

LLNL Livermore Site Fourth Quarter 2013 Self-Monitoring Report

This quarterly report presents the fourth quarter 2013 self-monitoring data for the ground water and soil vapor treatment facilities at the Lawrence Livermore National Laboratory (LLNL) Livermore Site. The volumes of ground water and soil vapor treated, and volatile organic compound (VOC) mass removed during the fourth quarter of 2013 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents results of ground water treatment facility and extraction well (ground water and soil vapor) VOC, and chromium analyses (Tables A-1 through A-4). During the fourth quarter of 2013, all effluent sample analytical results were within acceptable discharge limits.

Self-monitoring reports for all treatment facilities are presented in Attachment B. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes.

A map showing Livermore Site treatment areas and treatment facility locations, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B and 2 are presented in Attachment C. The contour maps for the individual HSUs are based on data collected during the fourth quarter of 2013.

Due to the Federal Government shutdown during October 2013, LLNL operations were interrupted, and ground water and soil vapor treatment facilities were temporarily shutoff, except for the western perimeter facilities TFA, TFB, and TFC (Figure 1). Quarterly ground water level measurements had been collected in the western portion of LLNL, in the vicinity of TFA, TFB and TFC, prior to the LLNL shutdown. Although ground water levels measurements were collected from the remainder of LLNL monitor wells following restart of the treatment facilities, these data reflect a transitory potentiometric state between non-pumping and pumping conditions in HSUs 3A, 3B, 4 and 5. Accordingly, ground water elevation contour maps were constructed for HSUs 1B and 2 only. Ground water elevation contour maps for all HSUs will be presented in subsequent quarterly reports.

Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, October through December 2013.

Treatment Area ^a	Month	Volume of ground water extracted (Kgal) ^b	Volume of vapor extracted (Kcf) ^b
TFA	October	9,300	-
	November	8,755	-
	December	10,997	-
TFB	October	2,846	-
	November	2,536	-
	December	2,751	-
TFC	October	3,473	-
	November	3,195	-
	December	3,708	-
TFD	October	4,740	800
	November	5,650	1,597
	December	6,983	1,986
TFE	October	831	1,050
	November	1,214	1,575
	December	1,670	2,053
TFG	October	411	-
	November	436	-
	December	547	-
TFH	October	587	1,676
	November	654	1,869
	December	761	1,876
TOTAL^c		72,045	14,482

^a Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF518-PZ, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFE started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

^b Totals are derived from individual extraction wells shown in Attachment B.

^c Rounded number.

Kcf = Thousands of cubic feet.

Kgal = Thousands of gallons.

Table 2. VOC mass removed at the Livermore Site, October through December 2013.

Treatment Area ^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	1.0	-	1.0
TFB	0.6	-	0.6
TFC	1.2	-	1.2
TFD	5.3	0.8	6.1
TFE	1.3	0.8	2.1
TFG	0.1	-	0.1
TFH	0.4	5.4	5.8
TOTAL^b	9.9	7.0	16.9

Table 3. Historical summary of volumes of water and soil vapor removed at the Livermore Site through December 2013.

Treatment Area ^a	Volume of ground water extracted (Mgal)	Volume of vapor extracted (Mcf)
TFA	2,072	-
TFB	497	-
TFC	566	-
TFD	1,149	125
TFE	410	196
TFG	92	-
TFH	179	277
TOTAL^b	4,965	598

Table 4. Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through December 2013.

Treatment Area ^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	215	-	215
TFB	84	-	84
TFC	113	-	113
TFD	887	99	986
TFE	232	156	388
TFG	12	-	12
TFH	42	1,277	1,319
TOTAL^b	1,585	1,532	3,117

^a Refer to Table 1 footnote for facilities in each treatment facility area.

^b Rounded number.

Abbreviations for Tables 2, 3 and 4:

kg = Kilograms.

Mcf = Millions of cubic feet.

Mgal = Millions of gallons.

VOC = Volatile organic compound.

Attachment A

VOC and Chromium Analyses

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
TFA-I001	01-OCT-13	E601	<0.5	0.82	0.73	<0.5	1.1	<1	<0.5	6.3	<0.5	0.54	<0.5
TFA-I001	01-NOV-13	E601	<0.5	0.86	0.68	<0.5	1.1	<1	<0.5	6.1	<0.5	0.61	<0.5
TFA-I001	03-DEC-13	E601	<0.5	0.84	0.66	<0.5	1	<1	<0.5	6	<0.5	0.6	<0.5
TFA-E001	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E^a	---	---	--	--	--	--	--	--	--	--	--	--	--
TFB													
TFB-I002	01-OCT-13	E601	0.56	2.4	<0.5	<0.5	1.5	<1	3	1.2	<0.5	12	<0.5
TFB-I002	04-NOV-13	E601	<0.5	2	<0.5	<0.5	1.3	<1	2.3	0.86	<0.5	8.5	<0.5
TFB-I002	02-DEC-13	E601	0.55	2	<0.5	<0.5	1.2	<1	2.3	0.94	<0.5	9.2	<0.5
TFB-E002	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	04-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC													
TFC-I003	01-OCT-13	E601	<0.5	1	<0.5	<0.5	0.7	<1	9	3.5	<0.5	11	<0.5
TFC-I003	04-NOV-13	E601	<0.5	1	<0.5	<0.5	0.72	<1	8.8	3.6	<0.5	11	<0.5
TFC-I003	03-DEC-13	E601	<0.5	0.88	<0.5	<0.5	0.65	<1	7.9	3.5	<0.5	11	<0.5
TFC-E003	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	04-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E													
MTU1-I	01-OCT-13	E601	<0.5	14	<0.5	<0.5	0.97	<1	11	0.54	<0.5	8.6	4.8
MTU1-I	06-NOV-13	E601	<0.5	13	<0.5	<0.5	0.83	<1	9.5	0.51	<0.5	8.1	4.4
MTU1-I	02-DEC-13	E601	<0.5	12	<0.5	<0.5	0.73	<1	7.6	<0.5	<0.5	7.5	3.7
MTU1-E	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-SE													
PTU1-I	01-OCT-13	E601	<0.5	7.8	<0.5	<0.5	1.7	<1	14	0.67	<0.5	14	1
PTU1-I	04-NOV-13	E601	<0.5	7.3	<0.5	<0.5	1.6	<1	13	0.63	<0.5	13	1.1
PTU1-I	02-DEC-13	E601	<0.5	6.9	<0.5	<0.5	1.6	<1	12	0.63	<0.5	13	1
PTU1-E	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	04-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD													
TFD-I004	01-OCT-13	E601	2.1	3	<0.5	<0.5	1.8	<1	0.69	3.5	<0.5	61	12
TFD-I004	01-NOV-13	E601	2.1	2.9	<0.5	<0.5	1.5	<1	0.68	2.8	<0.5	56	12
TFD-I004	02-DEC-13	E601	2.4	2.3	<0.5	<0.5	1.4	<1	0.78	2.8	<0.5	65	17
TFD-E004	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	01-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E													
PTU8-I	02-OCT-13	E601	4	1.4	<0.5	0.91	4.5	<1	<0.5	4.2	<0.5	97	1.3
PTU8-I	25-NOV-13	E601	3.4	1.3	<0.5	0.65	3.3	<1	<0.5	3.4	<0.5	77	1.1
PTU8-I	02-DEC-13	E601	3.5	1.2	<0.5	0.73	3.4	<1	<0.5	3.3	<0.5	75	0.92
PTU8-E	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	25-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-HPD													
PTU10-I	07-OCT-13	E601	1.6	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	39	<0.5
PTU10-I	06-NOV-13	E601	1.8	0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	43	<0.5
PTU10-I	04-DEC-13	E601	1.6	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	39	<0.5
PTU10-E	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	04-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-S													
PTU2-I	03-OCT-13	E601	0.72	1.2	<0.5	<0.5	4.2	<1	1	6.3	<0.5	49	<0.5
PTU2-I	12-NOV-13	E601	0.75	1.5	<0.5	<0.5	4.2	<1	1.2	6.5	<0.5	53	<0.5
PTU2-I	09-DEC-13	E601	0.79	1.5	<0.5	<0.5	4.3	<1	1.1	6.3	<0.5	54	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-S (cont.)													
PTU2-E	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	12-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	09-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SE													
PTU11-I	02-OCT-13	E601	0.72	5.2	0.67	1.6	10	<1	1.7	29	<0.5	98	<0.5
PTU11-I	06-NOV-13	E601	0.66	4.2	0.68	1.5	11	<1	1.4	30	<0.5	95	<0.5
PTU11-I	02-DEC-13	E601	0.8	4.8	0.6	1.5	9.5	<1	1.5	27	<0.5	100	<0.5
PTU11-E	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SS													
PTU12-I	09-OCT-13	E601	1.2	2.7	<0.5	1.6	8.2	<1	0.55	22	<0.5	100	5.3
PTU12-I	13-NOV-13	E601	1.4	2.4	0.67	2	11	<1	0.56	22	<0.5	120	4.1
PTU12-I	09-DEC-13	E601	1.8	2.5	0.67	2.1	11	<1	0.59	20	<0.5	120	4.2
PTU12-E	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	13-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	09-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-W													
PTU6-I	07-OCT-13	E601	<0.5	5.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.1	37
PTU6-I	06-NOV-13	E601	<0.5	4.8	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4	38
PTU6-I	04-DEC-13	E601	<0.5	5.3	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.2	35
PTU6-E	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	04-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-E													
PTU3-I	01-OCT-13	E601	<0.5	2.3	<0.5	<0.5	6.2	<1	5.7	6.5	<0.5	48	<0.5
PTU3-I	04-NOV-13	E601	<0.5	2.3	<0.5	<0.5	6.2	<1	5.6	6.3	<0.5	48	<0.5
PTU3-I	02-DEC-13	E601	<0.5	2.2	<0.5	<0.5	5.7	<1	5.3	6.4	<0.5	45	<0.5
PTU3-E	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	04-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-HS													
W-2105	02-OCT-13	E601	<0.5	0.91	<0.5	<0.5	1.9	4.6	3.8	17	<0.5	260	<0.5
GTU07-I	02-OCT-13	E601	<0.5	0.83	<0.5	<0.5	1.6	4.2	3.6	15	<0.5	240	<0.5
GTU07-I	05-NOV-13	E601	<0.5	0.9	<0.5	<0.5	1.8	4.5	3.8	16	<0.5	260	<0.5
GTU07-I	03-DEC-13	E601	<0.5	0.81	<0.5	<0.5	1.5	3.5	3.3	14	<0.5	230	<0.5
GTU07-E	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	05-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-NW													
PTU9-I	03-OCT-13	E601	<0.5	1.3	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	12	<0.5
PTU9-I	12-NOV-13	E601	<0.5	1.2	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	12	<0.5
PTU9-I	06-DEC-13	E601	<0.5	1.2	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	12	<0.5
PTU9-E	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	12-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	06-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SE													
W-359	01-OCT-13	E601	3	1.1	<0.5	<0.5	13	<1	5.2	7.4	<0.5	180	0.59
MTU04-I	04-NOV-13	E601	2.9	1.1	<0.5	<0.5	12	<1	4.9	7	<0.5	160	0.58
MTU04-I	02-DEC-13	E601	2.6	0.97	<0.5	<0.5	11	<1	4.6	6.8	<0.5	170	<0.5
MTU04-E	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	04-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SW^b													
MTU03-I	30-OCT-13	E601	0.55	<0.5	<0.5	<0.5	<0.5	<1	0.86	0.7	<0.5	10	<0.5
MTU03-I	31-OCT-13	E601	1.7	1.2	<0.5	<0.5	1.2	1.4	0.76	2.1	<0.5	45	<0.5
MTU03-I	01-NOV-13	E601	1.5	1	<0.5	<0.5	1.1	1.2	<0.5	1.9	<0.5	41	<0.5
MTU03-I	05-DEC-13	E601	1.5	1	<0.5	<0.5	0.86	<1	0.63	1.6	<0.5	38	<0.5
MTU03-E	30-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	05-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-W													
MTU05-I	07-OCT-13	E601	<0.5	0.73	<0.5	<0.5	0.88	2.1	1.1	1.2	<0.5	17	<0.5
MTU05-I	06-NOV-13	E601	<0.5	0.81	<0.5	<0.5	0.93	2.2	1.3	1.3	<0.5	18	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-W (cont.)													
MTU05-I	02-DEC-13	E601	<0.5	0.83	<0.5	<0.5	1	2.3	1.2	1.2	<0.5	19	<0.5
MTU05-E	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-1													
W-1111	02-OCT-13	E601	3	11	<0.5	<0.5	0.93	<1	<0.5	1	<0.5	3.8	<0.5
GTU01-I	08-NOV-13	E601	2.8	11	<0.5	<0.5	0.94	<1	<0.5	1.1	<0.5	4.1	<0.5
GTU01-I	03-DEC-13	E601	3	11	<0.5	<0.5	0.92	<1	<0.5	1	<0.5	3.9	<0.5
GTU01-E	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	08-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-N													
MTU02-I	02-OCT-13	E601	<0.5	1.4	<0.5	<0.5	1.4	<1	1.2	16	<0.5	4.8	<0.5
MTU02-I	08-NOV-13	E601	<0.5	1.4	<0.5	<0.5	1.3	<1	1.2	16	<0.5	4.8	<0.5
MTU02-I	03-DEC-13	E601	<0.5	1.4	<0.5	<0.5	1.3	<1	1	16	<0.5	4.7	<0.5
MTU02-E	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	08-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF406													
PTU5-I	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4	<0.5
PTU5-I	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.9	<0.5
PTU5-I	04-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4	<0.5
PTU5-E	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	04-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF406-NW													
W-1801	03-OCT-13	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	3.5	0.73	<0.5	22	<0.5
GTU03-I	08-NOV-13	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	3.3	0.78	<0.5	21	<0.5
GTU03-I	03-DEC-13	E601	<0.5	1.1	<0.5	<0.5	<0.5	<1	2.9	0.7	<0.5	19	<0.5
GTU03-E	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF406-NW (cont.)													
GTU03-E	08-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	03-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF518-N^c													
W-1410	28-OCT-13	E601	2.4	2.7	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	16	<0.5
TF5475-1^d													
W-1302-2	13-NOV-13	E601	1.9	31	1.1	3.7	16	<1	6.6	40	<0.5	330	<0.5
TF5475-2													
GTU09-I	01-OCT-13	E601	1.9	19	0.52	2.5	15	<1	5.1	36	<0.5	270	<0.5
GTU09-I	06-NOV-13	E601	2	19	0.5	2.7	16	<1	5.6	38	<0.5	210	<0.5
GTU09-I	02-DEC-13	E601	1.7	16	<0.5	2.4	14	<1	5	33	<0.5	250	<0.5
GTU09-E	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	02-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF5475-3^e													
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Notes on following page.

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

^a TFA-E did not operate during the fourth quarter reporting period due to lack of ground water in extraction well W-254, the sole source of water for this facility.

^b TFE-SW had multiple samples collected during the month of October due to testing and verification following the facility upgrade completion.

^c TF518-N did not operate during this reporting period due to mixed waste disposition issues.

^d TF5475-1 did not operate during this reporting period due to mixed waste disposition issues.

^e TF5475-3 did not operate during this reporting period due to mixed waste disposition issues.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
W-109	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.54	0.85	<0.5	<0.5	<0.5
W-262	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-404	09-OCT-13	E601	<0.5	<0.5	0.77	<0.5	1.1	<1	<0.5	4.7	<0.5	<0.5	<0.5
W-408	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-415	09-OCT-13	E601	<0.5	1.4	0.65	<0.5	1.4	<1	<0.5	10	<0.5	0.99	<0.5
W-457	09-OCT-13	E601	<0.5	<0.5	0.65	<0.5	0.76	<1	<0.5	5.7	<0.5	<0.5	<0.5
W-518	09-OCT-13	E601	<0.5	<0.5	6.1	<0.5	3.4	<1	<0.5	4.5	<0.5	<0.5	<0.5
W-522	09-OCT-13	E601	<0.5	<0.5	1.6	<0.5	1.1	<1	<0.5	2.9	<0.5	<0.5	<0.5
W-605	09-OCT-13	E601	<0.5	<0.5	0.76	<0.5	0.91	<1	<0.5	13	<0.5	0.61	<0.5
W-614	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	5	<0.5	<0.5	<0.5
W-712	09-OCT-13	E601	3	2.9	1	<0.5	3.5	<1	<0.5	2.1	<0.5	3.5	<0.5
W-714	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	6.3	<0.5	<0.5	<0.5
W-903	09-OCT-13	E601	<0.5	<0.5	0.65	<0.5	0.55	<1	<0.5	3.9	<0.5	<0.5	<0.5
W-904	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	0.76	<1	<0.5	4.8	<0.5	<0.5	<0.5
W-1001	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	09-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	2.1	<0.5	<0.5	<0.5
W-1009	09-OCT-13	E601	1	4.4	0.59	<0.5	2.7	<1	<0.5	9.7	<0.5	1.6	<0.5
TFA-E^a													
W-254 ^b	29-APR-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	20	<0.5	0.5	<0.5
TFB													
W-357	03-OCT-13	E601	1.4	2.8	<0.5	<0.5	1.5	<1	4.2	1.2	<0.5	31	<0.5
W-610	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	0.9	<1	1.1	0.61	<0.5	1.4	<0.5
W-620	03-OCT-13	E601	<0.5	0.88	<0.5	<0.5	0.89	<1	1.3	1	<0.5	3.5	<0.5
W-621	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.2	<0.5
W-655	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	5.2	<0.5	<0.5	0.71	<0.5
W-704	03-OCT-13	E601	0.59	3.8	<0.5	<0.5	2	<1	5.6	2.6	<0.5	17	<0.5
W-1423	03-OCT-13	E601	0.8	4.4	<0.5	<0.5	2.9	<1	3	1.9	<0.5	8.7	<0.5
W-2501	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	1.4	<0.5	<0.5	5.4	<0.5
W-2502	03-OCT-13	E601	0.79	3.8	<0.5	<0.5	2	<1	0.51	<0.5	<0.5	2.4	<0.5
TFC													
W-701	02-OCT-13	E601	<0.5	1.9	<0.5	<0.5	1.6	<1	25	2.4	<0.5	18	<0.5
W-1015	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	0.61	<1	1.5	0.82	<0.5	4	<0.5
W-1102	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	2.6	<0.5	<0.5	1.3	<0.5
W-1103	02-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.1	<0.5
W-1104	02-OCT-13	E601	<0.5	0.62	<0.5	<0.5	<0.5	<1	2.4	5.3	<0.5	9.9	<0.5
W-1116	02-OCT-13	E601	<0.5	1.1	<0.5	<0.5	<0.5	<1	5.1	3.9	<0.5	7.2	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
W-368	01-OCT-13	E601	<0.5	4.6	<0.5	<0.5	<0.5	<1	20	3.1	<0.5	14	3.8
W-413	01-OCT-13	E601	<0.5	14	<0.5	<0.5	0.95	<1	9.4	<0.5	<0.5	7.8	4.6
TFC-SE													
W-1213	23-DEC-13	E601	<0.5	7.8	<0.5	<0.5	1.1	<1	3.2	<0.5	<0.5	8.2	<0.5
W-2201	01-OCT-13	E601	<0.5	7.3	<0.5	<0.5	1.7	<1	16	0.81	<0.5	15	1.2
TFD													
W-351	02-OCT-13	E601	31	4.8	<0.5	0.92	6.7	<1	5.1	7.6	<0.5	530	1.2
W-653	02-OCT-13	E601	20	5.6	<0.5	<0.5	0.66	<1	2.6	0.75	<0.5	530	<0.5
W-906	28-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.3	<0.5
W-907-2	02-OCT-13	E601	<0.5	3.8	<0.5	<0.5	2.8	<1	1.3	6.1	<0.5	58	<0.5
W-2011	02-OCT-13	E601	0.95	0.74	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	20	<0.5
W-2101	02-OCT-13	E601	3.7	1.7	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	140	<0.5
W-2102	02-OCT-13	E601	14	4.3	<0.5	<0.5	<0.5	<1	1.6	0.54	<0.5	390	1.6
W-1206	02-OCT-13	E601	0.82	4.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	14	<0.5
W-1208	02-OCT-13	E601	1.8	1.9	<0.5	<0.5	2	<1	<0.5	3.6	<0.5	55	24
TFD-E													
W-2006	02-DEC-13	E601	0.97	1.8	2.2	7.8	80	1.2	<0.5	70	<0.5	430	<0.5
W-1301	02-OCT-13	E601	7	2.4	1.6	5.9	48	<1	0.7	35	<0.5	250	<0.5
W-1303	02-OCT-13	E601	3.5	2.2	0.68	2.7	5.1	1.1	<0.5	6.7	<0.5	140	6.2
W-1306	02-OCT-13	E601	1.9	1.6	<0.5	<0.5	<0.5	<1	<0.5	2.3	<0.5	52	<0.5
W-1307	02-OCT-13	E601	3.7	0.82	<0.5	<0.5	0.61	<1	<0.5	0.77	<0.5	55	<0.5
W-1550	02-OCT-13	E601	6.8	5.1	<0.5	<0.5	0.73	<1	0.58	2.3	<0.5	190	<0.5
W-2203	02-OCT-13	E601	10	2.7	<0.5	<0.5	2.1	<1	1.8	6	<0.5	96	<0.5
TFD-HPD													
W-1254	07-OCT-13	E601	1.6	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	39	<0.5
W-1650	10-OCT-13	E601	2.2	0.99	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	94	<0.5
W-1653	10-OCT-13	E601	0.52	1.5	<0.5	<0.5	<0.5	17	<0.5	0.64	<0.5	84	<0.5
W-1655	10-OCT-13	E601	<0.5	1.6	<0.5	<0.5	<0.5	1.7	<0.5	2	<0.5	51	<0.5
W-1657	10-OCT-13	E601	9.7	4	<0.5	<0.5	<0.5	<1	2.7	<0.5	<0.5	1000	<0.5
TFD-S													
W-1503	03-OCT-13	E601	1.6	1.6	<0.5	<0.5	1.2	<1	<0.5	1.7	<0.5	46	<0.5
W-1504	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	8.8	<1	2.2	13	<0.5	64	<0.5
W-1510	03-OCT-13	E601	<0.5	1.6	<0.5	<0.5	2.6	<1	<0.5	4.2	<0.5	32	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-SE													
W-314	02-OCT-13	E601	0.58	4.6	0.6	0.77	4.8	<1	1.9	8.9	<0.5	77	<0.5
W-2005	02-OCT-13	E601	<0.5	0.76	<0.5	0.84	10	<1	<0.5	25	<0.5	50	<0.5
W-1308	02-OCT-13	E601	<0.5	1.3	0.69	2.3	11	<1	<0.5	63	<0.5	83	<0.5
W-1403	02-OCT-13	E601	2.1	16	1.2	4.9	36	<1	3.7	87	<0.5	340	<0.5
W-1904	06-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	3.7	<1	<0.5	17	<0.5	8.3	<0.5
SIP-ETC-201	06-NOV-13	E601	<0.5	0.64	2.1	0.82	66	<1	<0.5	370	<0.5	200	<0.5
TFD-SS													
W-1523	09-OCT-13	E601	2.7	3.6	<0.5	1.6	10	<1	1.2	19	<0.5	120	<0.5
W-1601	09-OCT-13	E601	2.9	4	1.2	5.5	22	1	1.1	77	<0.5	240	<0.5
W-1602	09-OCT-13	E601	<0.5	1.8	<0.5	<0.5	<0.5	<1	<0.5	0.81	<0.5	7.2	1.9
W-1603	09-OCT-13	E601	<0.5	2	<0.5	1.6	4.9	<1	<0.5	17	<0.5	75	6.2
TFD-W													
W-1215	07-OCT-13	E601	<0.5	8.8	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.3	18
W-1216	07-OCT-13	E601	<0.5	4.9	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.5	26
W-1902	07-OCT-13	E601	<0.5	3.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.6	51
TFE-E													
W-566	01-OCT-13	E601	<0.5	2.8	<0.5	<0.5	4.6	<1	6.6	3.2	<0.5	39	<0.5
W-1109	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	22	<1	4.2	41	<0.5	150	<0.5
W-1903	01-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	15	<1	4.3	15	<0.5	30	<0.5
W-1909 ^b	14-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	9.1	1.1	<0.5	5.4	<0.5	6.5	<0.5
W-2305	30-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	22	<1	7.4	31	<0.5	58	<0.5
TFE-HS													
W-2105	02-OCT-13	E601	<0.5	0.91	<0.5	<0.5	1.9	4.6	3.8	17	<0.5	260	<0.5
TFE-NW													
W-1211	03-OCT-13	E601	<0.5	1.5	<0.5	<0.5	<0.5	<1	1.4	<0.5	<0.5	8.3	<0.5
W-1409	03-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	0.51	<1	<0.5	1.3	<0.5	26	<0.5
TFE-SE													
W-359	01-OCT-13	E601	3	1.1	<0.5	<0.5	13	<1	5.2	7.4	<0.5	180	0.59
TFE-SW													
W-1516	10-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.72	0.6	<0.5	9.9	<0.5
W-1518	10-DEC-13	E601	<0.5	<0.5	<0.5	<0.5	1.4	1.2	1.8	0.75	<0.5	11	<0.5
W-1520	10-DEC-13	E601	9.2	6.1	<0.5	3.2	2.1	1.9	<0.5	12	<0.5	240	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-SW (cont.)													
W-1522	10-DEC-13	E601	9	5.6	0.65	1	5.6	10	0.93	4.6	<0.5	160	<0.5
TFE-W													
W-292	07-OCT-13	E601	<0.5	0.75	<0.5	<0.5	0.89	2.1	0.99	1.2	<0.5	17	<0.5
W-305 ^b	09-JUL-13	E601	<0.5	1.2	<0.5	<0.5	2.2	<1	16	8.8	<0.5	33	0.6
TFG-1													
W-1111	02-OCT-13	E601	3	11	<0.5	<0.5	0.93	<1	<0.5	1	<0.5	3.8	<0.5
TFG-N													
W-1806	02-OCT-13	E601	<0.5	0.81	<0.5	<0.5	0.55	<1	<0.5	10	<0.5	3	<0.5
W-1807	02-OCT-13	E601	<0.5	1.7	<0.5	<0.5	1.7	<1	1.6	19	<0.5	5.8	<0.5
TF406													
W-1309	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.3	<0.5
W-1310	07-OCT-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.2	<0.5
TF406-NW													
W-1801	03-OCT-13	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	3.5	0.73	<0.5	22	<0.5
TF518-N^a													
W-1410	28-OCT-13	E601	2.4	2.7	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	16	<0.5
TF518-PZ													
W-1615	25-NOV-13	E601	<0.5	<0.5	<0.5	<0.5	2.1	<1	<0.5	37	<0.5	160	<0.5
W-518-1913 ^b	23-MAY-11	E601	<0.5	<0.5	<0.5	<0.5	0.76	<1	<0.5	3.8	<0.5	29	<0.5
W-518-1914 ^b	17-JAN-13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	44	<0.5	3.6	<0.5
W-518-1915	25-NOV-13	E601	<0.5	0.74	<0.5	<0.5	3.6	<1	<0.5	67	<0.5	480	<0.5
SVB-518-201 ^b	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	35	<0.5	8.5	<0.5
SVB-518-204 ^b	07-FEB-08	E601	<0.5	0.63	<0.5	<0.5	1.4	<1	<0.5	43	<0.5	550	<0.5
TF5475-1^a													
W-1302-2	13-NOV-13	E601	1.9	31	1.1	3.7	16	<1	6.6	40	<0.5	330	<0.5
TF5475-2													
W-1108	01-OCT-13	E601	1.9	18	0.5	2.5	16	<1	5.3	36	<0.5	270	<0.5
W-1415 ^b	15-OCT-12	E601	<0.5	6.5	<0.5	<0.5	3	7.2	<0.5	5.8	<0.5	47	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF5475-3^a													
W-1604	13-NOV-13	E601	5.3	69	1.9	16	40	4.1	16	100	<0.5	870	<0.5
W-1605	12-NOV-13	E601	<0.5	11	<0.5	1.2	<0.5	<1	<0.5	2	<0.5	23	<0.5
W-1608	12-NOV-13	E601	<0.5	6.6	<0.5	1.1	<0.5	<1	<0.5	2.1	<0.5	19	<0.5
W-1609	12-NOV-13	E601	<0.5	31	<0.5	1.9	3.1	<1	<0.5	8.3	<0.5	66	<0.5

Notes on following page.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

^a Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

^b Most recent VOC sample results available.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTFD-ETCS													
W-1904	12-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	0.16	<0.005	0.064	<0.005
W-ETC-2003	12-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.12	<0.005	0.035	<0.005
W-ETC-2004A	12-NOV-13	TO15DIT	<0.005	0.0067	<0.005	<0.005	<0.005	<0.005	<0.005	0.3	<0.005	0.088	<0.005
W-ETC-2004B	12-NOV-13	TO15DIT	<0.005	0.011	<0.005	<0.005	0.077	<0.005	<0.005	0.48	<0.005	1.1	<0.005
SIP-ETC-201	12-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	0.18	<0.005	0.19	<0.005
VTFE-ELM													
W-1903	20-NOV-13	TO15DIT	<0.005	<0.005	0.0065	<0.005	0.53	<0.005	0.14	0.57	<0.005	1.2	<0.005
W-1909 ^a	06-OCT-11	TO15DIT	<0.005	0.034	<0.005	<0.005	0.51	<0.005	0.054	0.88	<0.005	1.2	<0.005
W-2305 ^a	06-OCT-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.2	<0.005	0.036	0.46	<0.005	0.55	<0.005
W-543-001	20-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.0096	<0.005	<0.005	0.6	<0.005	0.11	<0.005
W-543-003	20-NOV-13	TO15DIT	<0.005	0.026	<0.005	<0.005	0.078	<0.005	0.023	0.22	<0.005	0.47	<0.005
W-543-1908	20-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.0093	<0.005	<0.005	0.05	<0.005	0.2	<0.005
VTFE-HS													
W-2105	26-NOV-13	TO15DIT	<0.005	0.0063	<0.005	<0.005	0.014	<0.005	0.14	0.15	<0.005	1.7	<0.005
W-ETS-2008A	26-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	0.017	<0.005
W-ETS-2008B	26-NOV-13	TO15DIT	<0.005	0.0068	<0.005	<0.005	0.0078	<0.005	0.015	0.38	<0.005	0.66	<0.005
W-ETS-2009	26-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.073	<0.005	0.24	<0.005
W-ETS-2010A	26-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.094	<0.005	0.11	<0.005
W-ETS-2010B	26-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	<0.005	0.034	<0.005
VTF406-HS													
W-217	19-NOV-13	TO15DIT	0.1	0.045	0.0088	<0.005	0.67	0.016	0.13	0.56	<0.005	1.7	0.008
W-514-2007A	19-NOV-13	TO15DIT	0.03	<0.005	<0.005	<0.005	0.018	<0.005	0.04	0.062	<0.005	0.29	1.5
W-514-2007B	19-NOV-13	TO15DIT	0.049	0.023	<0.005	<0.005	0.3	<0.005	0.042	0.22	<0.005	0.78	0.041
VTF511													
W-2204	04-DEC-13	TO15DIT	0.071	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	0.52	<0.036	4.6	<0.036
W-2205	04-DEC-13	TO15DIT	0.062	<0.01	<0.01	<0.01	0.023	<0.01	<0.01	0.15	<0.01	1.9	<0.01
W-2206	04-DEC-13	TO15DIT	0.0055	0.0063	<0.005	0.017	<0.005	<0.005	<0.005	0.13	<0.005	0.93	<0.005
W-2207A	04-DEC-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	0.28	<0.005
W-2207B	12-NOV-13	TO15DIT	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	<0.005	1.4	<0.005
W-2208A	04-DEC-13	TO15DIT	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	4.7	0.041
W-2208B	12-NOV-13	TO15DIT	0.097	0.077	0.051	<0.025	0.47	0.11	0.075	0.31	<0.025	15	0.09
VTF518-PZ													
W-1615	21-NOV-13	TO15DIT	<0.01	<0.01	<0.01	<0.01	0.27	<0.01	0.042	4.2	<0.01	9.7	<0.01
W-518-1913	21-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	0.043	<0.005	0.32	<0.005

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTF518-PZ (cont.)													
W-518-1914	21-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.93	<0.005	0.06	<0.005
W-518-1915	21-NOV-13	TO15DIT	<0.017	<0.017	<0.017	<0.017	0.21	<0.017	<0.017	13	<0.017	7.8	<0.017
SVB-518-201	21-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0053	<0.005	0.016	<0.005
SVB-518-204	21-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.046	<0.005	0.099	<0.005
VTF5475^b													
W-1605	25-NOV-13	TO15DIT	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	<0.005
W-1608	25-NOV-13	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0072	<0.005
W-2211	26-NOV-13	TO15DIT	0.0092	0.4	0.012	0.035	0.22	<0.005	0.043	0.18	<0.005	1.6	<0.005
W-2212	26-NOV-13	TO15DIT	0.0062	0.12	0.0055	0.012	0.16	<0.005	0.029	0.044	<0.005	0.43	<0.005
W-ETS-507	25-NOV-13	TO15DIT	<0.005	0.98	<0.005	0.034	0.0063	<0.005	<0.005	0.068	<0.005	0.65	<0.005
W-2302	26-NOV-13	TO15DIT	<0.005	0.017	<0.005	<0.005	0.01	<0.005	<0.005	0.013	<0.005	0.22	<0.005
W-2303	26-NOV-13	TO15DIT	<0.005	0.12	<0.005	0.031	0.016	<0.005	<0.005	0.036	<0.005	0.35	<0.005
SVI-ETS-504	26-NOV-13	TO15DIT	<0.005	0.039	<0.005	<0.005	0.01	<0.005	<0.005	0.018	<0.005	0.096	<0.005

Notes on following page.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

^a Most recent VOC vapor sample results available.

^b VTF5475 did not operate during reporting period due to mixed waste disposition issues.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Chromium (total)^a mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
TFB	TFB-E002	01-OCT-13	0.018	NA
	TFB-E002	04-NOV-13	0.022	NA
	TFB-E002	02-DEC-13	0.012	NA
TFC	TFC-E003	01-OCT-13	0.022	NA
	TFC-E003	04-NOV-13	0.024	NA
	TFC-E003	03-DEC-13	0.013	NA
TFC-E	MTU1-E	01-OCT-13	0.044	NA
	MTU1-E	06-NOV-13	0.043	NA
	MTU1-E	02-DEC-13	<0.001	NA
TFC-SE	PTU1-E	01-OCT-13	0.031	NA
	PTU1-E	04-NOV-13	0.032	NA
	PTU1-E	02-DEC-13	0.016	NA

^aA discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Lake Haussmann or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

MTU05 receiving water is routinely sampled at the TFC-R003 location.

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

Explanation of Abbreviations

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.

Attachment B

Self-Monitoring Reports

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** 13 14 **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **689**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-01-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **18.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	1,456	0.0
W-262	252	0.0
W-404	1,313,528	31.9
W-408	443,616	10.9
W-415	1,623,744	39.8
W-457	576,936	13.9
W-605	348,228	8.6
W-518	183,796	4.7
W-522	613,516	16.4
W-614	448,096	11.4
W-1001	125,024	3.0
W-1004	445,968	11.6
W-1009	846,320	24.0
W-712	200,648	6.7
W-714	337,252	8.4
W-903	598,312	13.6
W-904	1,193,712	30.0
Total:	<u>9,300,404</u>	<u>234.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,449,904</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

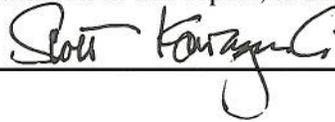
4,850,500

6. Comments:

Facility was shutdown on 10-12-2013 due to low airstripper flow fault. Facility was restarted on 10-15-2013. Started W-712 on 10-8-13. W-1009 down on 10-8-13 due to transducer failure. W-1009 restarted on 10-11-13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 11-01-2013

Self-Monitoring Report LLNL Treatment Facility A (TFA) AREA TFA

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **655**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-01-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **17.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	0	0.0
W-262	0	0.0
W-404	1,242,068	31.8
W-408	422,000	10.8
W-415	1,539,440	39.5
W-457	461,208	13.9
W-518	167,112	4.3
W-522	526,804	13.6
W-605	345,116	9.0
W-614	421,712	10.8
W-712	260,588	6.8
W-714	323,956	8.4
W-903	566,952	14.4
W-904	1,096,240	28.5
W-1001	117,314	3.0
W-1004	405,320	10.7
W-1009	859,152	22.1
Total:	<u>8,754,982</u>	<u>227.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,176,782</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

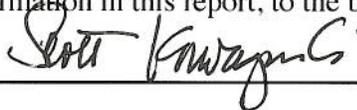
Arroyo Seco

TFG-ASW

4,578,200

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2013

Self-Monitoring Report LLNL Treatment Facility A (TFA) AREA TFA

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 824

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 17.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	0	0.0
W-262	0	0.0
W-404	1,571,534	32.1
W-408	535,424	10.9
W-415	1,929,248	39.2
W-457	449,792	9.1
W-518	210,798	4.3
W-522	702,228	13.8
W-605	435,456	9.0
W-614	533,204	11.2
W-712	323,536	6.9
W-714	398,112	8.2
W-903	730,544	14.3
W-904	1,430,272	29.7
W-1001	146,750	3.0
W-1004	513,000	10.5
W-1009	1,086,800	22.1
Total:	<u>10,996,698</u>	<u>224.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>5,237,198</u>

**Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA**

Arroyo Seco

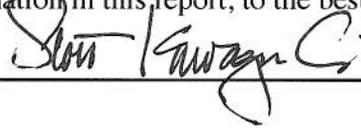
TFG-ASW

5,759,500

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 01-03-2014

Self-Monitoring Report

LLNL Solar Treatment Unit 06 (STU06)

AREA TFA-E

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>0</u>

6. Comments:

Facility secured due to lack of water in extraction well.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Steve Kawaguchi* Date: 10-31-2013

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October	31														
November	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27			

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	0	0.0
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>0</u>

6. Comments:

Facility secured due to lack of water in extraction well.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Steve Kawaguchi* Date: 12-02-2013

**Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured
Influent pH:
Effluent pH:
Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

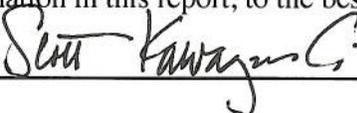
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>0</u>

6. Comments:

Facility secured due to lack of water in extraction well.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-02-2014

Self-Monitoring Report LLNL Treatment Facility B (TFB) AREA TFB

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 738

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 18.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	352,712	8.0
W-610	264,428	5.8
W-620	256,468	5.9
W-621	80	0.0
W-655	60	0.0
W-704	753,160	17.2
W-1423	184,500	4.4
W-2501	705,651	16.2
W-2502	329,210	7.6
Total:	<u>2,846,269</u>	<u>65.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,846,269</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>0</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

Operator Signature: Scott Kawzycki Date: 11-01-2013

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month October Year 2013

2. Date compliance sampling performed 10-01-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>16.78</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>5/ SSW</u>

4. Receiving Data:

Sample			
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>	
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>	

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawazu Co. Date: 11-08-2013

Self-Monitoring Report LLNL Treatment Facility B (TFB) AREA TFB

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **656**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-04-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **19**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	321,696	8.4
W-610	251,024	6.4
W-620	231,776	6.0
W-621	0	0.0
W-655	0	0.0
W-704	667,064	17.2
W-1423	155,208	4.2
W-2501	624,212	16.1
W-2502	284,780	7.5
Total:	<u>2,535,760</u>	<u>65.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,535,760</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>0</u>

6. Comments:

Began wet season treatment for hexavalent chromium on 11-25-13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

Operator Signature: Scott Kawaguchi Date: 12-02-2013

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month November Year 2013

2. Date compliance sampling performed 11-04-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.79</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SSE</u>

4. Receiving Data:

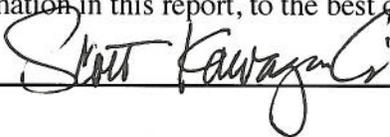
Sample			
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>	
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>	

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2013

Self-Monitoring Report

LLNL Treatment Facility B (TFB)

AREA TFB

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	<u>28</u>	<u>29</u>	<u>30</u>																											
December	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	14	15															
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>														

Total monthly time facility operated (hours): 714

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>12-02-2013</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>16.3</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	327,544	8.2
W-610	266,388	6.3
W-620	251,564	5.8
W-621	0	0.0
W-655	0	0.0
W-704	720,664	17.1
W-1423	182,596	3.9
W-2501	678,250	15.9
W-2502	324,224	7.2
Total:	<u>2,751,230</u>	<u>64.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,750,366</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>864</u>

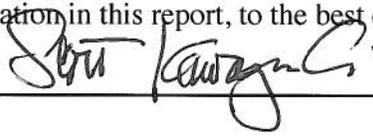
6. Comments:

Facility was shutdown on 12-04-2013 due to software issue. Facility was restarted on 12-05-2013. Facility was shutdown on 12-13-2013 due to low flow fault. Facility was restarted on 12-16-2013. Facility was shutdown on 12-20-2013

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

due to low flow fault. Facility was restarted on 12-21-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2014

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month December Year 2013

2. Date compliance sampling performed 12-02-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.9</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SE</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaga Date: 01-23-2014

Self-Monitoring Report LLNL Treatment Facility C (TFC) AREA TFC

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 751

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
 Influent pH: 7.5
 Effluent pH: 7.5
 Effluent Temperature (°C): 20.2

4. Wellfield Data:

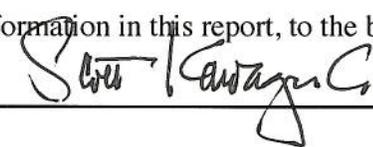
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	597,728	13.5
W-1015	135,888	3.1
W-1102	153,652	3.8
W-1103	90,768	2.0
W-1104	1,175,424	26.2
W-1116	74,516	1.6
Total:	<u>2,227,976</u>	<u>50.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,227,976</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2013

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month October Year 2013

2. Date compliance sampling performed 10-01-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>16.78</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>5/SSW</u>

4. Receiving Data:

Sample			
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>	
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>	

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 11-08-2013

Self-Monitoring Report LLNL Treatment Facility C (TFC) AREA TFC

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **658**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-04-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	521,784	13.4
W-1015	110,496	3.1
W-1102	140,742	3.7
W-1103	78,789	1.9
W-1104	1,029,888	26.2
W-1116	62,585	1.6
Total:	<u>1,944,284</u>	<u>49.9</u>

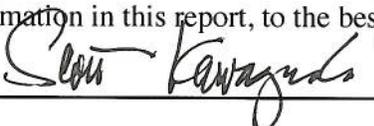
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,944,284</u>

6. Comments:

Began wet season hexavalent chromium treatment on 11-24-13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month November Year 2013

2. Date compliance sampling performed 11-04-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.79</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SSE</u>

4. Receiving Data:

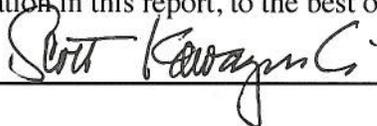
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2013

Self-Monitoring Report LLNL Treatment Facility C (TFC) AREA TFC

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 748

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 18.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	597,776	13.4
W-1015	122,004	2.8
W-1102	168,778	3.9
W-1103	63,311	1.9
W-1104	1,206,448	27.5
W-1116	76,076	1.8
Total:	<u>2,234,393</u>	<u>51.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,234,393</u>

6. Comments:

Facility was shutdown on 12-10-2013 to replace blowers. Blowers replaced and facility was restarted on 12-11-2013. W-1103 secured on 12-26-13 to replace faulty transducer. W-1103 transducer replaced and well restarted on 12-31-13. Facility was shutdown on 11-30-2013 due to high air stripper level fault. Facility was restarted on 12-02-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility C (TFC)
AREA TFC

Operator Signature: Steve Kawaguchi Date: 01-03-2014

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month December Year 2013

2. Date compliance sampling performed 12-03-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.76</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SE</u>

4. Receiving Data:

Sample			
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>	
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>	

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 01-23-2014

**Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 625

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 19.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	56,250	1.5
W-413	624,816	16.3
Total:	<u>681,066</u>	<u>17.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>681,066</u>

6. Comments:

Facility was down due to the government/LLNL shut down.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-04-2013

Self-Monitoring Report

LLNL Mini Treatment Unit 1 (MTU1)

AREA TFC-E

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **625**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-06-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	56,250	1.6
W-413	618,641	16.4
Total:	<u>674,891</u>	<u>18.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>674,891</u>

6. Comments:

Facility only ran a few minutes on 11-24 to look for leaks on the new resin columns.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Anthony VanNoy* Date: **12-03-2013**

Self-Monitoring Report

LLNL Mini Treatment Unit 1 (MTU1)

AREA TFC-E

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 788

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 19.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	75,648	1.6
W-413	782,100	16.4
Total:	<u>857,748</u>	<u>18.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>857,748</u>

6. Comments:

Facility was down starting 12-29-13 from 1130 a.m. till 12-30-13 at 1030 a.m. for resin work.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-10-2014

Self-Monitoring Report

LLNL Portable Treatment Unit 1 (PTU1)

AREA TFC-SE

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **631**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-01-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	115,256	3.1
W-2201	448,628	12.1
Total:	<u>563,884</u>	<u>15.2</u>

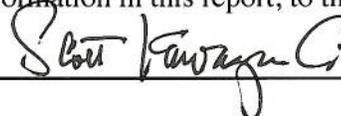
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>563,884</u>

6. Comments:

Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown.
 Facility was restarted on 10-21-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-01-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 1 (PTU1)

AREA TFC-SE

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **658**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-04-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	108,629	3.2
W-2201	467,072	12.1
Total:	<u>575,701</u>	<u>15.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>575,701</u>

6. Comments:

Wet season hexavalent chromium treatment began on 11-25-13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Steve Kawaguchi* Date: **12-02-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 1 (PTU1)

AREA TFC-SE

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 826

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 20.2

4. Wellfield Data:

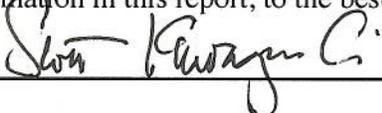
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	125,491	2.6
W-2201	490,764	12.1
Total:	<u>616,255</u>	<u>14.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>616,255</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-02-2014

Self-Monitoring Report

LLNL Treatment Facility D (TFD)

AREA TFD

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 609

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 21.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	46,547	1.3
W-653	2,824	3.0
W-906	21	0.0
W-907-2	360,237	9.9
W-2011	5,528	3.0
W-1206	434,534	11.8
W-1208	759,850	21.1
W-2102	13,808	3.0
W-2101	6,554	3.0
Total:	<u>1,629,903</u>	<u>56.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,629,903</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown.
Facility was restarted on 10-22-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: Steve Kawaguchi Date: 11-01-2013

Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **654**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-01-2013**
 Influent pH: **7.0**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	47,937	1.3
W-653	2,865	3.0
W-906	0	0.0
W-907-2	389,118	10.1
W-2011	5,864	3.0
W-2101	6,892	3.0
W-2102	13,196	3.0
W-1206	226,333	12.3
W-1208	811,819	21.2
Total:	<u>1,504,024</u>	<u>56.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,504,024</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

W-1206 down on 11-13-13 due to overload.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature:  Date: 12-02-2013

Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 823

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-12-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 19.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	57,375	1.2
W-653	3,365	3.0
W-906	0	0.0
W-907-2	389,893	9.9
W-2011	7,035	3.0
W-2101	8,232	3.0
W-2102	15,319	3.0
W-1206	423,539	10.0
W-1208	1,007,611	20.6
Total:	<u>1,912,369</u>	<u>53.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,912,369</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

W-1206 started on 12-5-13. W-907-2 secured on 12-23-13 due to loss of pressure in packer. W-907-2 started on 12-30-13.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 01-03-2014

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 287

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-02-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	237	0.0
W-1301	17,012	0.6
W-1303	39,151	1.9
W-1306	5,184	0.3
W-1307	119,678	6.5
W-1550	8,281	0.5
W-2203	3,839	0.2
Total:	<u>193,382</u>	<u>10.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>193,382</u>

6. Comments:

Facility was down 10/6 thru 10/8 and 10/10, 10/16, 10/30 and 10/31 due to discharge pump failure and scaling problems. Facility was down due to the government/LLNL shut down 10/18 thru 10/23.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-04-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): 153

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-25-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	293	0.0
W-1301	5,744	0.5
W-1303	21,601	2.1
W-1306	2,710	0.3
W-1307	67,369	7.0
W-1550	4,541	0.4
W-2203	2,070	0.2
Total:	<u>104,328</u>	<u>10.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>104,328</u>

6. Comments:

Facility was down due to bad motor on facility discharge pump. Motor was ordered and replaced.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	982	0.0
W-1301	26,121	0.6
W-1303	77,265	1.7
W-1306	12,244	0.2
W-1307	316,013	7.1
W-1550	22,161	0.4
W-2203	10,319	0.2
Total:	<u>465,105</u>	<u>10.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>465,105</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-10-2014

**Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 555

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-07-2013
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	262,055	8.8
Total:	<u>262,055</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>262,055</u>

6. Comments:

Facility was shutdown on 10-16-2013 at 11:08 in preparation for LLNL shutdown. Facility was restarted on 10-23-2013 at 13:16. Facility shutdown on 10-28-2013 on 16:55 due to a power outage. Facility was restarted on 10-29-2013 at 10:19.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 10 (PTU10)

AREA TFD-HPD

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **656**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-06-2013**
 Influent pH: **7.4**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **21.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	371,054	9.8
Total:	<u>371,054</u>	<u>9.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>371,054</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-17-2013**

**Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 765

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-04-2013
 Influent pH: 7.5
 Effluent pH: 7.5
 Effluent Temperature (°C): 17.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	243,368	6.8
Total:	<u>243,368</u>	<u>6.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>243,368</u>

6. Comments:

Facility shutdown on 12-21-2013 at 07:16 due to low flow. Facility was restarted on 12-23-2013 at 15:50.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Lyden Date: 01-16-2014

Self-Monitoring Report LLNL ISB01 (ISB01) AREA TFD-HPD

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 530

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	960	3.7
W-1653	772	3.0
W-1655	81	2.5
W-1657	14	0.2
Total:	<u>1,827</u>	<u>9.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>1,827</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system but was not treated. On 10-11-13 approximately 181.95 gallons of facility water were diverted into the premixing tote. On 10-21-13 approximately 19.81 gallons of facility water were diverted into the premixing tote. The facility did not operate while the Larox pump was injecting ethyl lactate into W-1552. The facility was shut down at 11:12 on 10-16-13 in preparation for LLNL shutdown. The facility was restarted at 10:46 on 10-21-13. The facility was also down for a number of hours to allow the water level to recover in W-1552.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-21-2013

Self-Monitoring Report LLNL ISB01 (ISB01) AREA TFD-HPD

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 254

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	528	3.7
W-1653	427	2.8
W-1655	65	1.8
W-1657	1	0.1
Total:	<u>1,021</u>	<u>8.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>1,021</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system but was not treated. On 11-15-13 approximately 190.42 gallons of facility water were diverted into the premixing tote. The facility did not operate while the Larox pump was injecting ethyl lactate into W-1552. The facility lost communication with TFRT earlier in the day on 11-26-13. The facility did not operate for the rest of the month due to a communication breakdown with TFRT.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

Operator Signature:  Date: 12-17-2013

Self-Monitoring Report LLNL ISB01 (ISB01) AREA TFD-HPD

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	28	29	30																												
December	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 219

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	628	2.6
W-1653	404	1.9
W-1655	818	2.9
W-1657	9	2.3
Total:		
	<u>1,859</u>	<u>9.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>1,859</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system and water is not discharged to the environment. Water was circulated through the system but was not treated. On 12-11-13 facility water was diverted into the premixing tote. This operation was concluded on 12-17-13 after approximately 200 gals of facility water were diverted into the premixing tote. The facility was operated in the regular flow configuration in between the tote filling operations. The facility did not operate while the Larox pump was injecting ethyl lactate solution into W-1552. The facility was also shut down during the time that facility water was being diverted to the ethyl lactate premixing tote, and a new flow meter was installed and tested at W-1653. The facility was also shut

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

down during well recovery time at W-1552. The facility was down for several days during testing for communication problems between the facility and TFRT.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Hill Date: 01-16-2014

Self-Monitoring Report

LLNL Portable Treatment Unit 2 (PTU2)

AREA TFD-S

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 406

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-03-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 23

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	255,952	10.7
W-1504	213,828	8.7
W-1510	87,378	5.0
Total:	<u>557,158</u>	<u>24.4</u>

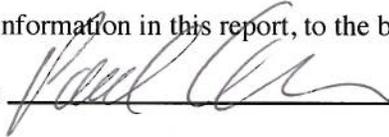
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>557,158</u>

6. Comments:

Facility was shutdown on 10-01-2013 due to "watch dog alarm". Facility was restarted on 10-03-2013. Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/25/13. Facility was shutdown on 10-25-2013 due to "well G flow meter failure". Facility was restarted on 10-28-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-05-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 2 (PTU2)

AREA TFD-S

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **655**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-12-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **23**

4. Wellfield Data:

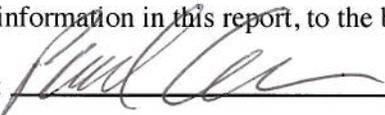
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	401,968	10.3
W-1504	331,854	8.6
W-1510	192,570	4.9
Total:	<u>926,392</u>	<u>23.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>926,392</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 2 (PTU2)

AREA TFD-S

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 795

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-09-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.8

4. Wellfield Data:

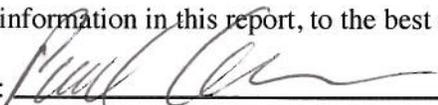
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	481,496	10.2
W-1504	395,688	8.4
W-1510	233,730	4.9
Total:	<u>1,110,914</u>	<u>23.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,110,914</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

Self-Monitoring Report

LLNL Portable Treatment Unit 11 (PTU11)

AREA TFD-SE

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 513

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	261,279	7.3
W-2005	31,723	0.7
W-1308	63,759	1.9
W-1403	40,124	1.1
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>396,885</u>	<u>11.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>396,885</u>

6. Comments:

Facility was down due to the government/LLNL shut down.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-04-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 11 (PTU11)

AREA TFD-SE

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 649

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-06-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 20.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	329,469	8.6
W-2005	49,867	1.4
W-1308	79,021	2.2
W-1403	42,481	1.2
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>500,838</u>	<u>13.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>500,838</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 11 (PTU11)

AREA TFD-SE

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 19.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	330,581	1.0
W-2005	43,841	0.9
W-1308	76,615	1.7
W-1403	47,239	7.4
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>498,276</u>	<u>11.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>498,276</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-10-2014

Self-Monitoring Report

LLNL Portable Treatment Unit 12 (PTU12)

AREA TFD-SS

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 20 21 22 23 **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 527

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-09-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 21

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	211,345	6.2
W-1601	10,609	1.2
W-1602	36,439	4.1
W-1603	126,705	13.6
Total:	<u>385,098</u>	<u>25.1</u>

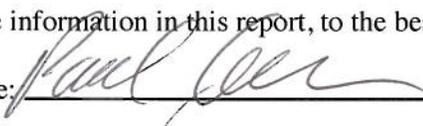
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>385,098</u>

6. Comments:

Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/24/13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-05-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **649**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-13-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **21**

4. Wellfield Data:

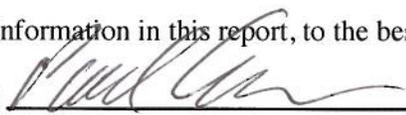
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	243,787	6.2
W-1601	37,289	1.0
W-1602	79,128	3.7
W-1603	387,751	13.4
Total:	<u>747,955</u>	<u>24.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>747,955</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 12 (PTU12)

AREA TFD-SS

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-09-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 20.8

4. Wellfield Data:

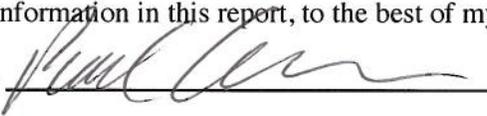
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	293,060	5.9
W-1601	36,112	0.9
W-1602	87,760	3.2
W-1603	572,793	11.8
Total:	<u>989,725</u>	<u>21.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>989,725</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

**Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 20 21 22 **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 578

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-07-2013
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 24.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	346,288	10.0
W-1216	347,560	10.2
W-1902	620,156	18.2
Total:	<u>1,314,004</u>	<u>38.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,314,004</u>

6. Comments:

Facility was shutdown on 10-16-2013 at 10:56 in preparation for LLNL shutdown. Facility was restarted on 10-23-2013 at 10:36.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 657

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-06-2013
Influent pH: 7.5
Effluent pH: 7.6
Effluent Temperature (°C): 22.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	394,159	10.1
W-1216	394,704	10.3
W-1902	705,157	18.2
Total:	<u>1,494,020</u>	<u>38.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,494,020</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Klein Date: 12-17-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 779

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-04-2013
 Influent pH: 7.4
 Effluent pH: 7.5
 Effluent Temperature (°C): 18.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	467,349	10.1
W-1216	464,222	10.0
W-1902	829,700	18.3
Total:	<u>1,761,271</u>	<u>38.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,761,271</u>

6. Comments:

Facility was shutdown on 12-19-2013 at 14:40 to replace cuno filter elements.
 Facility was restarted on 12-20-2013 at 09:12.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Lich Date: 01-16-2014

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 21 22 **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	278,606	6.9	-4	60	571
W-ETC-2004A	67,956	1.1	-1.5	60	571
W-ETC-2004B	453,486	9.5	-1.39	60	571
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>800,048</u>	<u>17.4</u>			

4. Comments:

Facility was secured on 10-16-2013 in preparation for LLNL shutdown. Facility restarted 10-23-13 at 11:15, wellfield flow rates adjusted to optimize facility performance during winter operation. As a result, cumulative volumes compared to facility flow rate entered on this report may not correlate. Facility shutdown 10-27-13, cause of shutdown unknown. Facility was restarted 10/28 at 08:40. Facility operations interrupted by a power outage 10/28 at 13:25 hrs., facility was restarted 10/29/13 at 10:16. End month volumes for extraction wells were calculated from individual flow measurements, and not derived from facility totalizer values.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 11-11-2013

Self-Monitoring Report
LLNL Vapor Extraction System 11 (VES11)
AREA VTFD-ETCS

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	128	0.0	0	0	0
W-ETC-2003	484,902	12.3	-0.83	78	656
W-ETC-2004A	203,955	5.4	-4.72	78	656
W-ETC-2004B	907,769	23.2	-4.61	78	656
SIP-ETC-201	35	0.0	0	0	0
Total:	<u>1,596,789</u>	<u>40.9</u>			

4. Comments:

Quarterly vapor samples collected from operating and idle extraction wells
11-12-13.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: 12-09-2013

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November	<u>28</u>	<u>29</u>	<u>30</u>																												
December	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	607,002	11.3	-.88	56	823
W-ETC-2004A	262,726	5.7	-5.08	56	823
W-ETC-2004B	1,115,957	23.4	-5.03	56	823
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,985,685</u>	<u>40.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-06-2014

Self-Monitoring Report

LLNL Portable Treatment Unit 3 (PTU3)

AREA TFE-E

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** 10 **11** **12** **13** **14** **15**
 16 17 18 19 20 21 22 23 24 **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 468

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-01-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 19.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	234,810	8.5
W-1109	25,651	0.9
W-1903	11,111	0.3
W-1909	0	0.0
W-2305	31	0.0
Total:	<u>271,603</u>	<u>9.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>271,603</u>

6. Comments:

Facility was shutdown on 10-09-2013 for system testing. Facility was restarted on 10-11-2013. Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown, and restarted on 10-25-2013. Facility shutdown 10-28-2013 due to unplanned power outage. Facility was restarted on 10-29-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-06-2013

Self-Monitoring Report

LLNL Portable Treatment Unit 3 (PTU3)

AREA TFE-E

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **657**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-04-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **19.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	332,310	8.6
W-1109	33,546	0.9
W-1903	20,353	0.5
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>386,209</u>	<u>10.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>386,209</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-06-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 3 (PTU3)

AREA TFE-E

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 825

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 19.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	413,385	8.5
W-1109	42,455	0.9
W-1903	22,283	0.4
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>478,123</u>	<u>9.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>478,123</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2014

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 618

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-02-2013
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 18.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	278	0.5
Total:	<u>278</u>	<u>0.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>278</u>

6. Comments:

Facility secured 10/1/13 at 11:35 to allow W-2105 water level to increase prior to collection of monthly water samples, and was restarted 10/2 at 08:50. Facility was shutdown 10/16/13 at 10:16 in preparation for LLNL shutdown. Facility was restarted 10/21/13 at 11:03. Facility operations were interrupted by power outages 10/28 at 09:30 and 13:25 hrs. Facility was restarted 10/29/13 at 10:16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 11-08-2013

Self-Monitoring Report

LLNL GAC Treatment Unit 07 (GTU07)

AREA TFE-HS

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 **25** **26** **27**

Total monthly time facility operated (hours): 149

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-05-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 15.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	83	0.4
Total:	<u>83</u>	<u>0.4</u>

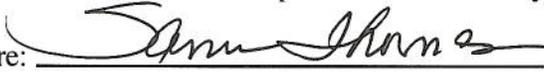
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>83</u>

6. Comments:

Facility secured 11/4/13 to allow W-2105 groundwater level to increase to facilitate collection of RWQCB samples. Facility was restarted 11/5/13. Following collection of RWQCB samples, facility shutdown for removal of groundwater pump, and restarted 11/25/13. W-2105 utilizes vacuum-enhanced groundwater extraction combined with cyclic pump operation. Therefore constant flow rate and hours of operation may not correspond.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-09-2013

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 677

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 13.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	511	1.1
Total:	<u>511</u>	<u>1.1</u>

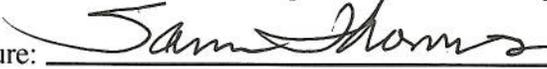
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>511</u>

6. Comments:

Facility secured 12/2/13 @ 11:00 to allow W-2105 water levels to increase prior to collection of monthly samples. Facility was restarted 12/3/13. Facility was secured 12/6/13 to 12/18/13 for freeze protection. W-2105 utilizes vacuum-enhanced groundwater extraction combined with cyclic pump operation. Therefore constant flow rate and hours of operation may not correspond.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-08-2014

**Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 467

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-03-2013
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 23

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	1	6.4
W-1409	50,189	1.8
Total:	<u>50,190</u>	<u>8.1</u>

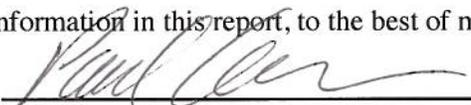
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>50,190</u>

6. Comments:

Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/22/13. Facility shutdown on 10-26-2013 due to discharge pump breaker failure. Facility was restarted on 10-29-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-05-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **645**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-12-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **22.9**

4. Wellfield Data:

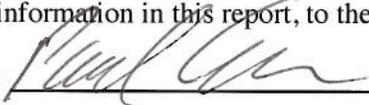
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	236,070	6.1
W-1409	69,635	1.8
Total:	<u>305,705</u>	<u>7.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>305,705</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

Self-Monitoring Report

LLNL Portable Treatment Unit 9 (PTU9)

AREA TFE-NW

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	<u>28</u>	<u>29</u>	<u>30</u>																												
December	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 817

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>11-28-2013</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>23.9</u>

4. Wellfield Data:

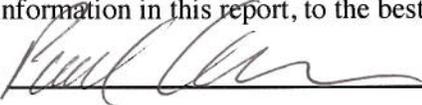
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	308,826	6.2
W-1409	87,416	1.8
Total:	<u>396,242</u>	<u>8.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>396,242</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

Self-Monitoring Report

LLNL Mini Treatment Unit 04 (MTU04)

AREA TFE-SE

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 21 **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **599**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-01-2013**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **20.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	301,670	8.3
Total:	<u>301,670</u>	<u>8.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>301,670</u>

6. Comments:

Facility was secured on 10-16-2013 in preparation for LLNL shutdown. Facility was restarted on 10-22-2013.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-06-2013**

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **642**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-04-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **21.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	323,195	8.4
Total:	<u>323,195</u>	<u>8.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>323,195</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: **12-06-2013**

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 815

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 20.3

4. Wellfield Data:

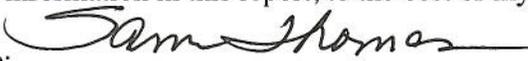
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	407,300	8.3
Total:	<u>407,300</u>	<u>8.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>407,300</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2014

**Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 **30** **31**

Total monthly time facility operated (hours): 1

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-30-2013
Influent pH: 6.5
Effluent pH: 7.0
Effluent Temperature (°C): 20.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	773	10.0
W-1518	35	0.9
W-1520	75	1.2
W-1522	0	0.0
Total:	<u>883</u>	<u>12.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>883</u>

6. Comments:

The REVAL (construction) process has been completed. Facility was restarted on 10-30-2013 at 11:00 (Day 1). Facility was shutdown on 10-30-2013 at 11:40. Facility was restarted on 10-31-2013 at 13:45 (Day 2). Facility was shutdown on 10-31-2013 at 16:12.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-21-2013

**Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 4

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	6,529	10.0
W-1518	745	0.9
W-1520	781	1.1
W-1522	210	1.0
Total:	<u>8,265</u>	<u>13.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>8,265</u>

6. Comments:

Facility was restarted on 11-01-2013 at 09:21. Facility was shutdown on 11-01-2013 at 10:08. Facility was restarted on 11-26-2013 at 10:02. Facility shutdown on 11-26-2013 at 14:37 due to air stripper interlock activation. The facility was down for most of the month to allow for system operations testing which also included the downloading of a new configuration file.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-17-2013

**Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 30
December 01 **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** 14 15
16 17 18 19 20 21 22 **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 471

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-05-2013
Influent pH: 7.5
Effluent pH: 7.4
Effluent Temperature (°C): 16.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	284,471	10.0
W-1518	15,911	0.6
W-1520	25,813	1.0
W-1522	11,165	0.6
Total:	<u>337,360</u>	<u>12.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>337,360</u>

6. Comments:

Facility was restarted on 12-02-2013 at 11:33. Facility was shutdown on 12-13-2013 at 14:24 in preparation for the Extraction Wellfield Startup Plan. Facility was restarted on 12-23-2013 at 13:20 after the pump at W-1516 was replaced. A new level transducer was installed, and the SOP3.2 was completed.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Ladin Date: 01-16-2014

**Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 570

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-07-2013
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 25.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	206,466	6.0
W-305	0	0.0
Total:	<u>206,466</u>	<u>6.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>206,466</u>

6. Comments:

Facility was shutdown on 10-16-2013 at 10:41 in preparation for LLNL shutdown. Facility was restarted on 10-22-2013 at 13:23. Facility shutdown on 10-29-2013 at 08:07 due to air stripper high water level. Facility was restarted on 10-29-2013 at 10:06.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2013

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 527

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-06-2013
 Influent pH: 7.4
 Effluent pH: 7.5
 Effluent Temperature (°C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	190,555	6.0
W-305	0	0.0
Total:	<u>190,555</u>	<u>6.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>190,555</u>

6. Comments:

Facility shutdown on 11-01-2013 at 12:44 due to W-292 pump overload light activation. Facility was restarted on 11-05-2013 at 09:15. Facility shutdown on 11-20-2013 at 16:41 due to W-292 pump overload light activation. Facility was restarted on 11-21-2013 at 09:24.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Kudil Date: 12-17-2013

Self-Monitoring Report LLNL Mini Treatment Unit 05 (MTU05) AREA TFE-W

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	<u>28</u>	<u>29</u>	<u>30</u>	04	05	06	07	08	09	10	11	12	13	14	15
December	<u>01</u>	<u>02</u>	<u>03</u>	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30 31

Total monthly time facility operated (hours): 141

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>12-02-2013</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>18.7</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	50,844	6.0
W-305	0	0.0
Total:	<u>50,844</u>	<u>6.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>50,844</u>

6. Comments:

Facility was shutdown on 12-03-2013 at 08:07 in preparation for the REVAL construction process.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-16-2014**

**Self-Monitoring Report
LLNL Vapor Extraction System 16 (VES16)
AREA VTFF-ELM**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **01** **02** **03** **04** **05** **06** **07** **08** **09** 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	15,631	0.4	-16.48	75	443
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	506,270	17.4	-1.3	75	443
W-543-1908	0	0.0	0	0	0
Total:	<u>521,901</u>	<u>17.8</u>			

4. Comments:

Facility was shutdown on 10-09-2013 to perform SOP 3.2 at W-1903. Facility was restarted on 10-11-2013. Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown, and restarted on 10-25-2013. Facility shutdown due to power interruptions on 10-27-13 at 18:00 hrs, restarted 10/28 at 11:27, shutdown at 13:00 hrs., restarted on 10-29-2013.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-20-2013

Self-Monitoring Report
LLNL Vapor Extraction System 16 (VES16)
AREA VTFE-ELM

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

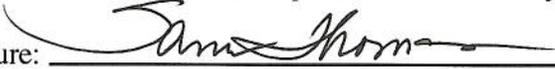
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	47,986	1.2	-20.74	58	642
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	12	0.0	0	0	0
W-543-003	879,976	23.0	-1.3	58	642
W-543-1908	10	0.0	0	0	0
Total:	<u>927,984</u>	<u>24.2</u>			

4. Comments:

Quarterly vapor samples collected from operating and idle extraction wells 11/20/13.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-06-2013

Self-Monitoring Report
LLNL Vapor Extraction System 16 (VES16)
AREA VTFF-ELM

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

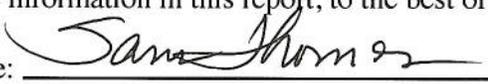
November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1903	77,897	1.4	-19.56	58	821
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	1,089,386	20.9	-1.5	58	821
W-543-1908	0	0.0	0	0	0
Total:	<u>1,167,283</u>	<u>22.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2014

**Self-Monitoring Report
LLNL Vapor Extraction System 12 (VES12)
AREA VTFE-HS**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

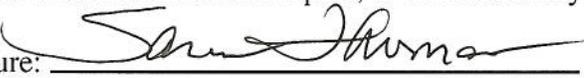
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	52,474	1.6	-12.54	68	627
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	476,043	12.0	-12.27	68	627
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	0	0.0	0	0	0
Total:	<u>528,517</u>	<u>13.6</u>			

4. Comments:

Facility was shutdown on 10-16-2013 at 10:16 hrs. in preparation for LLNL shutdown, and restarted on 10-21-2013 at 10:56. Facility operations were interrupted by power outages 10/28 at 09:30 and 13:25 hrs. Facility was restarted 10/29/13 at 10:16.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-14-2014**

Self-Monitoring Report
LLNL Vapor Extraction System 12 (VES12)
AREA VTFE-HS

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	10,806	0.0	0	0	161
W-ETS-2008A	11	0.0	0	0	0
W-ETS-2008B	636,604	16.2	-9.37	58	651
W-ETS-2009	25	0.0	0	0	0
W-ETS-2010A	9	0.0	0	0	0
W-ETS-2010B	16	0.0	0	0	0
Total:	<u>647,471</u>	<u>16.2</u>			

4. Comments:

W-2105 soil vapor and groundwater extraction secured 11/5/13 to 11/25/13.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-06-2013

Self-Monitoring Report
LLNL Vapor Extraction System 12 (VES12)
AREA VTFE-HS

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-2105	50,512	1.0	-10.62	48	820
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	835,112	16.8	-10.12	48	820
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	0	0.0	0	0	0
Total:	<u>885,624</u>	<u>17.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-06-2014

Self-Monitoring Report

LLNL GAC Treatment Unit 01 (GTU01)

AREA TFG-1

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 618

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-02-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	192,629	5.1
Total:	<u>192,629</u>	<u>5.1</u>

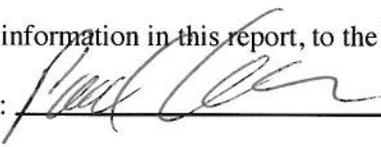
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>192,629</u>

6. Comments:

Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/21/13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-05-2013

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month October Year 2013

2. Date compliance sampling performed 10-02-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>16.91</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/SSW</u>

4. Receiving Data:

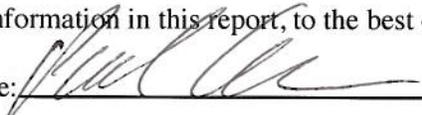
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2013

Self-Monitoring Report

LLNL GAC Treatment Unit 01 (GTU01)

AREA TFG-1

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **646**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-08-2013**
 Influent pH: **7.0**
 Effluent pH: **7.0**
 Effluent Temperature (°C): **22.2**

4. Wellfield Data:

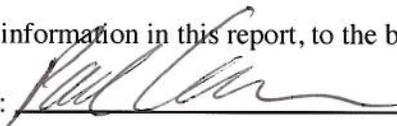
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>202,754</u>	<u>5.2</u>
Total:	<u>202,754</u>	<u>5.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>202,754</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month November Year 2013

2. Date compliance sampling performed 11-08-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>13.79</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SSE</u>

4. Receiving Data:

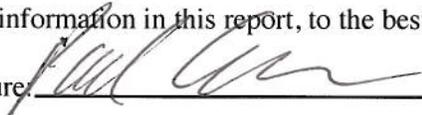
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2013

Self-Monitoring Report

LLNL GAC Treatment Unit 01 (GTU01)

AREA TFG-1

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 814

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.2

4. Wellfield Data:

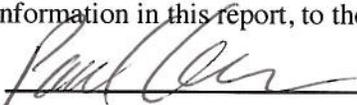
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	256,069	5.2
Total:	<u>256,069</u>	<u>5.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>256,069</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month December Year 2013

2. Date compliance sampling performed 12-03-2013

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.76</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>3/ SE</u>

4. Receiving Data:

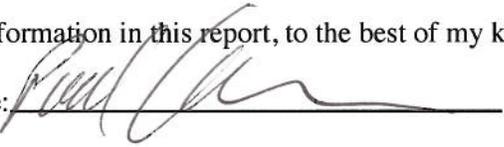
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-22-2014

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **628**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-02-2013**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **22.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	63,113	1.6
W-1807	155,645	4.2
Total:	<u>218,758</u>	<u>5.8</u>

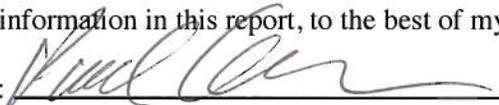
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>218,758</u>

6. Comments:

Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/22/13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-05-2013**

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 654

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-08-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.6

4. Wellfield Data:

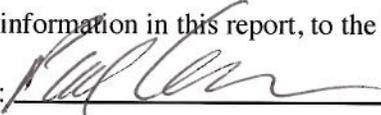
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	66,406	1.7
W-1807	166,754	4.4
Total:	<u>233,160</u>	<u>6.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>233,160</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2013

**Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 827

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.1

4. Wellfield Data:

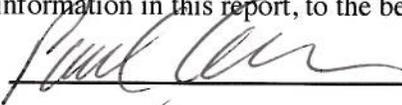
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	83,787	1.7
W-1807	207,062	4.3
Total:	<u>290,849</u>	<u>6.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>290,849</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

**Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 576

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-07-2013
Influent pH: 7.4
Effluent pH: 7.5
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	97	4.5
W-1310	303,740	8.9
Total:	<u>303,837</u>	<u>13.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>303,837</u>

6. Comments:

Facility was shutdown on 10-16-2013 at 10:31 in preparation for LLNL shutdown. Facility was restarted on 10-23-2013 at 09:54.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-27-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 657

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-06-2013
Influent pH: 7.4
Effluent pH: 7.5
Effluent Temperature (°C): 23.6

4. Wellfield Data:

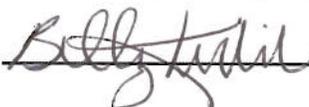
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	348,970	9.1
Total:	<u>348,970</u>	<u>9.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>348,970</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-17-2013

**Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 798

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-04-2013
 Influent pH: 7.4
 Effluent pH: 7.4
 Effluent Temperature (°C): 20.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	421,609	8.9
Total:	<u>421,609</u>	<u>8.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>421,609</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Larkin Date: 01-16-2014

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 595

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-03-2013
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 23.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	206,779	5.9
Total:	<u>206,779</u>	<u>5.9</u>

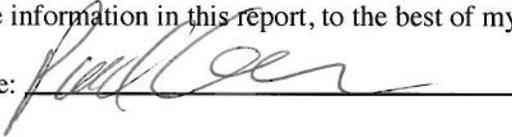
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>206,779</u>

6. Comments:

Facility secured on 10/16/13 in preparation for LLNL shutdown. System restarted on 10/22/13.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-05-2013

**Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27**

Total monthly time facility operated (hours): **646**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-08-2013**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **23.1**

4. Wellfield Data:

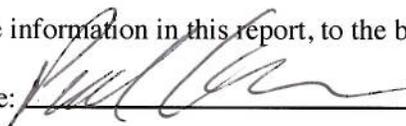
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	214,175	5.5
Total:	<u>214,175</u>	<u>5.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>214,175</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2013**

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 788

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-03-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 23

4. Wellfield Data:

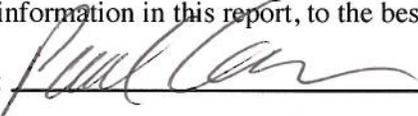
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	248,741	5.3
Total:	<u>248,741</u>	<u>5.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>248,741</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

**Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 10-31-2013

**Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N**

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October 31
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Steve Kawaguchi* Date: 12-02-2013

**Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured
Influent pH:
Effluent pH:
Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

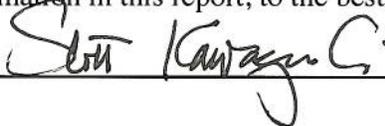
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-02-2014

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **628**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	57	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	6	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>63</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>63</u>

6. Comments:

Facility was secured on 10-16/13 for the LLNL shutdown , and restarted 10-21-13. Groundwater from this facility is transferred to and treated at TFB Main.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: **11-06-2013**

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 571

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	62	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	15	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>77</u>	<u>0.0</u>

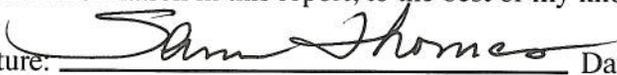
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>77</u>

6. Comments:

Transferred 750 gallons of groundwater to TFB Main for treatment 11/19/13. Air supply to pneumatic groundwater pumps off 11/23 and 11/24 to allow well levels to recover for collection of quarterly samples.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-06-2013

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 680

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	65	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	21	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>86</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>86</u>

6. Comments:

Facility secured 12/6/13 to 12/12/13 for freeze protection.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-08-2014

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 1 (CRD1)

AREA TF5475-1

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	0	0.0

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-15-2013

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 1 (CRD1)

AREA TF5475-1

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-17-2013

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 1 (CRD1)

AREA TF5475-1

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	28	29	30																												
December	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	0	0.0

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Fisher Date: 01-16-2014

**Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 17 18 19 20 21 22 23 **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **576**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-01-2013**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **18.6**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	76,032	1.9
W-1415	0	0.0
Total:	<u>76,032</u>	<u>1.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>76,032</u>

6. Comments:

Facility was down due to the government/LLNL shut down.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-04-2013**

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 655

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-06-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 18.9

4. Wellfield Data:

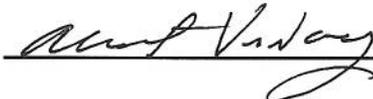
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	90,879	2.4
W-1415	0	0.0
Total:	<u>90,879</u>	<u>2.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>90,879</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-03-2013

**Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2**

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-02-2013
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 18.4

4. Wellfield Data:

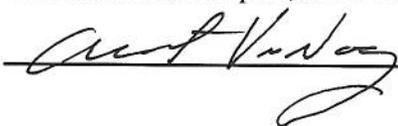
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	90,283	1.7
W-1415	0	0.0
Total:	<u>90,283</u>	<u>1.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>90,283</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-10-2014

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 2 (CRD2)

AREA TF5475-3

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

October	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty L. L. L. Date: 11-15-2013

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 2 (CRD2)

AREA TF5475-3

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold and underline**) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Billy Fisher* Date: 12-17-2013

Self-Monitoring Report

LLNL Catalytic Reductive Dehalogenation 2 (CRD2)

AREA TF5475-3

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treated ground water was discharged

November	28	29	30														
December	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:		
	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty L. Hain Date: 01-16-2014

Self-Monitoring Report
LLNL Vapor Extraction System 08 (VES08)
AREA VTF406-HS

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** 14 15
 16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	514,359	16.4	-2.48	68	593
W-514-2007A	0	0.0	0	0	593
W-514-2007B	337,633	10.7	-2.89	68	593
Total:	<u>851,992</u>	<u>27.1</u>			

4. Comments:

Facility shutdown on 10-13-2013, cause of shutdown unknown. Facility was restarted on 10-16-2013. Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown, and restarted on 10-21-2013. End month volumes for extraction wells were calculated from individual flow measurements, and not derived from facility totalizer values.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: 11-11-2013

Self-Monitoring Report
LLNL Vapor Extraction System 08 (VES08)
AREA VTF406-HS

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

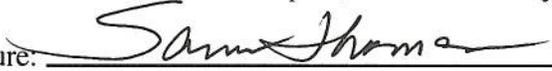
November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	586,395	15.6	-2.54	68	650
W-514-2007A	0	0.0	0	0	0
W-514-2007B	411,226	10.4	-2.92	68	650
Total:	<u>997,621</u>	<u>26.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-09-2013

Self-Monitoring Report
LLNL Vapor Extraction System 08 (VES08)
AREA VTF406-HS

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	665,171	13.8	-2.77	60	819
W-514-2007A	0	0.0	0	0	0
W-514-2007B	511,596	10.8	-3.04	60	819
Total:	<u>1,176,767</u>	<u>24.6</u>			

4. Comments:

End month volumes for extraction wells were calculated from individual flow measurements, and not derived from facility totalizer values.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-08-2014

Self-Monitoring Report
LLNL Vapor Extraction System 05 (VES05)
AREA VTF511

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 17 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	338,474	8.6	-4.7	80	622
W-2208A	0	0.0	0	0	0
W-2208B	320,917	8.5	-4.2	80	622
Total:	<u>659,391</u>	<u>17.0</u>			

4. Comments:

Facility was shutdown on 10-16-2013 in preparation for LLNL shutdown.
Facility was restarted on 10-21-2013.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-07-2013

Self-Monitoring Report
LLNL Vapor Extraction System 05 (VES05)
AREA VTF511

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	320,183	8.2	-4.7	60	649
W-2208A	0	0.0	0	0	0
W-2208B	311,140	7.8	-4.2	60	649
Total:	<u>631,323</u>	<u>16.0</u>			

4. Comments:

Due to condensate intermittently disrupting operation of facility instrumentation, extraction well end month cumulative volumes entered for reporting month may not be accurate.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-06-2014

Self-Monitoring Report
LLNL Vapor Extraction System 05 (VES05)
AREA VTF511

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 28 29 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	110	0.0	0	0	0
W-2207B	174,472	5.0	-5	48	816
W-2208A	71	0.0	0	0	0
W-2208B	288,755	5.8	-4.4	48	816
Total:	<u>463,408</u>	<u>10.8</u>			

4. Comments:

Quarterly vapor samples collected from W-2207A and W-2208A 12/04/13.
 Extraction well end month cumulative volumes entered for reporting month may not be accurate due to condensate restricting vapor flow in underground piping, and intermittently disrupting operation of facility instrumentation.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-07-2014

**Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ**

1. Reporting Period: Business Month October **Week: 1** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

September **28** **29** **30**
October **01** **02** **03** **04**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,450	3.9	-17.5	58	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	11,127	1.1	-20.5	58	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>50,577</u>	<u>5.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 2** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

October **05** **06** **07** **08** **09** **10** **11**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,960	4.0	-17.6	46	166
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	10,989	1.1	-20.7	48	166
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>50,949</u>	<u>5.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 3** Year 2013

2. Dates (in **bold** and underline) treatment facility operated

October **12** **13** **14** **15** **16** 17 18

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	29,035	3.9	-17	80	124
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,700	0.9	-20	80	124
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,735</u>	<u>4.8</u>			

4. Comments:

Facility was secured on on 10-16-2013 in preparation for the LLNL shutdown.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-06-2013

**Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ**

1. Reporting Period: Business Month October **Week: 4** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

October 19 20 **21** **22** **23** **24** **25**

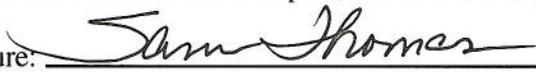
3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	21,364	3.8	-18	48	94
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,184	1.1	-21	48	94
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>27,548</u>	<u>4.9</u>			

4. Comments:

Facility was restarted on 10-21-2013 following the end of the LLNL shutdown.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: 1 Year 2013

2. Dates (in **bold** and underline) treatment facility operated

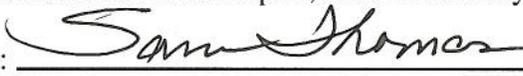
October **26** **27** **28** **29** **30** **31**
 November **01**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	40,538	4.0	-17.5	46	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	10,135	1.0	-20.5	46	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>50,673</u>	<u>5.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-06-2013

**Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ**

1. Reporting Period: Business Month November **Week: 2** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

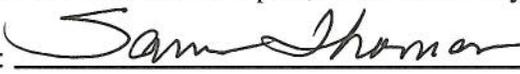
November **02** **03** **04** **05** **06** **07** **08**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,464	3.9	-17.5	49	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	12,143	1.2	-20.5	49	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>51,607</u>	<u>5.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November **Week: 3** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

November **09** **10** **11** **12** **13** **14** **15**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	38,334	3.8	-17.5	46	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	12,105	1.2	-20.5	46	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>50,439</u>	<u>5.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November **Week: 4** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

November **16** **17** **18** **19** **20** **21** **22**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	38,509	3.8	-17.8	49	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	12,161	1.2	-20.5	49	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>50,670</u>	<u>5.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-06-2013**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November **Week: 5** Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	28,536	4.0	-17.6	44	119
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	8,561	1.2	-20.5	44	119
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>37,097</u>	<u>5.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-06-2013

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 1** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

November **28** **29** **30**
 December **01** **02** **03** **04** **05** **06**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	49,201	4.3	-17.2	30	191
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	14,875	1.3	-20.5	30	191
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>64,076</u>	<u>5.6</u>			

4. Comments:

Facility operations secured 12/5/13 for freeze protection. Facility was shutdown on 12-05-2013.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: **01-06-2014**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 2** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

December **07** **08** **09** **10** **11** **12** **13**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	44,480	4.5	-16	30	165
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	12,850	1.3	-21	30	165
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>57,330</u>	<u>5.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-06-2014**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 3** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

December **14** **15** **16** **17** **18** **19** **20**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	41,983	4.2	-17.7	40	167
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	12,995	1.3	-20.5	40	167
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>54,978</u>	<u>5.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-06-2014**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 4** Year **2013**

2. Dates (in **bold** and underline) treatment facility operated

December **21** **22** **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	44,888	4.4	-17	40	170
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	14,283	1.4	-20	40	170
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>59,171</u>	<u>5.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-06-2014**

**Self-Monitoring Report
LLNL Vapor Extraction System 01 (VES01)
AREA VTF5475**

1. Reporting Period: Business Month October Year 2013

2. Dates (in **bold and underline**) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-15-2013

Self-Monitoring Report
LLNL Vapor Extraction System 01 (VES01)
AREA VTF5475

1. Reporting Period: Business Month November Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Field Date: 12-17-2013

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month December Year 2013

2. Dates (in **bold** and underline) treatment facility operated

November	28	29	30																												
December	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31															

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-16-2014

Attachment C

Figures

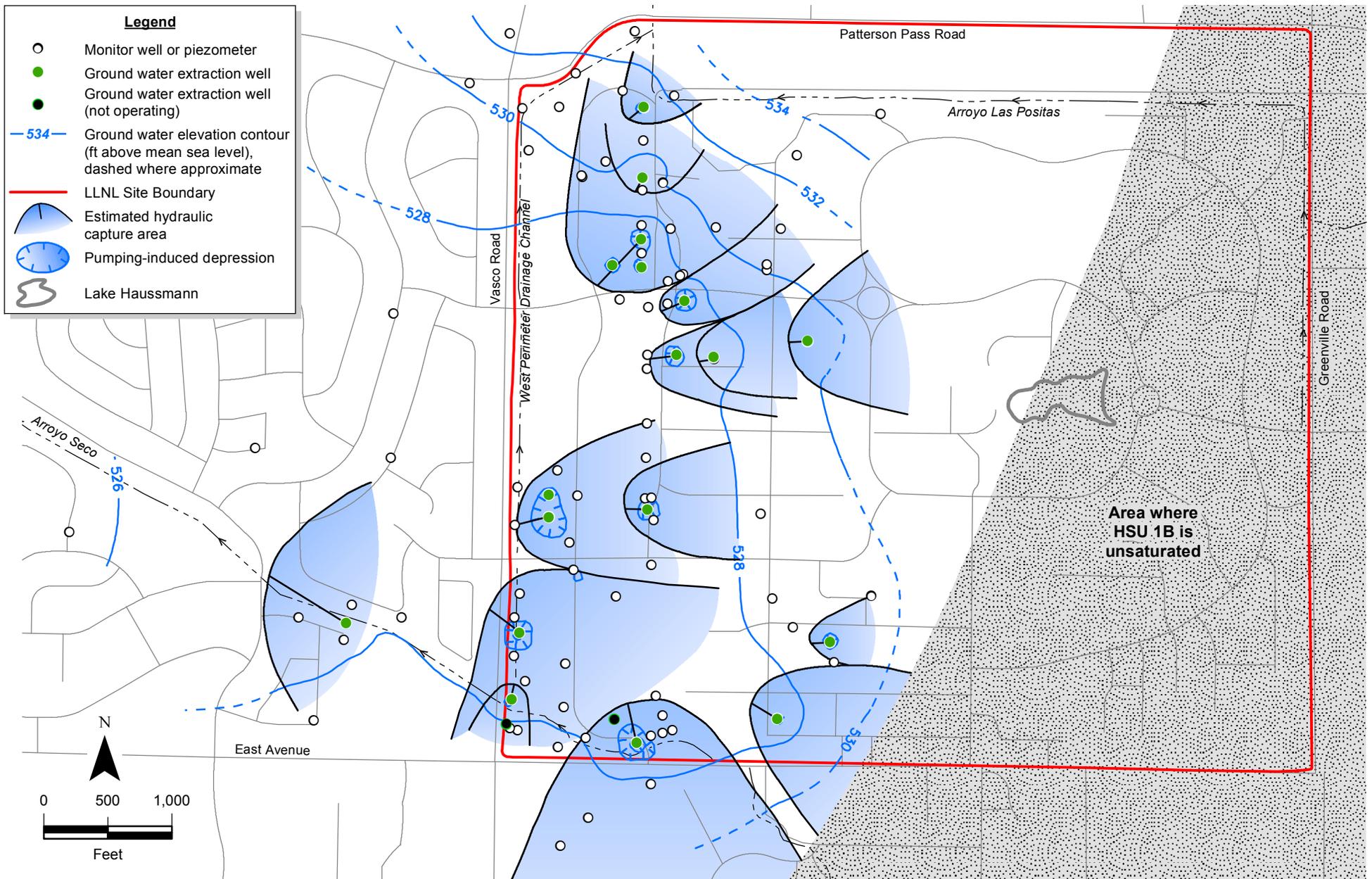


Figure 2. Ground water elevation contour map based on 99 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2013.

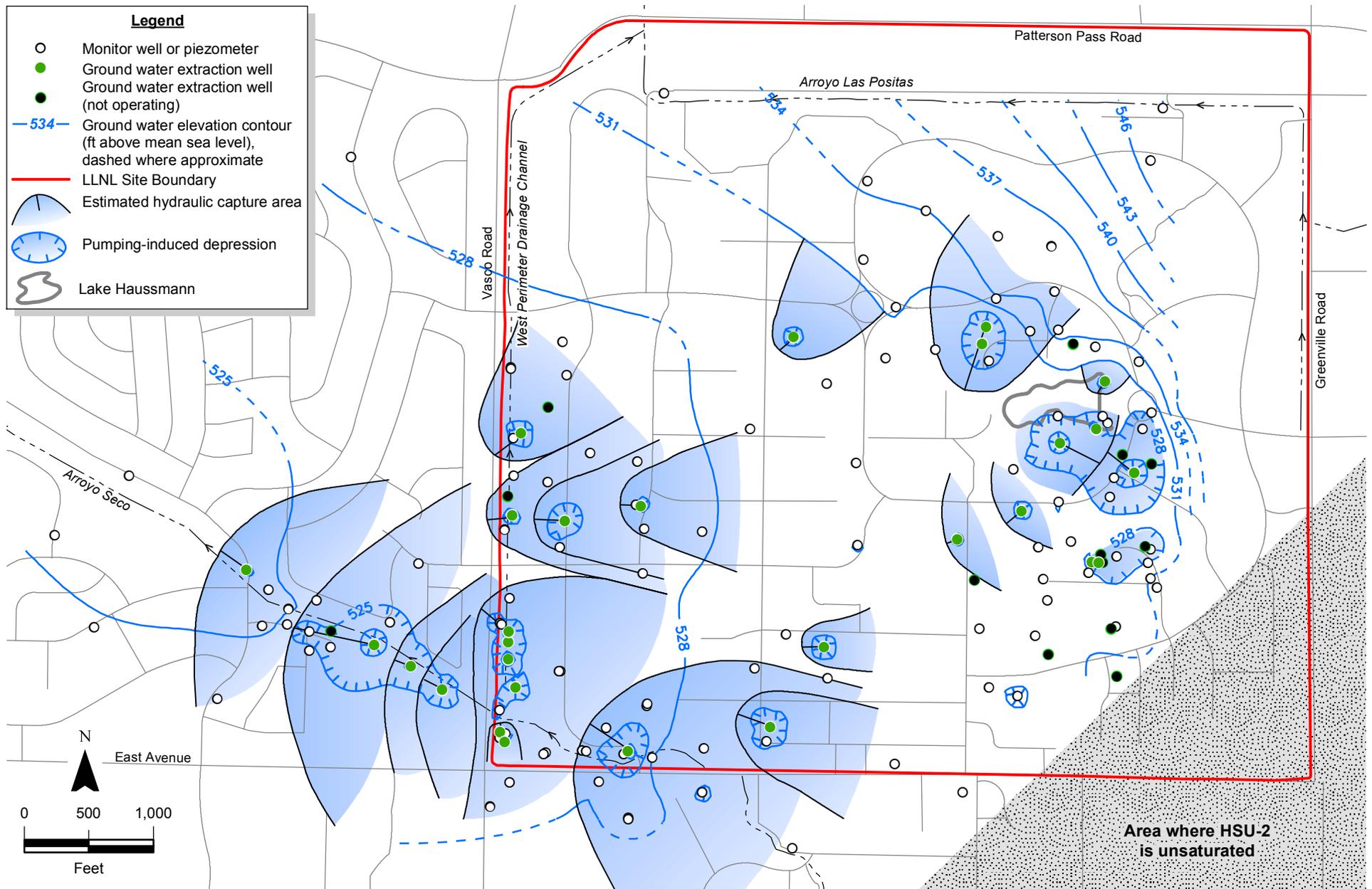


Figure 3. Ground water elevation contour map based on 150 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2013.