ATTACHMENT 3

TEST 1 AND 2: LABORATORY RESULTS

TEST 1 AND 2: LABORATORY RESULTS

DATE SAMPLED	TIME	LABORATORY SAMPLES - EPA 8010 + FREON 113 / EPA 8020																							
		WELL SCREEN(S)														Blower 1				Blower 2			
		A				B				C			ABC		BC		Primary 1		Secondary 1		Primary 2		Secondary 2	
		Carbon Tetrachloride mg/m³	Freon 113 mg/m³	1,1 DCE mg/m³	TCE mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	1,1 DCE mg/m³	TCE	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	TCE	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³
4/9/98	10:00	240	ND	ND	ND	280	ND	ND	ND	100	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
4/13/98	8:15	150	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11:15	160	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:15	160	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/14/98	7:00	150	11	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	150	11	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	160	10	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/15/98	7:00	160	11	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7:30	170	13	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	150	12	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11:00	150	11	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	200	16	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	150	11	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/16/98	7:00	180	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	160	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	170	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/17/98	8:30	57	ND	ND	ND	240	11	ND	ND	140	ND		--	--	--	--	--	--	--	--	--	--	--	--	--
4/20/98	7:00	--	--	ND	ND	220	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	ND	ND	260	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	--	--	ND	ND	280	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/98	8:00	--	--	ND	ND	290	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	ND	ND	250	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14:00	--	--	ND	ND	240	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/98	7:00	--	--	ND	ND	250	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	ND	ND	210	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:15	--	--	ND	ND	230	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13:30	--	--	ND	ND	250	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/23/98	7:00	--	--	ND	ND	270	17	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	ND	ND	250	17	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13:30	--	--	ND	ND	270	16	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/24/98	8:00	270	ND	17	ND	250	ND	16	ND	280	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
4/27/98	8:00	--	--	--	--	--	--	--	--	110	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	--	--	--	--	--	--	130	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	13:30	--	--	--	--	--	--	--	--	130	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
4/29/98	12:00	--	--	--	--	--	--	--	--	160	12	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	15:00	--	--	--	--	--	--	--	--	140	10	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	15:00	--	--	--	--	--	--	--	--	150	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	19:00	--	--	--	--	--	--	--	--	150	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/98	7:00	--	--	--	--	--	--	--	--	170	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	--	--	--	--	--	--	150	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	13:00	--	--	--	--	--	--	--	--	100	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	16:00	--	--	--	--	--	--	--	--	160	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	20:00	--	--	--	--	--	--	--	--	160	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
	23:00	--	--	--	--	--	--	--	--	170	10	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
5/1/98	7:30	59	ND	ND	ND	14	ND	ND	ND	110	7.6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
5/4/98	8:00	--	--	--	--	--	--	--	--	--	--	--	190	13	--	--	--	--	--	--	--	--	--	--	--
	11:00	--	--	--	--	--	--	--	--	--	--	--	190	16	--	--	--	--	--	--	--	--	--	--	--
	13:30	--	--	--	--	--	--	--	--	--	--	--	73	ND	--	--	--	--	--	--	--	--	--	--	--
5/5/98	8:00	--	--	--	--	--	--	--	--	--	--	--	160	14	--	--	--	--	--	--	--	--	--	--	--
	9:40	--	--	--	--	--	--	--	--	--	--	--	170	12	--	--	--	--	--	--	--	--	--	--	--
	10:40	--	--	--	--	--	--	--	--	--	--	--	190	14	--	--	--	--	--	--	--	--	--	--	--
5/6/98	8:00	--	--	--	--	--	--	--	--	--	--	--	160	12	--	--	--	--	--	--	--	--	--	--	--
	10:00	--	--	--	--	--	--	--	--	--	--	--	170	14	--	--	--	--	--	--	--	--	--	--	--
	13:00	--	--	--	--	--	--	--	--	--	--	--	170	12	--	--	--	--	--	--	--	--	--	--	--
5/7/98	7:30	--	--	--	--	--	--	--	--	--	--	--	170	13	--	--	--	--	--	--	--	--	--	--	--
	11:00	--	--	--	--	--	--	--	--	--	--	--	200	17	--	--	--	--	--	--	--	--	--	--	--
	11:00	--	--	--	--	--	--	--	--	--	--	--	200	16	--	--	--	--	--	--	--	--	--	--	--
	13:30	--	--	--	--	--	--	--	--	--	--	--	130	10	--	--	--	--	--	--	--	--	--	--	--
5/8/98	7:30	9.7	ND	ND	6.1	8.9	ND	ND	6.6	7.3	ND	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--
5/11/98	8:00	--	--	--	--	--	--	--	--	--	--	--	220	17	--	--	--	--	--	--	--	--	--	--	--

TEST 1 AND 2: LABORATORY RESULTS

DATE SAMPLED	TIME	LABORATORY SAMPLES - EPA 8010 + FREON 113 / EPA 8020																							
		WELL SCREEN(S)														Blower 1				Blower 2			
		A				B				C			ABC		BC		Primary 1		Secondary 1		Primary 2		Secondary 2	
		Carbon Tetrachloride mg/m³	Freon 113 mg/m³	1,1 DCE mg/m³	TCE mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	1,1 DCE mg/m³	TCE	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	TCE	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³	Carbon Tetrachloride mg/m³	Freon 113 mg/m³
	13:00	--	--	--	--	--	--	--	--	--	--	--	190	16	--	--	--	--	--	--	--	--	--	--	--
5/12/98	13:00	--	--	--	--	--	--	--	--	--	--	--	100	ND	--	--	--	--	--	--	--	--	--	--	--
5/13/98	9:00	110	--	ND	ND	270	--	ND	ND	130	--	ND	120	--	--	--	--	--	--	--	--	--	--	--	--
5/15/98	9:00												160	13	--	--	--	--	--	--	--	--	--	--	--
5/19/98	13:30	--	--	--	--	--	--	--	--	--	--	--	160	13	--	--	--	--	--	--	--	--	--	--	--
5/20/98	9:30	--	--	--	--	--	--	--	--	--	--	--	160	15	--	--	ND	ND	--	--	ND	ND	--	--	--
5/21/98	8:30	73	ND	ND	ND	260	17	ND	ND	140	14	ND	150	ND	--	--	ND	ND	--	--	ND	ND	--	--	--
5/22/98	8:00	--	--	--	--	--	--	--	--	--	--	--	92	8.2	--	--	ND	ND	--	--	ND	ND	--	--	--
5/26/98	10:00	35	ND	ND	ND	210	16	ND	ND	110	14		100	10	--	--	78	8	--	--	ND	ND	--	--	--
5/29/98	12:00	--	--	--	--	--	--	--	--	--	--	--	--	--	160	16	--	--	--	--	ND	ND	--	--	--
6/1/98	9:00	--	--	--	--	--	--	--	--	--	--	--	--	--	160	15	--	--	16	13	ND	ND	--	--	--
6/2/98	10:00	--	--	--	--	170	14	ND	ND	91	14	ND	--	--	140	13	--	--	21	7.9	ND	ND	--	--	--
6/3/98	9:45	--	--	--	--	--	--	--	--	--	--	--	--	--	150	15	--	--	16	ND	ND	ND	--	--	--
	9:50	--	--	--	--	--	--	--	--	--	--	--	--	--	130	13	--	--	--	--	--	--	--	--	--
6/4/98	10:00	--	--	--	--	--	--	--	--	--	--	--	--	--	120	13	--	--	--	--	ND	20	--	--	--
6/5/98	10:00	--	--	--	--	--	--	--	--	--	--	--	--	--	140	15	--	--	--	--	ND	24	--	--	--
6/8/98	9:30	--	--	--	--	150	13	ND	ND	81	14	ND	--	--	120	13	--	--	--	--	53	26	ND	ND	--
6/9/98	10:00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
6/16/98	10:00	49	ND	ND	ND	130	12	ND	ND	55	8.2	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
6/23/98	9:30	39	ND	ND	ND	120	11	ND	ND	48	7.4	ND	--	--	--	--	--	--	--	--	--	--	--	--	--

ATTACHMENT 4

TEST 3: EXTRACTION WELL DATA

TEST 3: EXTRACTION WELL DATA

		VACUUM							FLOWRATE				FID READINGS								
DATE	TIME	VE1-A	VE1-B	VE1-C	CARBON				ANEMOMETER FLOWRATE				INFLUENT				EFFLUENT				
					Primary 1 (Eff)	Secondary 1 (Eff)	Primary 2 (Eff)	Secondary 2 (Eff)	Screen A	Screen B	Screen C	Screen BC	A	B	C	ABC	Primary 1	Secondary 1	Primary 2	Secondary 2	FINAL
	hours	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*cfm=fpm*0.0218*			*cfm=fpm*0.0873*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
11/2/98	11:00	0	46	46	65	73	68	73	-	-	-	-	-	-	-	-	-	-	-	-	-
11/2/98	14:00	0	44	44	63	71	64	70	-	-	-	-	-	-	-	-	-	-	-	-	-
11/3/98	7:30	0	46	46	67	74	66	72	0	128	110	242	NA	4	6	5	0	0	0	0	0
11/3/98	13:30	0	45	45	64	72	65	72	0	138	125	270	-	-	-	-	-	-	-	-	-
11/4/98	9:00	0	-	-	66	74	66	72	0	126	114	242	NA	7	7.6	7.6	0.4	0	0	0	0
11/5/98	9:30	0	46	46	65	74	66	72	0	125	114	228	NA	4.3	5.6	5.4	0	0	0	0	0
11/5/98	12:00	0	45	45	64	72	65	70	0	127	117	247	-	-	-	-	-	-	-	-	-
11/6/98	8:40	0	44	44	62	70	64	70	0	127	114	256	NA	7.8	7.4	8	0.8	0	0	0	0
11/9/98	9:00	0	46	46	66	76	68	72	0	131	115	260	NA	5.8	5.5	5.6	0	0	0	0	0
11/10/98	9:00	0	46	46	68	76	67	72	0	128	115	257	NA	4.9	4.8	5.7	0.2	0	0	0	0
11/11/98	9:30	0	47	47	67	76	67	72	0	130	120	253	NA	3.8	4.6	4	0	0	0	0	0
11/12/98	10:30	0	47	47	67	76	68	74	0	131	120	258	NA	4.4	3.8	3.8	0	0	0	0	0
11/13/98	8:00	0	49	50	70	80	70	77	0	130	115	258	NA	4.8	5.4	4.6	0	0	0	0	0
11/16/98	10:00	0	50	50	70	80	70	78	0	130	120	258	NA	5	5.6	4.8	0	0	0	0	0
11/18/98	10:00	0	51	51	71	80	73	79	0	<131	131	262	NA	4.9	5.2	5	0	0	0	0	0
11/19/98	10:30	0	51	50	71	80	73	79	0	<131	131	260	NA	4.8	5	5	0	0	0	0	0
11/20/98	8:30	0	50	50	71	81	73	80	0	<131	129	240	NA	3.4	4	3.7	0	0	0	0	0
11/23/98	10:00	0	50	50	72	82	74	81	0	131	129	262	NA	2.6	3.8	2.4	0	0	0	0	0
12/4/98	17:00	0	51	51	73	83	75	80	0	131	129	260	-	-	-	-	0.2	-	1	-	-
12/8/98	9:30	-	51	50	74	84	76	72	0	131	126	279	NA	3.6	4.2	3.4	2	0	3	0	0
12/17/98	8:00	-	50	50	73	83	75	82	0	131	126	279	-	-	-	-	-	-	-	-	-
12/30/98	11:00	-	60	60	80	82	79	84	0	131	131	279	-	-	-	-	-	-	-	-	-
1/6/99	10:00	-	61	60	81	86	80	86	0	131	131	279	-	-	-	-	-	-	-	-	-
1/13/99	16:00	-	61	61	82	85	79	85	0	171	165	278	NA	1.3	3.3	1.4	2.3	0	3	0.2	0
1/21/99	15:30	-	63	62	82	86	80	87	0	166	152	253	NA	1.7	3.9	1.7	2.2	0.6	3.2	1.4	0.8
1/28/99	11:00	-	31	31	85	70	-	-	0	109	81	131	-	-	-	-	-	-	-	-	-
2/11/99	9:15	-	31	32	54	73	-	-	0	92	87	157	-	-	-	-	-	-	-	-	-
3/31/99	15:00	-	57	56	78	78	78	82	0	130	130	332	-	-	-	-	-	-	-	-	-
4/8/99	10:55	-	60	60	80	90	84	88	0	175	155	332	-	-	-	-	-	-	-	-	-
4/8/99	13:00	-	64	63	92	100	92	100	-	-	-	332	-	-	-	-	-	-	-	-	-
4/15/99	10:45	-	64	62	93	100	93	100	0	130	130	262	-	-	-	-	-	-	-	-	-
4/20/99	14:00	-	32	32	52	60	51	54	0	213	-	375	-	-	-	-	-	-	-	-	-
4/21/99	16:00	-	36	36	55	64	56	59	0	131	131	196	-	-	-	-	-	-	-	-	-
4/29/99	8:00	-	36	37	57	65	58	60	-	-	-	-	-	-	-	-	-	-	-	-	-
5/4/99	15:00	-	72	72	92	100	93	99	-	-	-	-	-	-	-	-	-	-	-	-	-
5/6/99	10:45	-	72	72	94	100	94	99	-	-	-	-	-	-	-	-	-	-	-	-	-
5/11/99	11:00	-	74	74	95	100	96	100	-	-	-	-	-	-	-	-	-	-	-	-	-
5/11/99	17:30	-	72	72	94	100	94	100	-	-	-	-	-	-	-	-	-	-	-	-	-
5/14/99	12:00	-	74	74	95	100	96	100	-	249	207	445	-	-	-	-	-	-	-	-	-
5/14/99	17:45	-	73	73	94	100	95	100	-	-	-	-	-	-	-	-	-	-	-	-	-
5/20/99	9:45	-	74	74	96	100	97	100	-	196	179	262*	-	-	-	-	-	-	-	-	-

TEST 3: EXTRACTION WELL DATA

DATE	TIME	VACUUM							FLOWRATE				FID READINGS								
		VE1-A	VE1-B	VE1-C	CARBON				ANEMOMETER FLOWRATE				INFLUENT				EFFLUENT				
					Primary 1 (Eff)	Secondary 1 (Eff)	Primary 2 (Eff)	Secondary 2 (Eff)	Screen A	Screen B	Screen C	Screen BC	A	B	C	ABC	Primary 1	Secondary 1	Primary 2	Secondary 2	FINAL
	hours	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*cfm=fpm*0.0218*			*cfm=fpm*0.0873*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*	*ppm*
6/1/99	9:30	-	72	72	94	-	-	-	-	233	203	323	-	-	-	-	-	-	-	-	-
6/7/99	15:45	-	72	72	94	100	93	105	-	263	272	306	-	-	-	-	-	-	-	-	-
7/1/99	15:00	-	67	67	85	90	90	90	-	167	249	393	-	-	-	-	-	-	-	-	-
7/7/99	8:45	-	72	72	92	97	100	97	-	-	-	-	-	-	-	-	-	-	-	-	-
7/7/99	12:00	-	70	70	90	95	98	95	-	-	-	-	-	-	-	-	-	-	-	-	-
7/13/99	8:00	-	72	72	92	96	100	96	-	-	-	-	-	-	-	-	-	-	-	-	-
7/15/99	8:45	-	73	73	94	98	100	98	-	-	-	-	-	-	-	-	-	-	-	-	-
7/15/99	12:25	-	71	71	92	96	100	96	-	-	-	-	-	-	-	-	-	-	-	-	-
7/21/99	10:00	-	0	0	0	0	0	0	-	0	0	0	-	-	-	-	-	-	-	-	-
7/27/99	11:00	-	-	-	84	88	90	90	-	-	-	-	-	-	-	-	-	-	-	-	-
7/27/99	1:00	-	-	-	88	93	95	92	-	-	-	-	-	-	-	-	-	-	-	-	-
7/30/99	9:00	-	72	72	93	97	100	98	-	266	238	393	-	-	-	-	-	-	-	-	-
7/30/99	13:45	-	70	70	90	97	98	95	-	-	-	-	-	-	-	-	-	-	-	-	-
8/5/99	9:00	-	72	72	93	98	100	98	-	-	-	-	-	-	-	-	-	-	-	-	-
8/5/99	1:00	-	70	71	82	96	100	96	-	-	-	-	-	-	-	-	-	-	-	-	-
8/11/99	9:20	-	73	74	95	99	102	100	-	-	-	-	-	-	-	-	-	-	-	-	-
8/11/99	12:45	-	71	71	93	97	97	100	-	-	-	-	-	-	-	-	-	-	-	-	-
8/20/99	9:00	-	73	73	94	99	101	99	-	-	-	-	-	-	-	-	-	-	-	-	-
8/20/99	12:25	-	71	71	92	97	100	96	-	-	-	-	-	-	-	-	-	-	-	-	-
8/24/99	10:00	-	72	72	93	97	101	98	-	-	-	-	-	-	-	-	-	-	-	-	-
8/25/99	9:00	-	72	72	93	97	100	97	-	-	-	-	-	-	-	-	-	-	-	-	-
9/8/99	9:00	-	73	73	95	100	102	100	-	251	244	375	-	-	-	-	-	-	-	-	-
9/15/99	8:35	-	-	100	126	130	134	130	-	-	244	314	-	-	-	-	-	-	-	-	-
9/22/99	8:45	-	-	100	128	130	135	131	-	-	-	-	-	-	-	-	-	-	-	-	-
9/29/99	10:00	-	-	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-

ATTACHMENT 5

TEST 3: MONITORING WELL DATA

TEST 3: MONITORING WELL DATA

VACUUM RESPONSES (MAGNAHELIC GAUGES)											
		PROBE									
DATE	WELL	A	B	C	D	E	F	G	H	I	J
		in. H_2O	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*	*in. H_2O*
11/3/98	SVW-25	0.0	0.0	0.0	0.3	0.0	2.1	0.0	1.0	1.7	2.8
	SVW-26	0.0	0.0	0.0	0.1	0.0	1.6	4.2	3.7	1.5	1.8
	SVW-27	0.0	0.0	0.0	0.0	-	0.7	2.9	2.5	1.1	2.0
	SVW-28	-	0.2	-	0.5	0.4	-	-	-	-	-
	SVW-32	No Access	-	-	-	-	-	-	-	-	-
	SVW-33	No Access	-	-	-	-	-	-	-	-	-
	SVW-34	0.0	0.2	0.1	0.2	0.1	0.1	2.7	3.8	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.1	1.6	1.4	0.8	2.0	1.75	0.95	1.75
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
11/4/98	SVW-25	0.0	0.0	0.0	0.3	0.0	2.9	0.0	0.6	2.0	0.0
	SVW-26	0.0	0.0	0.0	0.6	0.0	1.6	4.2	3.5	1.5	1.9
	SVW-27	0.0	0.0	0.0	2.7	1.5	0.9	3.5	3.1	1.4	2.1
	SVW-28	-	0.2	-	0.4	0.4	-	-	-	-	-
	SVW-32	0.0	0.0	0.1	0.2	0.25	0.0	0.3	2.5	1.1	0.0
	SVW-33	0.0	1.0	2.5	2.5	1.8	1.2	2.7	2.5	1.3	2.35
	SVW-34	0.0	0.2	0.2	0.2	0.2	0.1	2.5	3.8	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.1	1.5	1.4	0.7	2.0	1.8	1.0	1.7
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.5	1.6	1.6	0.8	1.4
11/5/98	SVW-25	0.0	0.0	0.0	0.1	0.0	1.9	0.0	0.4	1.7	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	1.4	3.2	2.8	1.15	1.75
	SVW-27	0.0	0.0	0.0	0.1	1.3	0.7	2.8	2.5	1.1	2.0
	SVW-28	0.0	0.1	0.0	0.2	0.4	1.1	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.9	0.0
	SVW-33	0.0	0.4	1.8	1.8	1.4	0.8	2.2	2.0	1.0	1.7
	SVW-34	0.0	0.0	0.0	0.2	0.0	0.1	2.2	3.3		
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	1.1	0.9	0.5	1.4	1.3	0.6	1.1
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.4	1.0	1.0	0.5	0.9
11/6/98	SVW-25	0.0	0.0	0.0	0.2	0.0	1.9	0.0	0.0	1.8	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	1.4	3.6	3.2	1.3	2.0
	SVW-27	0.0	0.0	0.0	0.25	1.3	0.8	3.2	2.8	1.4	2.4
	SVW-28	-	0.1	-	0.4	0.4	1.2	-	-	-	-
	SVW-32	0.0	0.0	0.1	0.2	0.15	0.0	0.2	2.3	1.0	
	SVW-33	0.0	1.0	2.4	2.5	1.75	1.0	2.6	2.4	1.2	2.1
	SVW-34	0.0	0.1	0.1	0.2	0.15	0.3	2.5	3.7	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.1	1.6	1.4	0.8	2.1	1.9	0.9	1.7
	SVW-38	0.0	0.0	0.1	0.1	0.0	0.6	1.9	1.7	0.9	1.5
11/9/98	SVW-25	0	0	0	0.4	0	2.3	0	0	2	0
	SVW-26	0	0	0	0.2	0	1.8	4.3	3.8	1.5	2.5
	SVW-27	0	0.1	0.1	0.3	1.6	1	3.8	3.5	1.5	2.8
	SVW-28	0	0.2	0	0.5	0.5	-	-	-	-	-
	SVW-32	0	0	0	0.3	1.5	0	0.3	2.7	1.2	0
	SVW-33	No Access	-	-	-	-	-	-	-	-	-
	SVW-34	0	0.2	0.25	0.4	0.2	0.2	0.1	2.8	4.2	
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0	0	0.1	1.7	1.5	1	2.3	2	1	2
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
11/10/98	SVW-25	0.0	0.0	0.0	0.4	0.0	5.0	0.0	0.0	2.1	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-26	-	-	-	0.2	0.0	4.3	4.6	3.9	1.7	2.8
	SVW-27	0.0	0.0	0.0	0.2	1.7	2.2	3.7	3.3	1.5	2.6
	SVW-28	-	0.2		0.5	0.0	0.0	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.2	0.0	0.1	1.5	1.1	0.0
	SVW-33	-	1.0	2.6	2.6	2.0	2.85	3.1	2.8	1.4	2.5
	SVW-34	0.0	0.1	0.1	0.3	0.3	0.4	2.7	4.2	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.2	0.2	1.8	1.7	2.2	2.5	2.2	1.2	2.1
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
11/11/98	SVW-25	0.0	0.0	0.0	0.3	0.0	3.5	0.0	0.0	1.8	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	3.6	3.5	3.2	0.0	2.0
	SVW-27	0.0	0.0	0.0	0.1	1.5	2.0	3.1	2.7	1.2	2.1
	SVW-28	-	0.1	-	0.3	0.4	3.0	-	-	-	-
	SVW-32	Not sampled due to weather conditions				-	-	-	-	-	-
	SVW-33	Not sampled due to weather conditions				-	-	-	-	-	-
	SVW-34	0.0	0.0	0.0	0.1	0.15	0.2	2.2	3.4	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.1	1.8	1.8	1.7	0.9	-
	SVW-36	Not sampled due to weather conditions				-	-	-	-	-	-
	SVW-37	Not sampled due to weather conditions				-	-	-	-	-	-
	SVW-38	Not sampled due to weather conditions				-	-	-	-	-	-
11/12/98	SVW-25	0.0	0.0	0.0	0.3	0.0	3.9	0.0	0.0	1.8	-
	SVW-26	0.0	0.0	0.0	0.0	0.0	3.5	3.4	3.0	0.0	2.0
	SVW-27	0.0	0.0	0.1	0.2	1.6	2.2	3.6	3.1	1.5	2.5
	SVW-28	0.0	0.1	0.0	0.3	0.5	4.0	0.0	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.2	0.0	0.1	2.3	1.1	0.0
	SVW-33	0.0	0.9	2.5	2.5	2.0	2.8	3.1	2.8	1.3	2.5
	SVW-34	0.0	0.0	0.0	0.1	0.2	0.2	2.2	3.2	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.2	2.5	2.7	2.5	1.4	2.4
	SVW-36	Not sampled	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	1.6	1.5	2.0	2.2	2.0	1.0	1.9
	SVW-38	0.0	0.0	0.0	0.1	0.1	1.7	2.0	1.9	0.9	1.5
11/13/98	SVW-25	0.0	0.0	0.0	0.1	-	4.4	-	-	1.6	-
	SVW-26	0.0	0.0	0.0	0.0	0.1	3.3	2.8	2.5	0.0	1.7
	SVW-27	0.0	0.0	0.0	0.0	1.3	1.6	2.7	2.2	1.1	1.9
	SVW-28	0.0	0.1	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0
	SVW-32	0.0	0.0	0.0	0.0	0.1	0.0	4.0	1.5	0.6	0.0
	SVW-33	0.0	0.4	1.6	1.6	1.3	1.9	2.1	1.9	0.9	1.6
	SVW-34	0.0	0.0	0.1	0.2	0.2	0.2	1.8	3.0	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	0.9	1.5
	SVW-36	Not Sampled	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	1.0	0.9	1.2	1.2	1.2	0.5	1.0
	SVW-38	0.0	0.0	0.0	0.0	0.0	1.0	1.2	1.2	0.6	1.0
11/16/98	SVW-25	0.0	0.0	0.0	0.2	-	4.6	-	-	1.8	-
	SVW-26	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.0	1.2	2.0
	SVW-27	0.0	0.0	0.0	0.1	1.5	1.9	3.0	2.6	1.2	2.1
	SVW-28	0.0	0.1	0.0	0.35	0.5	3.5	1.8	0.0	0.0	0.0
	SVW-32	-	-	-	-	0.1	-	-	1.6	0.8	-
	SVW-33	-	0.5	1.9	1.9	1.5	2.1	2.2	2.0	1.0	1.7
	SVW-34	0.0	0.0	0.1	0.2	0.2	0.2	0.0	3.5	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.1	1.7	1.7	1.6	0.9	1.6
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	1.2	1.1	1.4	1.2	1.2	0.8	1.4
	SVW-38	-	-	-	-	-	-	-	-	-	-
11/18/98	SVW-25	0.0	0.0	0.0	0.1	0.0	4.8	0.0	0.0	1.8	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	3.7	3.9	3.3	1.4	2.2
	SVW-27	0.0	0.1	0.0	0.1	1.6	2.0	3.2	3.0	1.4	2.2
	SVW-28	0.0	0.0	0.0	0.4	0.4	3.4	0.0	0.0	0.0	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-32	0.0	0.7	0.0	0.0	0.1	0.0	0.0	2.1	1.0	0.0
	SVW-33	0.0	0.0	2.2	2.2	1.7	2.4	2.7	2.4	1.5	2.1
	SVW-34	0.0	0.0	0.1	0.15	0.15	0.2	2.5	3.8	0.0	0.0
	SVW-35	0.0	0.0	0.0	0.0	0.1	2.0	2.1	2.0	1.0	1.7
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	1.35	1.3	1.65	1.7	1.6	0.8	1.4
	SVW-38	-	-	-	-	-	-	-	-	-	-
11/19/98	SVW-25	0.0	0.0	0.0	0.3	0.0	<5	0.0	0.0	2.1	0.0
	SVW-26	0.0	0.0	0.0	0.1	0.0	4.1	4.4	3.8	1.65	2.6
	SVW-27	0.0	0.0	0.0	0.2	1.8	2.4	3.8	3.4	1.6	2.7
	SVW-28	0.0	0.1	0.0	0.4	0.5	3.7	0.0	2.6	0.0	0.0
	SVW-32	0.0	0.0	0.0	0.0	0.3	0.0	0.0	2.4	1.2	0.0
	SVW-33	0.0	1.0	2.6	2.6	2.1	2.8	3.2	2.8	1.4	2.5
	SVW-34	0.0	0.0	0.1	0.3	0.3	0.35	2.7	4.1	0.0	0.0
	SVW-35	0.0	0.0	0.0	0.0	0.2	2.4	2.6	2.4	1.3	2.3
	SVW-36	-	-	-	-	-	-	-	-	1.0	-
	SVW-37	0.0	0.0	0.0	1.7	1.6	2.1	2.0	2.3	0.0	2.0
	SVW-38	-	-	-	-	-	-	-	-	-	-
11/20/98	SVW-25	-	-	-	0.3	-	5.0	-	-	2.1	-
	SVW-26	-	-	-	-	-	4.0	3.9	3.6	1.6	1.55
	SVW-27	-	-	-	0.4	1.7	2.4	3.8	3.4	1.5	2.8
	SVW-28	-	0.3	-	0.5	0.6	3.3	-	-	-	-
	SVW-32	-	-	-	-	0.3	-	-	2.5	1.1	-
	SVW-33	1.0	2.5	2.5	2.0	2.7	3.0	2.7	1.3	2.4	-
	SVW-34	-	-	0.1	0.2	0.3	0.5	2.6	3.9	-	-
	SVW-35	-	-	-	-	0.3	2.3	2.45	2.25	1.2	2.0
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	1.6	1.5	2.0	2.1	1.9	0.95	1.8
	SVW-38	-	-	-	-	-	-	-	-	-	-
11/23/98	SVW-25	-	-	-	0.3	-	5.0	-	-	2.1	-
	SVW-26	-	-	-	-	-	4.2	4.5	3.8	1.6	2.6
	SVW-27	-	-	-	0.25	1.7	2.3	3.9	3.5	1.6	2.8
	SVW-28	-	0.1	-	0.4	0.4	3.6	-	-	-	-
	SVW-32	-	-	-	-	-	-	-	-	-	-
	SVW-33	0.0	1.0	2.6	2.6	2.0	2.8	3.2	2.8	1.3	2.5
	SVW-34	-	-	0.0	0.2	0.2	0.3	2.5	4.0	-	-
	SVW-35	-	-	-	-	0.2	2.4	2.6	2.4	1.3	2.2
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	1.7	1.5	2.1	2.2	2.0	1.0	1.8
	SVW-38	-	-	-	-	-	-	-	-	-	-
12/8/99	SVW-25	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	1.4	0.0
	SVW-26	-	-	-	-	0.1	2.5	1.8	2.3	0.8	1.0
	SVW-27	-	-	-	-	1.2	1.4	2.2	2.0	0.9	1.5
	SVW-28	-	-	-	0.1	0.3	2.3	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.4	-
	SVW-33	-	0.1	1.2	1.4	1.0	1.4	1.5	1.5	0.6	1.1
	SVW-34	-	-	-	-	-	-	-	-	-	-
	SVW-35	-	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	-	-	-	-	-	-	-
	SVW-38	-	-	-	-	-	-	-	-	-	-
12/17/99	SVW-25	0.0	0.0	0.0	0.4	0.0	5.0	0.0	0.0	2.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	4.0	4.0	4.0	3.5	1.4	2.3
	SVW-27	-	-	-	0.3	1.6	2.2	3.5	3.0	1.2	2.3
	SVW-28	-	-	-	-	-	-	-	-	-	-
	SVW-32			0.1	0.3	0.3	0.0	0.15	2.2	1.0	0.0
	SVW-33	0.0	0.8	2.2	2.2	1.7	2.3	2.5	2.3	1.0	1.9
	SVW-34	0.0	0.0	0.0	0.0	0.0	0.4	2.3	3.8		

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-35	0.0	-	-	-	0.1	2.0	2.0	1.8	0.9	1.6
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	1.3	1.1	1.5	1.5	1.4	0.6	1.2
	SVW-38	-	-	-	-	-	0.9	1.1	1.0	0.5	0.8
12/23/98	SVW-25	-	-	-	0.1	-	0.7	-	-	0.0	-
	SVW-26	-	-	-		0.0	0.8	0.0	0.9	0.4	0.9
	SVW-27	-	-	-	0.3	0.5	0.7	1.0	0.0	0.0	0.7
8:40	SVW-28	-	-	-	0.2	0.15	0.25	-	-	-	-
8:40	SVW-32	-	-	-	-	-	0.0	0.0	0.9	0.4	-
	SVW-33	-	0.8	1.0	1.1	1	1.0	1.0	1.1	0.4	0.9
8:50	SVW-34	-	-	0.1	0.3	0.2	0.2	0.6	0.8	-	-
	SVW-35	-	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	0.8	0.8	1.0	1.0	1.0	0.5	0.9
	SVW-37	-	-	-	-	-	-	-	-	-	-
	SVW-38	-	-	-	-	-	-	-	-	-	-
12/23/98	SVW-25	-	-	-	0.0	-	4.1	-	-	1.4	-
	SVW-26	-	-	-	-	0.0	2.8	1.4	2.4	0.8	1.2
	SVW-27	-	-	-	0.9	0.9	1.2	1.8	0.8	0.7	1.0
	SVW-28	-	-	-	0.1	0.3	2.0	-	-	-	-
	SVW-32	-	-	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.0
	SVW-33	0.0	0.7	0.8	0.6	1.2	1.1	1.2	1.5	0.5	1.0
	SVW-34	-	-	0.0	0.0	0.0	0.0	1.2	2.2	-	-
	SVW-35	-	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	-		0.6	0.6	0.8	0.8	0.8	0.3	0.6
	SVW-38	-	-	-	-	-	-	-	-	-	-
12/24/98	SVW-25	-	-	-	0.3	-	5.0	-	-	2.4	-
	SVW-26	-	-	-	-	-	4.7	5.0	4.5	2.0	3.1
	SVW-27	-	-	-	0.3	2.0	2.6	4.6	4.0	1.7	3.0
	SVW-28	-	-	-	0.3	0.4	2.5	-	-	-	-
	SVW-32	-	-	-	-	-	-	-	3.0	1.3	-
	SVW-33		1.3	3.4	3.4	2.5	3.5	4.0	3.5	1.6	3.0
	SVW-34	0.1	0.0	0.1	0.3	0.3	0.4	2.9	4.7	-	-
	SVW-35		-	-	-	-	3.0	3.3	3.0	1.5	2.5
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	0.3	2.2	2.0	2.7	3.0	2.7	1.3	2.4
	SVW-38	-	-	-	0.1	0.0	0.9	2.5	2.3	1.1	1.8
12/30/98	SVW-25	-	-	-	0.4	-	5.0	-	-	2.0	-
	SVW-26	-	-	-	-	-	4.0	3.7	3.5	1.5	2.1
	SVW-27	-	-	-	0.3	1.8	2.4	3.7	3.3	1.3	2.4
	SVW-28	-	-	-	0.7	0.6	3.4	-	-	-	-
	SVW-32	-	-	-	0.3	0.3	0.0	0.0	2.5	1.0	0.0
	SVW-33	-	0.8	2.2	2.3	1.8	2.4	2.6	2.5	1.0	2.0
	SVW-34	-	-	0.2	0.3	0.3	0.4	2.5	4.0	-	-
	SVW-35	-	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	-	0.1	0.2	1.3	1.1	1.5	1.5	1.5	0.7	1.1
	SVW-38	-	-	-	-	-	-	-	-	-	-
1/6/99	SVW-25	-	-	-	-	-	5.0	-	-	2.0	-
	SVW-26	-	-	-	-	-	4.7	4.3	4.0	1.7	2.4
	SVW-27	-	-	-	0.2	1.6	2.4	4.1	3.6	1.2	2.6
	SVW-28	-	-	-	0.5	0.5	4.0	-	-	-	-
	SVW-32	-	-	-	0.0	0.2	-	-	2.2	1.0	-
	SVW-33	-	0.7	2.5	2.0	2.0	2.8	3.2	2.5	1.0	2.5
	SVW-34	-	-	-	0.2	0.1	0.2	2.5	4.3	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	1.6	1.5	2.0	2.0	2.0	1.0	1.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
1/13/99	SVW-25	-	-	-	-	-	5.0	-	-	2.2	-
	SVW-26	-	-	-	-	-	4.5	4.5	4.0	1.7	2.7
	SVW-27	-	-	-	0.2	1.8	2.4	4.0	3.5	1.2	2.7
	SVW-28	-	-	-	0.5	0.5	4.0	-	-	-	-
	SVW-32	-	-	-	0.0	0.2	-	-	2.3	1.0	-
	SVW-33	-	0.7	2.5	2.5	2.0	2.8	3.2	2.7	1.3	2.5
	SVW-34	-	-	0.0	0.2	0.1	0.2	2.7	4.3	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	-	0.0	0.0	1.7	1.5	2.0	2.1	1.9	1.0	1.8
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
1/21/99	SVW-25	-	-	-	0.4	0.0	5.0	-	2.0	-	-
	SVW-26	-	-	-	-	-	3.8	4.0	3.4	2.0	1.3
	SVW-27	-	-	-	0.2	1.5	2.0	3.2	0.2	0.9	2.25
	SVW-28	No Access	-	-	-	-	-	-	-	-	-
	SVW-32	-	-	-	-	-	-	-	2.0	0.8	-
	SVW-33	0.0	0.2	1.7	1.8	1.4	2.0	2.2	2.0	1.0	1.7
	SVW-34	No Access	-	-	-	-	-	-	-	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	-	-	-	1.0	1.0	1.2	1.2	1.1	0.5	0.9
	SVW-38	-	-	-	-	-	-	-	-	-	-
1/28/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0
	SVW-26	No Access	-	-	-	-	-	-	-	-	-
	SVW-27	0.0	0.0	0.0	0.2	0.3	0.5	0.6	0.6	0.0	0.5
	SVW-28	No Access	-	-	-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.0
	SVW-33	0.0	0.5	0.7	0.8	0.5	0.7	0.7	0.7	0.3	0.6
	SVW-34	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	No Access	-	-	-	-	-	-	-	-	-
	SVW-37	No Access	-	-	-	-	-	-	-	-	-
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
2/11/99	SVW-25	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	3.0	3.2	2.8	2.3	2.0
	SVW-27	0.0	0.0	0.0	0.1	1.4	1.7	2.7	0.0	0.0	2.0
	SVW-28	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.7	0.0
	SVW-33	0.0	0.6	2.0	2.1	1.7	2.1	2.4	2.2	0.0	2.0
	SVW-34	0.0	0.0	0.0	0.1	0.1	0.1	1.7	3.0	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	0.0	0.0	0.0	0.0	0.0	1.3	1.4	1.5	0.5	1.2
	SVW-37	No Access	-	-	-	-	-	-	-	-	-
	SVW-38	No Access	-	-	-	-	-	-	-	-	-
2/22/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-33	0.0	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.0
	SVW-34	No Access	-	-	-	-	-	-	-	-	-
	SVW-35	No Access	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	No Access	-	-	-	-	-	-	-	-	-
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.1
3/4/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
	SVW-36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/8/99	SVW-25	Closed for Sampling Work		-	-	-	-	-	-	-	-
	SVW-26	Closed for Sampling Work		-	-	-	-	-	-	-	-
	SVW-27	0.0	0.0	0.0	0.15	0.05	0.3	0.5	0.0	0.0	0.15
	SVW-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0
	SVW-33	0.4	0.5	0.7	0.8	0.6	0.7	0.7	0.0	0.0	0.6
	SVW-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.6
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	0.75	0.65	0.9	0.9	0.8	0.5	0.6
	SVW-38	Well Not Accessible (Inside Construction Area)				-	-	-	-	-	-
4/14/99	SVW-25	0.0	0.0	0.1	0.3	0.0	4.7	0.0	0.0	2.1	0.0
	SVW-26	Well Not Sampled Due to Construction				-	-	-	-	-	-
	SVW-27	0.0	0.0	0.0	0.3	1.4	1.8	2.7	0.7	0.0	1.9
	SVW-28	0.0	0.0	-	-	0.3	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.5	0.7	0.0
	SVW-33	0.5	0.0	1.0	1.2	0.8	1.3	1.5	0.0	0.0	1.2
	SVW-34	0.0	0.1	0.0	0.1	0.1	0.1	1.4	2.9	-	-
	SVW-35	0.0	0.0	0.0	0.1	0.1	0.8	0.7	0.7	0.3	0.1
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	Well Not Sampled (Car Parked Over Vault)				-	-	-	-	-	-
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/99	SVW-25	0.0	0.0	0.0	0.2	0.1	3.7	0.0	0.0	1.7	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.1	0.0
	SVW-27	0.0	0.0	0.0	0.2	1.1	1.5	2.2	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.1	0.1	0.0	1.1	0.5	0.0
	SVW-33	0.0	0.0	1.0	1.1	0.8	1.2	1.3	0.0	0.0	0.8
	SVW-34	0.0	0.1	0.0	0.1	0.1	0.1	1.5	2.4	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.1	0.9	1.0	0.9	0.5	0.9
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	0.5	0.4	0.5	0.5	0.4	0.2	0.0
	SVW-38	No readings taken (well covered by pipe inside work area).						-	-	-	-
4/29/99	SVW-25	0.0	0.0	0.0	0.4	0.0	4.5	0.0	0.0	2.2	0.0
	SVW-26	0.0	0.0	0.0	0.4	0.0	4.5	0.0	0.0	2.2	0.0
	SVW-27	-	-	-	-	-	-	-	-	-	-
	SVW-28	0.0	0.0	0.0	0.6	0.5	0.0	0.0	0.0	-	-
	SVW-32	-	-	-	-	-	-	-	-	-	-
	SVW-33	-	-	-	-	-	-	-	-	-	-
	SVW-34	0.0	0.0	0.1	0.4	0.3	0.4	2.3	3.4	-	-
	SVW-35	-	-	-	-	-	-	-	-	-	-
	SVW-36	-	-	-	-	-	-	-	-	-	-
	SVW-37	Did not sample remaining wells. Needed to shut down system.						-	-	-	-
	SVW-38	-	-	-	-	-	-	-	-	-	-
5/4/99	SVW-25	0.0	0.0	0.0	-	0.1	0.4	-	-	0.0	0.0
	SVW-26	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-27	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-33	0.0	0.4	0.5	0.6	0.5	0.5	0.4	0.0	0.0	0.4
	SVW-34	0.0	-	0.0	0.0	0.0	0.0	0.0	0.1	-	-
	SVW-35	Did Not Take Readings-- Car Parked Over Well					-	-	-	-	-
	SVW-36	0.0	0.1	0.2	0.3	0.2	-	-	-	-	-
	SVW-37	Car parked over well (no results).			-	-	-	-	-	-	-
	SVW-38	Well inaccessible-- inside construction area					-	-	-	-	-
5/6/99	SVW-25	0.0	0.0	0.0	-	0.1	5.0	-	-	3.5	-
	SVW-26	0.0	0.0	-	0.0	-	5.0	5.0	5.0	2.8	-
	SVW-27	0.0	0.0	0.0	0.5	2.2	3.1	5.0	0.0	0.0	0.0
	SVW-28	0.0	0.1	0.0	0.6	0.7	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.1	0.0	0.2	0.3	0.1	0.2	2.9	1.7	0.2
	SVW-33	0.3	0.7	3.1	3.2	2.4	3.5	4.0	0.0	0.0	3.4
	SVW-34	0.0	-	0.2	0.4	0.3	0.4	3.5	5.0	-	-
	SVW-35	Did not measure -- car parked over well					-	-	-	-	-
	SVW-36	0.0	0.1	0.2	0.3	0.3	-	-	-	-	-
	SVW-37	Did not measure -- car parked over well					-	-	-	-	-
	SVW-38	Well inaccessible -- inside construction zone					-	-	-	-	-
5/11/99	SVW-25	0.0	0.0	0.0	0.1	0.1	5.0	-	-	3.3	0.0
	SVW-26	0.0	0.0	-	0.0	-	4.8	5.0	4.5	2.5	-
	SVW-27	0.0	0.0	0.0	0.4	2.0	2.6	4.7	0.0	0.0	0.0
	SVW-28	Car parked over well (no results).			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.2	0.3	0.0	0.1	2.8	1.5	0.1
	SVW-33	1.5	0.4	2.5	2.6	2.0	2.9	3.4	0.0	0.0	0.0
	SVW-34	0.0	-	0.1	0.3	0.2	0.2	3.0	4.5	-	-
	SVW-35	0.0	0.1	0.0	0.2	0.2	2.3	2.4	2.2	1.3	2.2
	SVW-36	Did not take readings.			-	-	-	-	-	-	-
	SVW-37	0.0	0.0	0.1	1.4	1.3	1.7	1.8	1.6	0.0	0.0
	SVW-38	Well inaccessible -- inside construction zone					-	-	-	-	-
5/14/99	SVW-25	0.0	0.0	0.0	0.0	0.0	5.0	-	-	3.5	0.0
	SVW-26	0.0	0.0	-	0.0	-	5.0	5.0	5.0	2.7	-
	SVW-27	0.0	0.0	0.0	0.4	2.2	3.1	5.0	0.0	0.0	0.1
	SVW-28	0.0	0.0	0.0	0.6	0.8	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.2	0.4	0.0	0.0	3.2	1.7	0.1
	SVW-33	0.0	0.9	3.4	3.4	2.5	3.8	4.4	0.0	0.0	0.0
	SVW-34	0.0	-	0.1	0.4	0.3	0.4	3.6	5.0	-	-
	SVW-35	Car Parked Over Well			-	-	-	-	-	-	-
	SVW-36	0.0	0.0	0.0	0.2	0.2	-	-	-	-	-
	SVW-37	0.0	0.1	0.2	2.2	2.0	2.6	3.0	2.5	1.5	0.0
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.6	0.9	1.5	0.8	1.3
	SVW-39	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.3	-
5/20/99	SVW-25	0.0	0.0	0.0	0.5	0.0	5.0	0.0	0.0	3.5	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	2.7	0.0
	SVW-27	0.0	0.0	0.0	0.4	2.3	2.9	5.0	0.0	0.0	0.0
	SVW-28	Car Parked Over Well			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.1	0.3	0.0	0.0	3.4	1.7	0.0
	SVW-33	0.0	0.7	3.2	3.2	2.4	3.7	4.3	0.0	0.0	3.5
	SVW-34	0.0	-	0.2	0.5	0.3	0.5	3.8	5.0	-	-
	SVW-35	0.0	0.1	0.1	0.2	0.3	3.3	3.6	3.2	1.8	3.3
	SVW-36	0.0	0.0	0.0	0.2	0.1	-	-	-	-	-
	SVW-37	0.0	0.1	0.2	2.3	2.1	2.8	3.1	2.8	1.5	0.0
	SVW-38	Cannot Measure -- Well Inaccessible					-	-	-	-	-
	SVW-39	0.0	0.1	0.0	0.1	0.0	0.9	0.0	2.1	1.2	-
5/27/99	SVW-25	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-	0.0
	SVW-26	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	SVW-27	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
	SVW-28	Did not measure -- car parked over well.					-	-	-	-	-
	SVW-32	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
	SVW-33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-34	0.0	-	0.0	0.0	0.0	0.0	0.1	0.1	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.2	0.1	0.0
	SVW-38	Cannot Measure -- Well Inaccessible					-	-	-	-	-
	SVW-39	0.0	0.0	0.0	0.0	0.1	0.0	0.9*	0.0	0.1	-
6/1/99	SVW-25	0.0	0.0	0.0	0.7	0.0	5.0	0.0	0.0	1.7	0.0
	SVW-26	0.0	0.1	0.0	0.0	0.1	5.0	5.0	5.0	1.4	0.0
	SVW-27	0.0	0.1	0.6	0.7	2.4	3.1	5.0	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.9	0.8	0.0	0.0	0.0	-	-
	SVW-32	Did not measure.			-	-	-	-	-	-	-
	SVW-33	0.2	1.0	3.5	3.5	2.6	3.9	4.5	0.0	0.0	3.7
	SVW-34	0.0	0.1	0.2	0.4	0.4	0.5	3.7	5.0	-	-
	SVW-35	0.0	0.0	0.0	0.0	0.2	2.9	3.2	2.9	0.6	3.0
	SVW-36	Did not measure.			-	-	-	-	-	-	-
	SVW-37	0.0	0.1	0.1	2.1	1.9	2.5	2.7	2.5	0.4	2.3
	SVW-38	Did not measure -- well inaccessible.				-	-	-	-	-	-
	SVW-39	Did not measure.			-	-	-	-	-	-	-
6/7/99	SVW-25	0.0	0.0	0.0	0.5	0.1	5.0	0.0	0.0	3.3	0.0
	SVW-26	0.0	0.1	0.0	0.0	0.0	5.0	5.0	5.0	2.4	0.0
	SVW-27	0.0	0.0	0.2	0.4	2.2	2.7	5.0	4.2	0.0	0.0
	SVW-28	0.0	0.1	0.0	0.6	0.7	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.3	0.3	0.1	0.1	3.0	1.0	0.1
	SVW-33	0.0	0.7	3.0	3.0	1.6	3.4	4.0	0.0	0.0	3.2
	SVW-34	0.0	0.1	0.1	0.0	0.3	0.5	3.4	4.9	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.3	2.9	3.1	2.8	1.5	2.8
	SVW-36	0.0	0.0	0.2	0.2	0.2	-	-	-	-	-
	SVW-37	0.0	0.1	0.2	2.0	1.3	2.4	2.7	2.3	1.2	2.2
	SVW-38	Did not measure -- well inaccessible.					-	-	-	-	-
	SVW-39	Did not measure.				-	-	-	-	-	-
6/23/99	SVW-25	0.0	0.0	0.0	0.2	0.1	0.6	0.0	0.0	0.4	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.2	0.1	0.0	0.8	0.0	0.1	0.5
	SVW-28	Car parked over well.			-	-	-	-	-	-	-
	SVW-32	0.0	0.1	0.0	0.2	0.1	0.0	0.1	0.6	0.6	0.1
	SVW-33	0.3	0.4	0.7	0.8	0.5	0.8	0.8	0.1	0.0	0.7
	SVW-34	0.0	0.1	0.0	0.1	0.1	0.1	0.5	0.7	-	-
	SVW-35	Car parked over well.			-	-	-	-	-	-	-
	SVW-36	0.0	0.1	0.1	0.3	0.2	-	-	-	-	-
	SVW-37	0.0	0.1	0.1	0.8	0.5	0.8	0.9	0.8	0.3	0.9
	SVW-38	Well inaccessible.			-	-	-	-	-	-	-
	SVW-39	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.5	-
7/1/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-	-
	SVW-35	Did not measure- car parked over well.				-	-	-	-	-	-
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	0.0	0.0	0.0	0.3	0.1	0.2	0.3	0.3	0.0	0.0
	SVW-38	Did not measure- well inaccessible.				-	-	-	-	-	-
	SVW-39	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.7	0.6	-
7/7/99	SVW-25	0.0	0.0	0.0	0.6	0.0	5.0	0.0	0.0	5.0	0.0
	SVW-26	0.0	0.1	0.0	0.0	0.0	0.0	5.0	4.9	4.2	0.0
	SVW-27	0.0	0.0	0.0	0.6	0.8	3.0	5.0	0.0	0.0	3.6
	SVW-28	Did not measure-car parked over well.				-	-	-	-	-	-

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-32	0.0	0.1	0.2	0.3	0.1	0.0	0.0	3.3	2.8	0.0
	SVW-33	0.0	1.0	3.2	3.2	1.4	3.5	4.1	0.0	0.0	3.2
	SVW-34	0.0	0.2	0.1	0.4	0.3	0.5	3.4	4.8	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.3	2.8	3.1	2.8	2.7	2.7
	SVW-36	0.0	0.3	0.5	0.7	0.2	-	-	-	-	-
	SVW-37	0.0	0.2	0.3	2.0	0.9	2.4	2.7	2.3	2.3	2.2
	SVW-38	Truck obstructing well - cannot take reading.					-	-	-	-	-
	SVW-39	0.0	0.0	0.0	0.2	0.0	0.7	1.8	0.0	1.7	-
7/13/99	SVW-25	0.0	0.0	0.0	0.6	0.0	5.0	0.0	0.0	4.8	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.4	3.6	0.0
	SVW-27	0.0	0.0	0.3	0.5	1.3	2.4	4.6	0.0	0.0	3.3
	SVW-28	Did not measure -- car parked over well					-	-	-	-	-
	SVW-32	0.0	0.0	0.1	0.3	0.2	0.1	0.0	2.9	2.5	0.0
	SVW-33	0.2	0.7	2.3	2.8	1.1	3.1	3.6	0.0	0.0	2.9
	SVW-34	0.0	0.2	0.2	0.4	0.2	0.5	2.8	4.4	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.2	2.4	2.7	2.4	2.3	2.4
	SVW-36	0.0	0.2	0.3	0.5	0.2	-	-	-	-	-
	SVW-37	0.0	0.1	0.2	1.8	1.7	2.1	2.1	2.0	2.0	2.0
	SVW-38	0.0	0.1	0.1	0.2	0.0	1.5	1.7	1.6	1.5	1.5
	SVW-39	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.3	-
7/15/99	SVW-25	0.0	0.0	0.0	0.5	0.0	5.0	0.0	0.0	5.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.8	3.8	0.0
	SVW-27	0.0	0.0	0.0	0.6	1.5	2.9	5.0	0.0	0.0	3.6
	SVW-28	Cannot measure-- car parked over well					-	-	-	-	-
	SVW-32	0.0	0.0	0.1	0.4	0.3	0.1	0.1	3.2	2.8	0.0
	SVW-33	0.6	0.9	3.2	3.3	2.4	3.6	4.1	0.0	0.0	3.2
	SVW-34	0.0	0.1	0.1	0.4	0.2	0.5	2.9	4.9	-	-
	SVW-35	0.0	0.0	0.0	0.3	0.2	2.9	3.2	2.8	2.7	2.8
	SVW-36	0.0	0.3	0.5	0.7	0.5	-	-	-	-	-
	SVW-37	0.0	0.1	0.2	2.6	1.3	2.5	2.8	2.5	2.0	2.3
	SVW-38	Cannot measure-- car parked over well					-	-	-	-	-
	SVW-39	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.8	0.0
7/21/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.1	0.1	0.0	0.5	0.0	0.0	0.3
	SVW-28	Car parked over well			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0
	SVW-33	0.0	0.1	0.4	0.6	0.2	0.5	0.6	0.0	0.0	0.5
	SVW-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-	-
	SVW-35	0.0	0.0	0.0	0.1	0.0	0.5	0.6	0.5	0.5	0.5
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	Car parked over well			-	-	-	-	-	-	-
	SVW-38	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.4
	SVW-39	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	-
7/30/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	4.9	4.2	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.4	1.6	2.5	4.1	3.2	0.0	2.8
	SVW-28	0.0	0.0	0.0	0.6	0.3	0.0	0.3	0.0	-	-
	SVW-32	0.0	0.0	0.0	0.2	0.3	0.0	0.0	2.5	2.1	0.0
	SVW-33	0.0	0.5	1.3	2.4	0.6	2.6	2.9	0.0	0.0	2.2
	SVW-34	0.0	0.2	0.0	0.4	0.0	0.5	2.8	4.2	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.2	2.2	2.4	2.2	2.1	2.1
	SVW-36	0.0	0.0	0.1	0.1	0.1	-	-	-	-	-
	SVW-37	Car parked over well			-	-	-	-	-	-	-
	SVW-38	0.0	0.0	0.0	0.0	0.0	1.2	1.4	1.3	1.3	1.2
	SVW-39	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.1	-
8/5/99	SVW-25	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	4.8	0.0
	SVW-26	0.0	0.0	0.0	0.2	0.0	0.0	5.0	4.4	0.0	0.0

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
	SVW-27	0.0	0.0	0.0	0.5	1.8	2.8	4.6	0.0	0.0	3.3
	SVW-28	0.0	0.0	0.0	0.6	0.4	0.0	0.0	0.0	-	-
	SVW-32	0.0	0.0	0.1	0.3	0.3	0.0	0.0	2.9	2.5	0.0
	SVW-33	0.0	0.7	2.7	2.8	0.9	3.1	3.4	0.0	0.0	2.7
	SVW-34	0.0	0.7	0.0	0.4	0.0	0.5	3.1	4.5	-	-
	SVW-35	0.0	0.0	0.0	0.1	0.2	2.4	2.6	2.3	2.2	2.3
	SVW-36	0.0	0.1	0.3	0.4	0.1	-	-	-	-	-
	SVW-37	Car parked over well			-	-	-	-	-	-	-
	SVW-38	0.0	0.0	0.0	0.1	0.0	1.4	1.7	1.5	1.5	1.4
	SVW-39	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.3	-
8/11/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.8	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.4	1.0	2.8	4.9	3.3	0.0	3.4
	SVW-28	Car parked over well			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.2	0.1	0.0	0.0	3.0	2.6	0.0
	SVW-33	0.0	0.9	3.1	3.2	2.1	3.4	3.9	0.0	0.0	3.0
	SVW-34	0.0	0.0	0.0	0.4	0.0	0.5	3.4	5.0	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.3	3.0	3.4	3.0	2.9	2.8
	SVW-36	0.0	0.2	0.3	0.4	0.0	-	-	-	-	-
	SVW-37	Car parked over well			-	-	-	-	-	-	-
	SVW-38	0.0	0.0	0.1	0.2	0.0	2.0	2.5	2.3	2.2	2.2
	SVW-39	0.0	0.0	0.0	0.1	0.0	1.4	2.0	0.1	2.0	-
8/20/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.7	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.5	0.8	2.9	4.8	3.5	0.0	3.3
	SVW-28	Car parked over well			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.1	0.4	0.2	0.1	0.3	3.1	2.7	0.0
	SVW-33	0.0	0.8	3.0	3.0	1.7	3.3	3.8	0.0	0.0	3.0
	SVW-34	0.0	0.0	0.0	0.4	0.1	0.5	3.1	4.7	-	-
	SVW-35	0.0	0.1	0.1	0.3	0.2	2.8	3.1	2.7	2.7	2.7
	SVW-36	0.0	0.2	0.3	0.5	0.2	-	-	-	-	-
	SVW-37	Car parked over well			-	-	-	-	-	-	-
	SVW-38	0.0	0.1	0.2	0.3	0.0	1.9	2.2	2.0	1.9	1.9
	SVW-39	0.0	0.1	0.0	0.2	0.0	1.3	1.1	0.0	1.7	-
9/15/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.5	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.2	0.4	1.1	2.4	0.0	0.0	1.3
	SVW-28	-	-	-	-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.4	0.0
	SVW-33	0.0	0.3	1.4	1.6	1.1	1.7	1.9	0.0	0.0	1.6
	SVW-34	0.0	0.1	0.0	0.0	0.1	0.2	1.5	2.3	-	-
	SVW-35	0.0	0.1	0.1	0.1	0.0	1.6	1.7	1.6	1.5	0.0
	SVW-36	0.0	0.0	0.1	0.1	0.1	-	-	-	-	-
	SVW-37	-	-	-	-	-	-	-	-	-	-
	SVW-38	0.0	0.1	0.1	0.1	0.0	1.1	1.1	1.2	1.1	1.1
	SVW-39	0.0	0.0	0.0	0.2	0.0	0.9	0.4	0.0	1.1	-
9/22/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.8	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.2	0.6	1.8	2.7	0.0	0.0	2.0
	SVW-28	Car parked over well.			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.2	0.1	0.0	0.0	1.9	1.7	0.1
	SVW-33	0.0	0.4	1.6	1.7	0.5	1.9	2.1	0.0	0.0	1.8
	SVW-34	0.0	0.1	0.0	0.0	0.1	0.3	1.6	2.5	-	-
	SVW-35	Car parked over well.			-	-	-	-	-	-	-
	SVW-36	0.0	0.0	0.1	0.2	0.1	-	-	-	-	-
	SVW-37	Car parked over well.			-	-	-	-	-	-	-
	SVW-38	0.0	0.1	0.1	0.2	0.0	1.1	1.4	1.4	1.3	1.2
	SVW-39	0.0	0.0	0.0	0.0	0.1	1.0	0.4	0.0	1.1	-

TEST 3: MONITORING WELL DATA

DATE	WELL	PROBE									
		A	B	C	D	E	F	G	H	I	J
9/29/99	SVW-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVW-27	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	2.4
	SVW-28	Car parked over well.			-	-	-	-	-	-	-
	SVW-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0
	SVW-33	0.0	0.0	0.3	0.5	0.1	0.4	0.4	0.0	0.0	0.4
	SVW-34	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.6	-	-
	SVW-35	Car parked over well.			-	-	-	-	-	-	-
	SVW-36	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
	SVW-37	Car parked over well.			-	-	-	-	-	-	-
	SVW-38	0.0	0.1	0.1	0.2	0.0	0.7	0.9	0.8	0.7	0.8
	SVW-39	0.0	0.0	0.0	0.1	0.0	0.6	0.4	0.0	0.7	-

* average of readings taken over 5 minute period

ATTACHMENT 6

TEST 3: LABORATORY RESULTS

TEST 3: LABORATORY RESULTS

		LABORATORY SAMPLES - EPA 8010 + FREON 113 / EPA 8020															
		WELL SCREEN(S)[b]									CARBON VESSEL EFFLUENT						
		B			C			BC			Primary 1		Primary 2		Secondary[c]	
DATE SAMPLED	TIME	Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113[d]	Carbon Tetrachloride	Freon 113[d]	Carbon Tetrachloride	Freon 113[d]
		mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3
11/2/98	10:50	-	-	-	-	-	-	41	0	0	-	-	-	-	-	-
11/3/98	9:00	100	0	0	86	0	0	61	0	0	-	-	-	-	-	-
11/4/98	8:00	-	-	-	-	-	-	110	11	0	-	-	-	-	-	-
11/5/98	8:30	-	-	-	-	-	-	120	13	0	-	-	-	-	-	-
11/5/98[a]	8:30	-	-	-	-	-	-	100	12	0	-	-	-	-	-	-
11/6/99	8:00	-	-	-	-	-	-	100	12	0	-	-	-	-	-	-
11/9/98	9:30	95	0	0	70	0	0	91	0	0	-	-	-	-	-	-
11/10/98	9:00	-	-	-	-	-	-	76	10	0	-	-	-	-	-	-
11/11/98	9:00	-	-	-	-	-	-	76	9.8	0	-	-	-	-	-	-
11/12/98	9:00	-	-	-	-	-	-	73	0	0	-	-	-	-	-	-
11/13/98	9:00	-	-	-	-	-	-	75	9.2	0	-	-	-	-	-	-
11/13/98[a]	9:00	-	-	-	-	-	-	59	8.1	0	-	-	-	-	-	-
11/16/98	9:00	70	9.5	0	56	8.5	0	67	8.9	0	-	-	-	-	-	-
11/18/98	9:00	-	-	-	-	-	-	60	8.2	0	-	-	-	-	-	-
11/19/98	10:00	-	-	-	-	-	-	55	7.2	0	-	-	-	-	-	-
11/19/98[a]	10:00	-	-	-	-	-	-	53	6.8	0	-	-	-	-	-	-
11/20/98	8:30	-	-	-	-	-	-	68	7.9	0	-	-	-	-	-	-
11/23/98	9:00	-	-	-	-	-	-	51	6.7	0	0	0	0	0	-	-
12/4/98	7:00	-	-	-	-	-	-	48	8.6	0	0	0	0	6.1	-	-
12/8/98	7:30	41	6.9	0	30	5.9	5.1	32	5.6	0	0	11	0	11	-	-
12/14/98	11:30	-	-	-	-	-	-	36	6.1	0	-	-	-	-	-	-
12/23/98	13:00	-	-	-	-	-	-	35	5.3	0	-	-	-	-	-	-
12/30/98	13:00	-	-	-	-	-	-	30	5	0	-	-	-	-	-	-
12/30/98[a]	13:00	-	-	-	-	-	-	31	0	0	-	-	-	-	-	-
1/6/99	9:30	-	-	-	-	-	-	16	0	0	-	-	-	-	-	-
1/13/99	11:00	-	-	-	-	-	-	22	0	0	-	-	-	-	-	-
1/13/99[a]	11:00	-	-	-	-	-	-	19	0	0	-	-	-	-	-	-
1/13/99	4:00	-	-	-	-	-	-	-	-	-	0	10	0	15	-	-
1/21/99	11:00	-	-	-	-	-	-	24	0	0	0	10	7.6	12	0	0
2/11/99	11:30	-	-	-	-	-	-	15	0	0	-	-	-	-	0	8.7
3/31/99	13:45	20	0	0	8.6	0	0	-	-	-	-	-	-	-	-	-
4/8/99	12:30	-	-	-	-	-	-	13	-	-	0	0	0	0	-	-
4/14/99	12:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-	-
4/29/99	8:25	-	-	-	-	-	-	0	0	0	-	-	-	-	-	-

TEST 3: LABORATORY RESULTS

DATE SAMPLED	TIME	WELL SCREEN(S)[b]									CARBON VESSEL EFFLUENT					
		B			C			BC			Primary 1		Primary 2		Secondary[c]	
		Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113	TCE[d]	Carbon Tetrachloride	Freon 113[d]	Carbon Tetrachloride	Freon 113[d]	Carbon Tetrachloride	Freon 113[d]
5/4/99	13:25	-	-	-	-	-	-	7.6	0	0	-	-	-	-	-	-
5/4/99[a]	14:50	-	-	-	-	-	-	12	2.7	2.7	-	-	-	-	-	-
5/6/99	11:00	-	-	-	-	-	-	12	3.2	2.7	-	-	-	-	-	-
5/11/99	11:05	-	-	-	-	-	-	8.3	0	0	-	-	-	-	-	-
5/14/99	11:25	-	-	-	-	-	-	8.5	0	2	0	3.1	0	3.1	-	-
5/20/99	10:25	-	-	-	-	-	-	6.8	0	0	0	0	0	0	-	-
5/27/99	15:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-	-
5/27/99	16:45	-	-	-	-	-	-	0	0	0	0	0	0	0	-	-
6/1/99	9:50	-	-	-	-	-	-	9.3	2.2	3.2	3.7	4.2	3.4	3.3	-	-
6/7/99	10:50	-	-	-	-	-	-	6.7	0	2.2	6.2	2.4	4.5	2	-	-
7/1/99	13:35	-	-	-	-	-	-	0	0	0	0	0	0	0	-	-
7/1/99	15:55	-	-	-	-	-	-	3	0	0	-	-	-	-	-	-
7/1/99	16:04	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-
7/7/99	11:45	-	-	-	-	-	-	6.8	0	0	0	0	0	0	-	-
7/7/99[a]	11:50	-	-	-	-	-	-	6.9	0	0	-	-	-	-	-	-
7/13/99	8:30	-	-	-	-	-	-	6	0	0	0	0	0	0	-	-
7/15/99	9:10	-	-	-	-	-	-	6.2	0	2.1	0	0	0	0	-	-
7/27/99	11:00	-	-	-	-	-	-	8.7	0	2	-	-	-	-	-	-
7/27/99	13:00	-	-	-	-	-	-	7	0	0	-	-	-	-	-	-
7/30/99	9:25	-	-	-	-	-	-	6	0	2	0	0	0	0	-	-
8/5/99	9:12	-	-	-	-	-	-	5.4	0	0	0	0	0	0	-	-
8/5/99[a]	9:14	-	-	-	-	-	-	5.5	0	0	-	-	-	-	-	-
8/11/99	9:10	-	-	-	-	-	-	5.9	0	0	0	3	0	0	-	-
8/20/99	9:13	-	-	-	-	-	-	5.8	0	0	0	0	0	0	-	-
8/25/99	9:15	5.9	0	0	4.2	0	2.3	5.2	0	0	0	0	0	0	-	-
9/8/99	9:05	-	-	-	3.5	0	0	5.5	0	0	-	-	-	-	-	-
9/15/99	8:50	-	-	-	2.9	0	0	-	-	-	-	-	-	-	-	-
9/15/99	9:20	-	-	-	3.2	0	0	-	-	-	-	-	-	-	-	-
9/22/99	9:10	-	-	-	4	0	0	-	-	-	0	0	0	0	-	-

Notes:

a. Duplicate samples

b. Only well screens B, C and BC were in operation during Test 3

c. There is only one secondary effluent stream which is the final effluent stream of the SVE system

d. Lab results for TCE and 1,1-DCE are assumed to be non-detect unless otherwise stated

ATTACHMENT 7

CARBON ANALYSES RESULTS

U.S. FILTER

UNITED STATES FILTER CORPORATION

FAX

U.S. FILTER/WESTATES
5375 S. Boyle Avenue
Los Angeles, CA 90058

TELEPHONE 213.277.4163
FACSIMILE 213.277.4184

TO: Vittal Hosangadi

CC: Foster Wheeler

FAX: 714-444-5560 TEL: 714-444-5537

FROM: Debbie Ringo DATE: 9-14-98 PAGE 1 OF 2

PROJECT: J.P.L. - Pasadena

We have ran a VM/XM on your spent carbon sampled on 8/19/98, see attached report.

The VM – Volatile Matter is Wt % loading on an as received basis and indicates to you and us if this is a "normal" loading capacity.

The XM – Xylene Moisture is Wt % loading on an as received basis of Moisture adsorbed on the carbon. If the XM % loading is high on Vapor Phase Carbon, this is an indicator that will affect higher loading of organics on the carbon. (In the majority of vapor phase applications, we recommend the influent R/H be below 50%. This does not include most impregnated carbon or other specialty applications. Please call your representative.)

Your test indicates:

VM: 44.6 wt% loading -- g VM/100 g GAC
( ) Fair
(✓) Good
( ) Excellent

XM: 0.40 wt% loading -- as received basis
( ) Fair
(✓) Good
( ) Excellent
( ) Too High

( ) If checked, please call me regarding this report to further discuss your application.

THIS TRANSMISSION CONTAINS CONFIDENTIAL INFORMATION INTENDED FOR USE ONLY BY THE ABOVE NAMED RECIPIENT READING, DISCUSSION, DISTRIBUTION, OR COPYING OF THIS MESSAGE IS STRICTLY PROHIBITED BY ANYONE OTHER THAN THE NAMED RECIPIENT OR HIS OR HER EMPLOYEES OR AGENTS. IF YOU HAVE RECEIVED THIS FAX IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE (COLLECT), AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA U.S. POSTAL SERVICE.

U.S. FILTER

U.S. FILTER/WESTATES
5375 SOUTH BOYLE AVENUE
LOS ANGELES CA 90058
TELEPHONE 213 277 1600
FACSIMILE 213-277-4184

ANALYTICAL REPORT

LAB No.:	8265	ORDER No.:	4926-OA
CUSTOMER:	JPL 4800 Oak Grove Dr. Pasadena, CA	DATE SAMPLED:	8/19/98
		DATE RECEIVED:	8/20/98
		DATE ANALYZED:	9/10/98
CONTACT:	Debbie Ringo	DATE REPORTED:	9/11/98
TELEPHONE:	323-277-4163	SITE:	
SAMPLED BY:	Juan Lopez	CONTACT:	
SUBMITTED BY:	Juan Lopez	TELEPHONE:	

SAMPLE I.D.	METHOD ASTM D 3175 VOLATILE MATTER (VM)		METHOD ASTM D 2867 XYLENE MOISTURE (XM)
	AS Received (Wt%)	g VM / 100 g GAC (Wt%)	(Wt%)
Vapor Phase Carbon	30.7	44.6	0.40

COMMENTS:

Q.C. SUPERVISOR

DATE

APPENDIX B

COST ESTIMATES

TABLE B-1
Remedial Alternative 1 - No Action
Capital and O&M Worksheet

Prepared By: VSH
Checked By:
Date: 10/28/99

CAPITAL COST $ -

O&M COST

Annual Monitoring Cost Estimate

The soil vapor monitoring probes will be sampled, and samples will be analyzed on-site using a mobile laboratory

Field Program	Qty	Unit	Unit Cost	Item Cost	Comments
Sampling and O & M					
1) Labor	10	person days	1000	$ 10,000	
2) Equipment Rental	10	days	200	$ 2,000	
3) Laboratory	10	days	2500	$ 25,000	Mobile Laboratory
4) Other ODCs	1	event	2,000	$ 2,000	Miscellaneous per event
Field Program Subtotal				**$ 39,000**	

Reporting	Qty	Unit	Unit Cost	Item Cost	Comments
1) Data Analysis	80	hour	100	$ 8,000	
2) Reporting	40	hour	100	$ 4,000	
Analysis and Reporting Subtotal				**$ 12,000**	

TOTAL MONITORING COST PER EVENT = $ 51,000

Notes:

5-Year Review Cost Estimate

Item	Qty	Unit	Unit Cost	Item Cost	Comments
Effectiveness Rvw & Report	80	hour	100	8,000	per Section 121 (c) of CERCLA
Other Direct Cost				3,000	Misc.Expenses & Travel for Review & Report
TOTAL 5-YR REVIEW COST				11,000	

TABLE B-2
Remedial Alternative 1 - No Action

Prepared By: vsh
Checked By:
Date: 10/28/99

Present Worth Analysis Worksheet

Source: Perry's 5th Ed.Table 25.36

PW	na	Present Worth
P	na	Principal
FW	na	Current Dollar amount of a future year cashflow
S	na	Total sum of Principal (P) and Interest (i)
i	0.05	Discount rate as Interest compounded.
n	na	Period in Years or Year of the Future Cashflow
PWf	na	Present Worth Factor - Applied to a future Sum S to obtain PW

PW = FW/(1+i)^n

Calculate PW for multiple Years (n) in Table at Int (i) as entered above.

Year	Capital	5-Yr Rvw	Monitoring	CashFlow (FW)	PW
1			204,000	204,000	194,286
2			204,000	204,000	185,034
3			204,000	204,000	176,223
4			204,000	204,000	167,831
5		11,000	204,000	215,000	168,458
6			51,000	51,000	38,057
7			51,000	51,000	36,245
8			51,000	51,000	34,519
9			51,000	51,000	32,875
10		11,000	51,000	62,000	38,063
11			51,000	51,000	29,819
12			51,000	51,000	28,399
13			51,000	51,000	27,046
14			51,000	51,000	25,758
15		11,000	51,000	62,000	29,823
16			51,000	51,000	23,364
17			51,000	51,000	22,251
18			51,000	51,000	21,192
19			51,000	51,000	20,182
20		11,000	51,000	62,000	23,367
21			51,000	51,000	18,306
22			51,000	51,000	17,434
23			51,000	51,000	16,604
24			51,000	51,000	15,813
25		11,000	51,000	62,000	18,309
26			51,000	51,000	14,343
27			51,000	51,000	13,660
28			51,000	51,000	13,010
29			51,000	51,000	12,390
30		11,000	51,000	62,000	14,345
Totals	-	66,000	2,295,000	2,361,000	1,477,007

TABLE B-3
Remedial Alternative 2 - SVE +GAC + Monitoring
Capital and O&M Worksheet

Prepared By: VSH
Checked By:
Date: 10/28/99

CAPITAL COST	Qty	Unit	Unit Cost	Item Cost	
Well Installation					
Driller	1000	lf	$ 125	$ 125,000	5 new wells
Mob/Demob	2	ea	$ 4,000	$ 8,000	
Equipment Rental	25	days	$ 500	$ 12,500	
Labor	60	persondays	$ 1,000	$ 60,000	
Soil Bins/Water Tanks	1	ls	$ 10,000	$ 10,000	
Soil Disposal	39.25	tons	$ 100	$ 3,925	Based on 1 foot dia hole
ODCs	1	ls	$ 25,000	$ 25,000	
Vapor Extraction and Treatment Equipment					
Blower package	5	ea	$ 30,000	$ 150,000	
Carbon vessels	20	ea	$ 7,000	$ 140,000	
Piping Manifolds	5	ls	$ 10,000	$ 50,000	
Fence	5	ea	$ 3,000	$ 15,000	
ODCs	5	ea	$ 5,000	$ 25,000	
Subtotal Capital				$ 624,425	
Design/Construction Management (15%)				$ 93,664	
Contingency (25%)				$ 156,106	
Total				$ 874,195	

O&M COST

Annual Operating and Maintenance Cost Estimate

Field Program	Qty	Unit	Unit Cost	Item Cost	
1) Labor	60	person days	$ 800	$ 48,000	
2) Equipment Rental	30	days	$ 200	$ 6,000	
3) Laboratory	120	samples	$ 160	$ 19,200	EPA 8010/8020, Tedlar Bags
4) Carbon	80000	lbs	$ 1.50	$ 120,000	Assume 4 changes of 10 vessels, ea 2000lbs
4) Electricity	840960	kWh	$ 0.10	$ 84,096	
4) Other ODCs	12	month	$ 1,000	$ 12,000	
Field Program Subtotal				**$ 289,296**	

Reporting	Qty	Unit	Unit Cost	Item Cost	
1) Data Analysis	300	hour	$ 100	$ 30,000	
2) Reporting	100	hour	$ 100	$ 10,000	
Analysis and Reporting Subtotal				**$ 40,000**	

TOTAL COST PER YEAR = **$ 329,296**

Notes:

5-Year Review Cost Estimate

Item	Qty	Unit	Unit Cost	Item Cost	Comments
Effectiveness Rvw & Report	80	hour	$ 100	$ 8,000	per Section 121 (c) of CERCLA
Other Direct Cost				$ 3,000	Misc.Expenses & Travel for Review & Report

TOTAL 5-YR REVIEW COST $ 11,000

TABLE B-4
Remedial Alternative 2 - SVE +GAC + Monitoring

Prepared By: VSH
Checked By:
Date: 10/28/99

Present Worth Analysis Worksheet

Source: Perry's 5th Ed.Table 25.36

PW	na	Present Worth
P	na	Principal
FW	na	Current Dollar amount of a future year cashflow
S	na	Total sum of Principal (P) and Interest (i)
i	0.05	Discount rate as Interest compounded.
n	na	Period in Years or Year of the Future Cashflow
PWf	na	Present Worth Factor - Applied to a future Sum S to obtain PW

PW = FW/(1+i)^n

Calculate PW for multiple Years (n) in Table at Int (i) as entered above.

Year	Capital	5-Yr Rvw	O&M+Monitoring	CashFlow (FW)	PW
1	874,195		533,296	1,407,491	1,340,468
2			533,296	533,296	483,715
3			533,296	533,296	460,681
4			533,296	533,296	438,744
5		11,000	533,296	544,296	426,470
6			51,000	51,000	38,057
7			51,000	51,000	36,245
8			51,000	51,000	34,519
9			51,000	51,000	32,875
10		11,000	51,000	62,000	38,063
11			51,000	51,000	29,819
12			51,000	51,000	28,399
13			51,000	51,000	27,046
14			51,000	51,000	25,758
15		11,000	51,000	62,000	29,823
16			51,000	51,000	23,364
17			51,000	51,000	22,251
18			51,000	51,000	21,192
19			51,000	51,000	20,182
20		11,000	51,000	62,000	23,367
21			51,000	51,000	18,306
22			51,000	51,000	17,434
23			51,000	51,000	16,604
24			51,000	51,000	15,813
25		11,000	51,000	62,000	18,309
26			51,000	51,000	14,343
27			51,000	51,000	13,660
28			51,000	51,000	13,010
29			51,000	51,000	12,390
30		11,000	51,000	62,000	14,345
Totals	874,195	66,000	3,941,480	4,881,675	3,735,253

APPENDIX C

GENERAL APPROACH TO DESIGN, OPERATION, AND CLOSURE - SOIL VAPOR EXTRACTION AT OPERABLE UNIT 2

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GENERAL APPROACH TO DESIGN, OPERATION, AND CLOSURE - SOIL VAPOR EXTRACTION AT OPERABLE UNIT 2

The SVE system at OU-2 will be designed based on the results of the OU-2 pilot study to provide adequate coverage of VOC-impacted areas. Specifically, the radius of remediation influence (RORI) and the pore volume exchange rate (PVER) will be used to establish the required number of wells. As discussed in Appendix A, a RORI of 400 feet was observed during the pilot test. The area of impact (Section 3.2) is approximately 2.14×10^6 ft^2. The minimum number of wells based on RORI can then be estimated using the following equation:

$$N_{well} = \text{Area of impact} \div (\pi \times \text{RORI}^2) \quad (1)$$

Based on Equation (1), the minimum number of wells required is 4.26. To allow sufficient overlap, six wells are assumed to be required. Assuming that the lower screens (total of a 100 feet) will be operated for the majority of the remediation duration, and based on the observation during the pilot test that impact on shallow zones during extraction from deeper screens is minimal, the soil volume (SV) impacted by the remediation would be:

$$SV = \text{Area of Impact} \times 100 \text{ feet} = 2.14 \times 10^8 \text{ ft}^2 \quad (2)$$

The pore volume (PV) of the impacted soil can be estimated using the following equation:

$$PV = SV \times n \quad (3)$$

Where:

n = porosity = 0.35

Based on Equations (2) and (3), the PV of impacted soil = $0.35 \times 2.14 \times 10^8 = 7.49 \times 10^7$ ft^3

Based on an average flow of 350 cubic feet per minute (cfm) per well, the PVER would be:

$$PVER = PV \div (N_{well} \times 350) \quad (4)$$

Based on Equation (4), the PVER = 25 days.

Thus, 25 days would be required to exchange one pore volume of impacted soil, which is reasonable. It should be noted that in Equation (4), PV is assumed to be based on Equation (3). In reality, the actual PV impacted by the six wells may be higher, which would result in a greater PVER.

Each well will be provided with extraction equipment capable of extracting up to 500 standard cubic feet per minute (scfm) and exerting vacuums on the order of 100 inches water (in. H_2O). Depending on the locations of the wells, multiple wells may be extracted from using a single extraction blower. Alternately, a single blower may be trailer-mounted and moved between locations. The exhaust from the blower would be treated using vapor-phase GAC.

System effectiveness will be verified based on the following system effectiveness criteria (SEC):

1. SEC-1: Adequate flow rate from extraction wells.
2. SEC-2: Adequate vacuum responses in soil vapor monitoring probes.
3. SEC-3: Part (i) reduction in VOCs in extracted soil vapor (at least 90 percent) **and** Part (ii) achievement of asymptotic levels in extracted soil vapor.

The above criteria will all have to be met for all extraction wells.

The SVE system will be operated until the following preclosure criteria (PC) have been met:

1. PC-1: VOC concentrations in monitoring probes (when system has not been in operation for at least 1 week prior to sampling) are significantly reduced compared to initial concentrations (at least 80 percent reduction[1] compared to start of operations), **and**
2. PC-2: The above VOC concentrations in monitoring probes have reached an asymptotic level.

These criteria will be evaluated during the course of operation using the data obtained during the quarterly soil-vapor monitoring program.

When SEC-1, 2, 3 and PC-1 and 2 have been met, additional extraction is not expected to achieve significant VOC removals and the site is expected to be approaching cleanup. Closure activities will then be initiated as described below.

In accordance with RWQCB guidelines for site assessment and remediation (RWQCB, 1996), the SVE system will be temporarily shut down, and VOC concentrations in the extraction wells and monitoring probes will be monitored. These concentrations will serve as the baseline. The following closure criterion (CC) will be evaluated:

CC-1: The "screening concentration" will be estimated for different depths in accordance with Appendix A of the RWQCB guidelines. It should be noted that the "screening concentrations" will be in terms of soil vapor concentrations as opposed to soil concentrations. Appendix A of the RWQCB guidance provides a method for estimating soil screening concentrations. It also provides a method for estimating soil vapor

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[1] The exact percentage of reduction will have to be discussed.

concentrations, which will be used to convert the soil screening concentration to a soil vapor screening concentration. The soil vapor in the monitoring probes will be monitored for at least 1 year. If the "rebound" in successive tests (i.e., the increase compared to the preceding event) does not exceed 50 percent of the "soil gas screening concentration" (SCSG), it will be assumed that cleanup has been approached.

While the guidance indicates that soil matrix sampling will be required to confirm cleanup (this would have been CC-2), depth of contamination, drilling conditions, and past regulatory direction from RWQCB (which has disallowed soil sampling at JPL for VOC analyses) makes this confirmation impossible.

If CC-1 indicates that rebounds do not exceed 50 percent of the SCSG, closure will be requested.

If CC-1 indicates that rebounds exceed 50 percent of the SCSG, an evaluation of the following additional criteria (AC) will be conducted:

1. AC-1: Verification of overall VOC concentration reduction in extraction wells and monitoring probes.
2. AC-2: Verification of asymptotic level for monitoring probes as evidenced by "rebounds." However, this "rebound" will have to be defined differently from CC-1 above since AC-2 is being evaluated because CC-1 could not be met. Use of the same definition as CC-1 would result in circular logic.
3. AC-3: Estimated residual impact to groundwater using transport modeling. This modeling will consist of two parts: (1) estimation of VOC mass flux to groundwater using models such as SESOIL or VLEACH; and (2) estimation of groundwater impact using AT123D or a simple mixing model.
4. AC-4: Implementation of groundwater monitoring (this will be under OU-1/OU-3).

It should be noted that additional input on the closure approach will be solicited from the RWQCB, as well as EPA and DTSC, during the proposed plan stage in light of the fact that soil VOC data cannot be used.