	50	
		Sampled using PID Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW-07 95.5'-98'

Field Crew: MT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: Sunny, windy

Time: 0914

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST106 ICE shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	98' ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.1332 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	95.5 ft	GilAir -5	
(E) Depth to Bottom of Screen	98 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.362 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-07

Notes: Screen interval 95.5-98

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0914	-.20	1	0	1409	15.7		6		0	5.40		823	
0918	↓	↓	4	1307	16.4	↓	10	↓	0	5.42	↓	823	
0922			8	965	17.8		5		0	5.44		822	
0926			12	1662	15.2		7		0	5.44		821	
0930	↓	↓	16	1953	14.5	↓	7	↓	0	5.44	↓	821	
		Sample	during	PAM	Pump								

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-07 147.5' - 150'

Field Crew: AT, RB

Site / SWMU No.: 106

Date: ~~0949~~ 3/4/11

Crew Signature:

Weather: Sunny, windy

Time: 0949

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	150 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = ~~.00136~~, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.204 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	147.5 ft	GilAir -5	
(E) Depth to Bottom of Screen	150 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.56 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-07

Notes: Screen Interval 147.5 – 150'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0956	-.13	1.5	0	38.5 ~~13.9~~	14.9		0		0	4.98		11	
0959	↓	↓	6	36.8	14.3		0		0	5.00		10	
1002			12	30.4	14.7		0		0	5.00		10	
1005			18	34.1	14.1		0		0	5.00		10	
			Sampled using SRM Pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-08

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature:

Weather: Sunny

Time: 1230

Review Signature and Date: 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.0714 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-88

Notes: Screen Interval 50-52.5'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1256	.44	1	0	↓	↓	↓	↓	↓	0	7.54	7.37	3320	
1300	↓	4	↓						0	8.32	6.14	3650	
1304		8							0	8.56	5.70	3720	
1308		12					↓		0	8.74	5.35	3760	
1312	↓	16	↓	↓	↓	↓	8%	↓	0	8.80	5.26 ~~5.20~~	3773	
		Connected Pan pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB, BFF

Well ID No.: SVMW-08

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature:

Weather: Sunny

Time: 1330

Review Signature and Date: 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 TCE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.1394 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-08

Notes:
100' - 102.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1330	.36	Ø1	0						0	7.24	9.66	120	
1334			4						0	7.94	8.68	107	
1338			8						0	8.18	8.27	114	
1342			12						0	8.26	8.17	117	
1346			16				4		0	8.30	8.15	119	
		Connected to pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-08

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature:

Weather: Ptly cloudy, 60s

Time: 1408

Review Signature and Date: 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	0.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.70 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-08

Notes:

250-252.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1408	-3.2	1	0						0	0.62	~~20.79~~ 19.52	~~72~~ 37	
1412			4						0	0.70	~~20.78~~ 19.41	78 46	
1416			8						0	0.76	~~20.59~~ 19.38	~~44~~ 55	
1420			12						0	0.80	19.28	59	
1424			16						0	0.84	19.05	62	
1426			18				0		0	.86	19.15	64	
		Connected to Pan Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SUMW-~~01~~ 08

Field Crew: at, RB

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature: [signature]

Weather: Sunny

Time: 1330

Review Signature and Date: [signature] 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: - Intact - Damaged -

Locked: Yes - No

Well ID Mark: Yes - No

Notes: ST 106 ICE shut down / can not purge port plugged / no sample

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	268.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	~~365~~ .00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.365 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	266 ft	GilAir -5	
(E) Depth to Bottom of Screen	268.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.7 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-08

Notes: 266' - 268.5'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	

Port plugged
No purge
No sample

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-09

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 0930 3/10/11

Crew Signature:

Weather: Sunny, Breezy

Time: 0930

Review Signature and Date: 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 ICE shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.0714 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-09

Notes:

50-52.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0947	-.30	1	0						0	8.76	6.77	1472	
0951	↓	↓	4						0	8.76	7.13	1547	
0955	↓	↓	8						0	8.78	7.09	1577	
0959	↓	↓	12				↓		0	8.76	7.03	1615	
1003	↓	↓	16	↓	↓	↓	9	↓	0	8.76	7.01	1623	
			Connected Pump Pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: 106 SVMU-09

Field Crew: MT, RB

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature:

Weather: Sunny, Breezy

Time: 0928

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ice slint down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.1394 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-09

Notes:

100-1025'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1027	-.50	1	0						0	8.30	5.13	5550	
1031	↓	↓	4	↓	↓	↓		↓	0	8.26	5.09	5620	
1035			8						0	8.28	5.03	5680	
1039			12						0	8.30	4.79	5720	
1043	↓	↓	16	↓	↓	↓	100	↓	0	8.32	4.84	5740	
			Connected Pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: 10 SWMU-09

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/10/11

Crew Signature:

Weather: Sunny, Breezy

Time: 1030

Review Signature and Date:

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 Ice Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5	ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.3434	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250	ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)		.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.7	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-05

Notes:

250-252.5'

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
0855	-3.6	1	0						0	1.08	19.05	531	
0859			4						0	1.08	19.14	528	
0903			8						0	1.08	19.31	498	
0907			12						0	1.08	18.78	477	
0911			16.17				14		0	1.08	18.75	462	
			Connected Pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB- BFF

Well ID No.: SVMW-09

Field Crew: AT, RB

Site / SWMU No.: 106

Date: ~~2/10/11~~ 3/10/11

Crew Signature:

Weather: Sunny Breezy

Time: 11:01

Review Signature and Date: 3/10/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	268.5 ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.3651 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	266 ft	GilAir -5	
(E) Depth to Bottom of Screen	268.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.7 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-09

Notes: (266' - 268.5')

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1105	-5.6	1	0						0	1.14	18.17	3330	
1109	↓	↓	4	↓	↓	↓	↓	↓	0	1.16	17.17	3180	
1113			8						0	1.18	18.20	3070	
1117			12						0	1.16	18.25	2950	
1121	↓	↓	16.17	↓		↓	100		0	1.18	18.51	2900	
		Connected to Pump		Pump									

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 10 - (50)

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny 60s lt. brz

Time: 1140

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: Yes (No)

Well ID Mark: (Yes) No

Notes: ST 106 off High Traffic

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.07 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50 ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.43 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 10 (50) 50-52.5

Notes: ST 106 ICE - High Traffic - Fgas difficult to zero

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1148	+.30	1	0	>2000	3.8		100	135	-.02	9.8		6220	
1152			4	>2000	5.4		100	0	-.02	9.50		6110	
1156			8	>2000	4.8		100	0	-.02	9.82		6300	
1200			12	>2000	7.8		100		-.02	9.70		6280	
1205			16	>2000	10.1		100		-.02	9.64		6320	
			Connect to PAM pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 10 (100)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny 60s

Time: 1241

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST.106 Shut down - High Traffic

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.13 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 10 (100) 100-102.5

Notes: ST 106 ICE - Shut down - High traffic -

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1241	+.31	1	0	>2000	8.3		100		.02	5.42		6150	
1246			4	>2000	8.4		100		.02	5.44		6180	
1250			8	>2000	8.4		100		.02	5.44		6210	
1254			12	>2000	8.1		100		.02	5.44		6220	
1300			16	>2000	8.4		100		.02	5.44		6210	
			Connect to PAN pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 10 (150)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny, lt brz 60s

Time: 1330

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: - Intact - Damaged -

Locked: Yes - No

Well ID Mark: Yes - No

Notes: ST 106 Shutdown - High traffic

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.21 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150 ft	GilAir -5	
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.56 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 10 (150) 150-152.5

Notes: GT 106 ICE - Shut down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1330	-.9	1	0	>2000	10.4		100		-.02	5.22		6080	
1334			4	>2000	10.1		100		-.02	5.24		6150	
1338			8	>2000	9.1		100		-.02	5.24		6140	
1342			12	>2000	9.1		100		-.02	5.22		6140	
1345			16	>2000	10.6		100		-.02	4.98		6090	
		Connect to PAM pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 10 250

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny 60s Ht brz

Time: 1415

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 shut down - High traffic -

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, ~~3" = .04906~~	.00136 ~~.34~~ ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.70 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SMVW 10 250-252.5

Notes: ST 106 ICE Shut Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1415	-.8	1	0	>2000	18		100		0	1.68		4520	
1419			4	>2000	18		100		0	1.38		3930	
1423			8	>2000	18.2		100		0	1.26		3980	
1427			12	>2000	18.7		100		0	1.32		4090	
1431			16	>2000	~~18.5~~ 18.9		100		0	1.22		3910	
1433			18	>2000	19.5		100		0	1.22		3980	
		Connect to PAM Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW 11 50'

Field Crew: RB, AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny 50s Hbrz

Time: 0825

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 ICE "ON" - Turned off @ 0835. 5 gas - unable to zero.
HIGH TRAFFIC AREA

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	52.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.07	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	50	ft	GilAir -5	
(E) Depth to Bottom of Screen	52.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.43	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW (50') 50-52.5

Notes:
ST 106 ICE - ~~Shut~~ ON at time of purge start - off @ 0835
High traffic, 5 gas alarms - ~~difficult to~~ unable to let 5 gas "zero"

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0825	-.22	1.0	0	>2000	2.2		100		0	11.32		4070	
0829			4	>2000	2.3		100		0	11.46		4390	
0838			~~8~~ 13	>2000	2.4 ~~3.5~~		100		-.01%	11.42		4460	ST 106 ICE - OFF
0852			27	>2000	2.2		100		.00	11.50		4520	5 gas being recalibrated
0900			35	>2000	2.2		100		.01	11.54		4580	cant get to "0"
0920	-.1												
			Connect to PAM pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW 11 100

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny lt brz 50s

Time: 0920

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: High traffic - STE 106 ICE off - 5 gas problems - Discuss with James V. Swap 5 gas PID - Need to clean bulb

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	102.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2 .00136	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.13 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	100 ft	GilAir -5	
(E) Depth to Bottom of Screen	102.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.49 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 11 100-102.5

Notes:
ST 106 ICE - Shut Down - High Traffic - 5 gas unable to "Zero"

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0921	-.24	1.0	0	>2000	2.7		100			9.32		6560	
0925			4	>200	2.6		100			9.34		6630	
0936			8/5	>2000	2.9		100			9.32		6680	
0940			19	>2000	2.9		100			9.30		6690	
			Connect to PAM pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 11 (250)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature:

Weather: Sunny lt brz 50s

Time: 1005

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: 5 Gas PID - Changed out - ST 106 ICE off -

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.70 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 11 (250) 250-252.5

Notes: ST 106 ICE OFF

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1011	~~2.0~~ -1.0	1	0	>2000	19.4		15		0.0	2.0-2		3720	
1015			4	>2000	17.2		87		-.01	2.38		5130	
1019			8	>2000	18.6		63		-.01	2.38		5430	
1023			12	>2000	17.2		100		-.01	2.38		5550	
1027			16	>2000	17.1		100		-.01	2.38		5600	
1032			18	>2000	16.2		100		-.02	2.36		5650	
		Connect to PAM Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 11 (260)

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/3/11

Crew Signature: RB

Weather: Sunny lt brz

Time: 1050

Review Signature and Date: 3/3/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark (Yes) - No

Notes:

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	262.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ~~.357~~ ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.357 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	260 ft	GilAir -5	
(E) Depth to Bottom of Screen	262.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.71 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 11 (260) 260-262.5

Notes: ST 106 ICE off

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1051	-1.0	1	0	240	20.8		0		0	0		369	
1055			4	9101	20.4		0		0	.36		1136	
1059			8	1430	20.8		6		0	.54		1834	
1103			12	>2000	20.0		17		0	.62		2060	
1107			16	>2000	19.6		60		0	.68		2290	
		Connect to PAM Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW-12

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: Sunny, Windy

Time: 1100

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.2074 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150 ft	GilAir -5	
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.57 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-12

Notes: 150 - 152.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (~~%~~ ppm)	LEL (%)	CO (~~%~~ ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1102	-.68	1.5	0	38.2	19.8		0		0	.14		9	
1105			6	36.4	19.8		0		0	.16		9	
1108			12	34.2	19.8		0		0	.14		8	
1110			16	30.4	19.8		0		0	.14		8	
		Connect to PAM pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-12

Field Crew: AT, RB

Site / SWMU No.: 166

Date: 3/4/11

Crew Signature:

Weather: Sunny, Windy

Time: 1110

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 FCE Shut Off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5	ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.0036	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.3434	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250	ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.70	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-12

Notes: 250-252.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (~~%~~ ppm)	LEL (%)	CO (~~%~~ ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1139	-.65	1.5	0	225	20.1		4		0	0.00		.15	
1142			6	252	19.4		5		0	0		72	
1145			12	245	19.7		5		0	0		77	
1148			18	240	19.7		5		0	0		69	
		Sample		PAM pump									

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-12

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: Sunny, Very Windy

Time: 1200

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	352.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.479 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	350 ft	GilAir -5	
(E) Depth to Bottom of Screen	352.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.8 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-12

Notes: 350-352.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%) ppm	LEL (%)	CO (%) ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1226	-.70	1.5	0	113.6	15.9		1		0	0		157	
1229			6	123.5	16.5		1		0	0		167	
1232			12	127.0	16.6		1		0	0		165	
1235			18	129.3	16.7m		1		0	0		141	
			used	ppm	pump								

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW-12

Field Crew: AT, RB

Site / SWMU No.: 106

Date: 3/4/11

Crew Signature:

Weather: Sunny Very Windy

Time: 1245

Review Signature and Date: 3/4/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 SVE 120 shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	452.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.6154	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	450	ft	GilAir -5	
(E) Depth to Bottom of Screen	452.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.97	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW-12

Notes: 450-452.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (% ppm)	LEL (%)	CO (% ppm)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1256	-.64	1.5	0	323	19.7		7		0	0		117	
1259	↓	↓	6	306	19.7	↓	7	↓	0	0	↓	116	
1302			12	288	19.8		6		0	0		109	
1305			18	305	19.7		7		0	0		105	
1307	↓	↓	20	305	19.7	↓	7	↓	0	0	↓	106	
			Sample	PPM	Pump								

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No.: SVMW 13
Field Crew: RB AT
Site / SWMU No.: 106
Date: 3/11/11
Crew Signature: [signature]
Weather: Sunny 60s
Time: 1042
Review Signature and Date: [signature] 3/11/11

WELL OBSERVATIONS

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

Notes: STE 344 ICE Shut down (KAFB 1068)

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.21 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150 ft	GilAir -5	
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.56 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 13 (150)

Notes: ST 344 ICE Shut down (KAFB 1068)

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1042	-2.1	1.5	0						0	.44	18.02	1775	
1046			6						0	.44	17.21	2050	
1050			12						0	.44	16.95	2080	
1054			18	7200			50		0	.44	17.08	2070	
		Connected Rtm Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 13

Field Crew: RB AT

Site / SWMU No.: ~~SS~~ 106 ~~AOC AB~~

Date: 3/11/11

Crew Signature:

Weather: Sunny, 60s

Time: 1110

Review Signature and Date: 3/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 344 (KAFB 1068) Ice shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.70 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 13 (250)

Notes: ST 344 (KAFB 1068) ICE SHUT DOWN

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1110	-.5	~~2~~ 1.5	0						0.0	.64	16.78	28	
1114			6						000	.66	16.67	18	
1118			12						0.00	.66	16.64	17	
1122			18	523			0		0.00	.66	16.74	13	
		Connected	from	Pump									

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW 13

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/11/11

Crew Signature: 3/11/11

Weather: Sunny 60s

Time: 1130

Review Signature and Date: 3/11/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: STE 344 (KAFB 1068) Ice Shut down; Field Dup as well

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	352.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.48 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	350 ft	GilAir -5	
(E) Depth to Bottom of Screen	352.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.83 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 13 (350)

Notes: STE 344 (RAB 1068) ICE Start Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1134	-.9	1.5	0						0.0	.04	17.80	40	
1138			6						0.0	1.64	16.73	16	
1142			12						0.0	1.64	16.70	15	
1146			18						0.00	1.66	16.70	14	
1147			19	20.6			0		0.0	1.67	16.60	14	
			Connected PPM Pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF
Well ID No.: SVMW 13
Field Crew: AT RB
Site / SWMU No.: 106
Date: 3/11/11
Crew Signature:
Weather: Sunny 60s
Time: 1214
Review Signature and Date: 3/11/11

WELL OBSERVATIONS

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

Notes: ST 344 ICE

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	452.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	.00136 ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.62 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	450 ft	GilAir -5	
(E) Depth to Bottom of Screen	452.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.97 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 13 (450)

Notes: ST 344 ICE - Shut Down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm)	Volume Purged (ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ppm	LEL (%)	CO ppm	CO (%)	CO_2 (%)	O_2 (%)	HC ppmv	
1214	-1.1	1.5	0						0.0	0.0	16.87	1240	
1218			6						0.0	0.0	16.85	1238	
1222			12						0.0	.54	16.76	1254	
1226			18						0.0	.54	16.65	1257	
1229			21	1783			34		0.0	.54	16.61	1258	
			Connected to PID pump										

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SWMW. 14 (150)

Field Crew: RB, AT, ML,

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny, lt brz, 40s

Time: 1100

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 106 ICE - Shut off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.207 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150 ft	GilAir -5	Pump 1
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.56 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 14 (150)

Notes: ST106 ICE Shut down 150-152.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1101 ~~1058~~	-1.9	1	0	0	20.0	n/m	0	n/m	0	.12	n/m	0	
1105	↓	↓	4	0	20.0	↓	0	↓	0	.14	↓	0	
1109	↓	↓	8	0	20.0	↓	0	↓	0	.14	↓	0	
1113	↓	↓	12	0	20.0	↓	0	↓	0	.14	↓	0	
1117	↓	↓	16	0	~~19.9~~	↓	0	↓	0	.14	↓	0	
		Connect to PAM Pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - ~~BFF~~

Well ID No.: SVMW 14 (250)

Field Crew: RB, AT, ML

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny 40s lt brz

Time: 1020

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: 1 scfm - ST 106 ICE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136) ¾" = .00306, 2" = .0218, 3" = .04906		ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250	ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)		.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.70	ft^3		
(L) Conversion to Liters (K x 28.316)		L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 14 (250)

Notes:

ST 106 ICE SHUT Down 250-252.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (~~cfm~~ or lpm)	Volume Purged (L or ~~ft³~~)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1022	-.5	1.0	0	2.6	19.9	n/m	0	n/m	0	.14	n/m	1	
1026			4	3.7	19.8		0		0	.16		2	
1030			8	3.1	19.8		0		0	.16		2	
1034			12	2.5	19.8		0		0	.18		1	
1036 ~~1038~~			16	2.2	19.9		0		0	.16		2	
1038			18	2.2	19.8		0		0	.16		2	
		Connect to PAM Pump											

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB - BFF

Well ID No.: SVMW 14 (350)

Field Crew: RB, AT, ML,

Site / SWMU No.: 106

Date: 3/1/11

Crew Signature:

Weather: Sunny 40s Hbrz

Time: 0940

Review Signature and Date: 3/1/11

WELL OBSERVATIONS

Protective Casing / Vault: (- Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 106 ICE - off

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	352.5 ft	Horiba Mexa-584L	
(B) Casing Factor (½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	~~ft²~~	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.47 ~~+.20 gal~~ ft³	5 Gas Detector	
(D) Depth to Top of Screen	350 ft	GilAir -5	
(E) Depth to Bottom of Screen	352.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft³		
(K) One Purge Volume (C + J)	1.83 ~~2.62 gal~~ ft³		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 14

Notes:

350 - 352.5

16 min Purge / stable readings

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S ~~(%)~~ ppm	LEL (%)	CO ~~(%)~~ ppm	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0946	-1.3	1.5	0	28.7	20.4	n/m	5	n/m	0	.14	n/m	21	
0950	↓	↓	6	25.7	20.3	↓	4	↓	0	.12	↓	13	
0954	↓	↓	12	25.2	20.3	↓	4	↓	0	.14	↓	13	
0958	↓	↓	18	25	20.3	↓	4	↓	0	.16	↓	17	
			Connect to PAM pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: ~~SVEW 12~~ SVMW 14 - 450-452.5

Field Crew: RB, AT, DR, ML

Site / SWMU No.: 106

Date: ~~2/28/11~~ + 3/1/11

Crew Signature:

Weather: Sunny, lt brz 40s

Time: ~~MW 0815~~ / 0756

Review Signature and Date: ~~[illegible]~~ 5/1/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: ~~Yes~~ - (No)

Well ID Mark: (Yes) - No

Notes:

ST-106 ICE System shut down, flow rate = 1.5 cfm

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	452.5	ft	Horiba Mexa-584L	
(B) Casing Factor: (½" = .00136), ¾" = .00306, 2" = .0218, 3" = .04906	.00136	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.61	ft^3	5 Gas Detector	
(D) Depth to Top of Screen	450	ft	GilAir -5	
(E) Depth to Bottom of Screen	452.5	ft		
(F) Filter Pack Length (E –D)	2.5	ft		
(G) Casing/Borehole Factor (10 in)	.545	sq. ft		
(J) Filter Pack Volume (F x G)	1.36	ft^3		
(K) One Purge Volume (C + J)	1.972	ft^3		
(L) Conversion to Liters (K x 28.316)	55.8	L		

$\frac{1.97}{1.5} = 1.31$ min

10 well volumes

$\frac{V}{T} = R$

$V = R \cdot T$

$1.972 = (2\ cfm) \cdot T$

$T = \frac{1.97}{\approx 1.5} \approx .98$ min

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 14 450-452.5

Notes:

16 min Purge - or until readings Stabilize
ST 106 ICE Shut down

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR VOC ppm	5 GAS DETECTOR O_2 (%)	5 GAS DETECTOR H_2S ppm	5 GAS DETECTOR LEL (%)	5 GAS DETECTOR CO ppm	Horiba Mexa – 584 L CO (%)	Horiba Mexa – 584 L CO_2 (%)	Horiba Mexa – 584 L O_2 (%)	Horiba Mexa – 584 L HC (ppmv)	Comments
0843	-1.2	~~1.5~~ 1.5	0	>2000			65		0	~~2.70~~ 0		2460	
0847	↓	1.5	6	>2000			62		0	2.62		2030	
0851		1.5	12	>2000	7.7		58		0	2.56		1837	
0855		1.5	18	>2000	7.8		53		0	2.50		1695	
0859		1.5	24	>2000	7.9		50		0	2.46		1563	
0903		1.5	30	>2000	8.0		47		0	2.44		1483	
0907	↓	1.5	36	1893	8.2		45		0	2.42		1397	
~~change to~~		Connect GilAir 5 PAM pump @ 2 lpm for											Sample

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: SVMW 15 150'

Field Crew: RB-AT

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: Cloudy - 1Frn - 40s

Time: 0858

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes:

ST 1066 ICE Shut down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	152.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.21 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	150.0 ft	GilAir -5	
(E) Depth to Bottom of Screen	152.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.57 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 15

Notes: ST 1066 ICE Shut down 150-152.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft³)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0858	.3	1 cfm	0	25.4	16.6		0		0	0		32	
0859			4	20.7	17.0		0		0	0		26	
0903			8	26.7	16.5		0		0	0		26	
0907			12	19.9	16.6		0		0	0		22	
0911			16	19.5	16.5		0		0	0		20	
		Connect to PAm pump											

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: SVMW-15 250

Field Crew: RB AT

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: cloudy 1HRn 40s

Time: 931

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: - (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 1064 down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	252.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.34 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	250 ft	GilAir -5	
(E) Depth to Bottom of Screen	252.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.703 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 15

Notes: ST 1066 ICE Down 250-252.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
0931	.31	1.5	0	83.7	17.4		0		0	.48		23	
0935			6	83.6	17.4		0		0	.38		41	
939			12	84.3	17.2		0		0	.52		48	
943			18	81.0	17.9		0		0	.54		52	
			Connect	to	PAM	pump							

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB-BFF

Well ID No.: 350 SVMW-15

Field Crew: AT RB

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: cloudy

Time: 1004

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) - Damaged -

Locked: Yes - (No)

Well ID Mark: (Yes) - No

Notes: ST 1066 ICF Shot dam

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	352.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.479 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	350 ft	GilAir -5	
(E) Depth to Bottom of Screen	352.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.83 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW - 15

Notes: ST 1066 ICE down 350-352.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1004	.31		0	>2000	16.1		100		-.01	.42		4240	
10:08			6	>2000	15.0		100		-.01	.42		4250	
10:12			12	>2000	14.7		100		-.01	.42		4260	
10:16			18	>2000	14.2		100		-.01	.44		4270	
			Connect to PAM pump										

Shaw Environmental, Inc.

VAPOR PURGE LOG

Kirtland Air Force Base, Bulk Fuels Facility Spill

Project Name: KAFB BFF

Well ID No.: ~~SMW~~ SVMW 450' SVMW-15

Field Crew: AT RB

Site / SWMU No.: 106

Date: 3/7/11

Crew Signature:

Weather: Cloudy 50s

Time: 1040

Review Signature and Date: 3/7/11

WELL OBSERVATIONS

Protective Casing / Vault: (Intact) Damaged

Locked: Yes (No)

Well ID Mark: (Yes) No

Notes: ST 1066 ICE Shut Down

CALCULATIONS/EQUIPMENT/ID NUMBERS

(A) Depth to Well Bottom	452.5 ft	Horiba Mexa-584L	
(B) Casing Factor: ½" = .00136, ¾" = .00306, 2" = .0218, 3" = .04906	ft^2	Vac/Pump/ Blower	
(C) One Well Casing Volume (A x B):	.61 ft^3	5 Gas Detector	
(D) Depth to Top of Screen	450 ft	GilAir -5	
(E) Depth to Bottom of Screen	452.5 ft		
(F) Filter Pack Length (E –D)	2.5 ft		
(G) Casing/Borehole Factor (10 in)	.545 sq. ft		
(J) Filter Pack Volume (F x G)	1.36 ft^3		
(K) One Purge Volume (C + J)	1.97 ft^3		
(L) Conversion to Liters (K x 28.316)	L		

Shaw Environmental, Inc.

VAPOR PURGE LOG (continued)

Kirtland Air Force Base, Bulk Fuels Facility Spill

PURGE DATA

Well ID No.: SVMW 15

Notes: ST 1066 ICE down 450-452.5

Date/Time	Static Pressure (in H_2O)	Purge Flow Rate (cfm or lpm)	Volume Purged (L or ft^3)	5 GAS DETECTOR					Horiba Mexa – 584 L				Comments
				VOC ppm	O_2 (%)	H_2S (%)	LEL (%)	CO (%)	CO (%)	CO_2 (%)	O_2 (%)	HC (ppmv)	
1040	.4	1.5	0	>2000	15.7		100		.02	.96	~~.96~~ at	6280	
~~10~~44			6	>2000	15.4		100		0	.98	.	6320	
1048			12	>2000	15.4		100		-.02	.98		6340	
1052			18	>2000	15.5		100		-.02	1.00	-	6360	
1054			20	>2000	15.2		100		-.02	1.00		6370	
				Connect to PAH pump									