DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, MCAPP
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

September 28, 2007

U-110-07

Mr. Bryan Smith
Texas Commission on Environmental Quality
Industrial and Hazardous Waste Permits Section
P.O. Box 13087 (MC-130)
Austin, TX 78711-3087

Subject: Monthly Status Report of the Pilot Study Class V Aquifer Remediation Injection Wells at Camp Stanley Storage Activity, Boerne, Texas, TCEQ Authorization No. 5X2600431; WWC12002216; CN602728206/RN104431655

Dear Mr. Smith:

The Camp Stanley Storage Activity (CSSA), McAlester Army Ammunition Plant, U.S. Army Field Support Command, Army Materiel Command, U.S. Army, is submitting this monthly report summarizing the injection activities performed at the on-post Solid Waste Management Unit (SWMU) B-3 site. The activities performed are part of the planned SWMU B-3 Pilot Study being performed to evaluate the effectiveness of enhanced anaerobic biodegradation (EAB) for treatment of chlorinated compounds in groundwater. The pilot study activities include the injection of recovered groundwater into mulch/gravel filled bioreactor trenches.

This monthly report is for the period of July 30, 2007 through August 26, 2007. Due to elevated rainfall amounts during this period, the groundwater injection system was suspended. Therefore twice monthly samples of the injected groundwater for volatile organic concentrations and total dissolved solids were not collected. However monthly monitoring data were collected and are expected to be presented in the quarterly report as required by the UIC authorization.

If you have any questions regarding the information contained in this letter, please feel free to contact Glare Sanchez, CSSA Environmental Program Manager, at (210) 698-5208 or Ken Rice, Parsons, at (512) 719-6050.

Sincerely,

Jason D. Shirley
Installation Manager

Attachments

cc: Glare Sanchez, CSSA Environmental Program Manager
Kent Rohlof, AFCEE
Julie Burdey, Parsons
Ken Rice, Parsons
Brian Vanderglas, Parsons
File: 744223.11000

Personnel S. Elliott + K. Caskey

Monthly Monitoring

MPMWs	Sample Date	Sample Time	pH	Temp	SpCond	ORP	DO	Regulatory (√)	Performance (√)
CS-WB05-LGR-01	8/22/07	1400	6.86	23.67	0.934	-24.2	4.22		
CS-WB05-LGR-02		1350	6.88	24.57	0.811	-45.5	4.03		
CS-WB05-LGR03A		1341	6.96	26.36	0.720	6.5	5.20		
CS-WB05-LGR03B		1045	7.11	34.34	0.848	-5.2	~~3~~.98		
CS-WB05-LGR04A		1034	7.06	23.47	0.603	-99.0	~~3~~.86		
CS-WB05-LGR04B		1025	6.85	23.06	0.567	1.9	4.90		
CS-WB05-BS-01		1013	7.01	23.29	0.576	-59.5	5.23		
CS-WB05-CC-01		1004	6.95	23.41	0.623	-86.2	4.40		
CS-WB05-CC-02	↓	0954	6.86	23.96	0.635	-74.3	5.94		
CS-WB06-UGR-01	8/21/07	1445	6.87	25.07	0.715	13.0	3.37		
CS-WB06-LGR-01		1435	7.00	24.42	0.645	12.8	4.37		
CS-WB06-LGR-02		1425	7.10	24.28	0.622	2.8	3.64		
CS-WB06-LGR03A		1415	7.03	24.26	0.605	21.9	6.27		
CS-WB06-LGR03B		1355	7.07	24.74	0.613	-0.1	3.20		
CS-WB06-LGR-04	↓	1340	6.93	24.03	0.590	10.9	4.64		
CS-WB07-UGR-01	8/22/07	1601	6.56	23.06	0.832	-105.0	2.13		
CS-WB07-LGR-01	8/22/07	1555	6.90	22.97	0.720	~~7~~.9	3.53		
CS-WB07-LGR-02	8/22/07	1545	6.98	23.06	0.637	-21.3	4.74		
CS-WB07-LGR03A	8/22/07	1535	7.02	23.47	0.584	-34.3	5.29		
CS-WB07-LGR03B	8/22/07	1455	7.04	24.46	0.597	-21.1	6.06		
CS-WB07-LGR-04	8/22/07	1441	7.02	25.94	0.602	1.3	4.10		
CS-WB08-UGR-01	8/21/07	10.50	6.91	24.02	0.633	22.0	2.73		
CS-WB08-LGR-01	8/21/07	1043	7.01	23.74	0.773	9.5	3.15		
CS-WB08-LGR-02	8/21/07	1035	7.03	24.26	0.856	-9.9	4.28		
CS-WB08-LGR03A	8/21/07	1032	6.93	23.60	0.605	40.2	6.42		
CS-WB08-LGR03B	8/21/07	1015	6.92	23.60	0.598	34.1	~~5.05~~	~~74.80~~	
CS-WB08-LGR-04	8/21/07	1004	~~7.00~~	23.30	0.557	30.6	~~6.68~~ (24)		

↓ 5.80

Notes As part of monthly monitoring, Sumps 1-1, 1-2, 1-3, and uppermost saturated intervals of WB05 and WB-07 will be sampled for Performance list of analyses. Sumps in any trench that has beeen used during the previous 30 days will be sampled for Regulatory list of analyses. TDS has to be added to the list of analyses for Sumps 1-1, 1-2, and 1-3 if Trench 1 has been used in the previous 30 days.

Performance list of analyses Volume Required: 1.5 L	Regulatory list of analyses Volume Required: 0.5 L
VOCs (Volatile Organic Compounds)	VOCs (Volatile Organic Compounds)
DOC (Dissolved Organic Carbon)	TDS (Total Dissolved Solids)
TOC (Total Organic Carbon)	Notes
Methane, Ethane, Ethene	
Carbon Dioxide	
Hydrogen Sulfide	
Alkalinity	
Nitrogen, Nitrate + Nitrite	
Sulfate, Chloride, Ferrous Iron, Manganese	
Hydrogen (after bioreactor operational for 1 year)	

Month 4

Week 17

Personnel	S. Elliott + K. Caskey

Weekly Water Level Monitoring

Well Interval	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	8/22/07	0945	14.10	14.17	30.93
CS-WB05-LGR-02	182		0944		14.21	70.10
CS-WB05-LGR-03A	216		0943		14.23	86.17
CS-WB05-LGR-03B	262		0942		26.01	106.13
CS-WB05-LGR-04A	277		0941		32.53	112.91
CS-WB05-LGR-04B	329		0939		55.15	135.45
CS-WB05-BS-01	362		0937		69.49	148.15
CS-WB05-CC-01	432		0936		99.88	164.84
CS-WB05-CC-02	460		0935		112.02	176.84
CS-WB06-UGR-01	20	8/21/07	1334	14.06	14.09	20.04
CS-WB06-LGR-01	93		1333		14.11	41.34
CS-WB06-LGR-02	174		1332		14.17	75.87
CS-WB06-LGR-03A	207		1331		14.18	86.57
CS-WB06-LGR-03B	260		1327		24.04	109.27
CS-WB06-LGR-04	320		1326		50.10	135.63
CS-WB07-UGR-01	14	8/22/07	1434	14.08	14.09	18.53
CS-WB07-LGR-01	90		1433		14.13	35.37
CS-WB07-LGR-02	175		1432		14.19	74.26
CS-WB07-LGR-03A	208		1431		14.19	87.15
CS-WB07-LGR-03B	257		1430		18.00	108.34
CS-WB07-LGR-04	318		1429		44.52	134.66
CS-WB08-UGR-01	38	8/21/07	0942	14.04	14.11	22.46
CS-WB08-LGR-01	115		0941		14.14	34.04
CS-WB08-LGR-02	193		0940		14.17	69.67
CS-WB08-LGR-03A	228		0939		14.19	85.75
CS-WB08-LGR-03B	273		0938		21.42	105.20
CS-WB08-LGR-04	341		0937		50.95	135.63

Personnel: S. Elliott & K. Rice

Bioreactor Monitoring
Trench Sumps Water Levels ('BTOC)

Sample Time:	Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp	SpCond	ORP	DO	Trench Currently Being Used (√)	
	Date: 8/23/07		Time: 0900		Bottom / Top					flash flow
0930	B3-T1-1	12.9	2.68	6.49	25.9/27.15	0.85	-171.0	0.72		
1000	B3-T1-2	12.4	2.28	6.35	28.07/28.78	1.026	-152.3	0.69		
1235	B3-T1-3	12.85	1.92	6.99	29.43/29.56	0.996	-181.0	0.40		
	B3-T2-1	9.67	4.08	6.35	29.39	1.678	-174.5	0.59		
	B3-T2-2	10.01	~~6.40~~ 4.40	6.49	29.98	3.365	-171.7	0.48		
	B3-T3-1	9.96	6.80	6.42	25.57	1.068	-148.2	0.46		6.2'
	B3-T3-2	7.4	6.90							2'
	B3-T4-1	6.32	6.05							
	B3-T5-1	9.33	9.10							1.7'
	B3-T5-2	7.98	6.05	6.46	26.68	0.919	-124.6	0.47		
	B3-T6-1	11.45	11.15							7.6
	B3-T6-2	12.34	11.35	6.42	26.22	1.083	-149.6	0.48		8.6'
	B3-UIC									

B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Data / Time	Rate (gravity fed)/ Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1		
				P-2		
T-1		/		P-3		
T-2		/		P-4		
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)=		Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi. Change filter.
T-4		/				
T-5		/				* No water added to any of the tranches, trench 1 overflowing from last Thursdays rain.
T-6		/				
B-3 (Mon)		/		PB-1: PB-2: =		
B-3 (Tues)		/		PB-1: PB-2: =		
B-3 (Wed)		/		PB-1: PB-2: =		
B-3 (Thurs)		/		PB-1: PB-2: =		
B-3 (Fri)		/		PB-1: PB-2: =		

Personnel	S. Elliott & K. Caskey

Weekly Water Level Monitoring

Well Interval	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	8/15/07	0927	14.01	14.10	29.97
CS-WB05-LGR-02	182	↓	0926		14.13	65.63
CS-WB05-LGR-03A	216		0925		14.15	79.20
CS-WB05-LGR-03B	262		0923		25.95	99.14
CS-WB05-LGR-04A	277		0922		32.47	105.05
CS-WB05-LGR-04B	329		0921		55.09	127.50
CS-WB05-BS-01	362		0920		69.44	142.22
CS-WB05-CC-01	432		0919		99.83	163.32
CS-WB05-CC-02	460	↓	0918		111.98	175.37
CS-WB06-UGR-01	20	8/15/07	0959	14.06	14.06	17.08
CS-WB06-LGR-01	93	↓	0958		14.13	31.49
CS-WB06-LGR-02	174		0957		14.14	66.26
CS-WB06-LGR-03A	207		0956		14.17	80.80
CS-WB06-LGR-03B	260		0954		24.03	103.70
CS-WB06-LGR-04	320	↓	0953		50.08	127.05
CS-WB07-UGR-01	14	8/15/07	0943	14.05	14.09	16.95
CS-WB07-LGR-01	90	↓	0942		14.10	33.20
CS-WB07-LGR-02	175		0941		14.13	67.97
CS-WB07-LGR-03A	208		0940		14.16	80.64
CS-WB07-LGR-03B	257		0939		17.96	101.88
CS-WB07-LGR-04	318	↓	0938		44.45	126.16
CS-WB08-UGR-01	38	8/15/07	1016	14.05	14.08	19.18
CS-WB08-LGR-01	115	↓	1015		14.09	31.62
CS-WB08-LGR-02	193		1014		14.14	65.57
CS-WB08-LGR-03A	228		1013		14.16	78.34
CS-WB08-LGR-03B	273		1012		21.38	97.79
CS-WB08-LGR-04	341	↓	~~1006~~ 1011		~~14.17~~ 50.91	~~154.62~~ (SL) 127.66

Week 16

Personnel: S. Elliott & K. Caskey

Bioreactor Monitoring
Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp	SpCond	ORP	DO	Trench Currently Being Used (√)
Date: 8/15/07		Time: 0830						
B3-T1-1	12.9	8.02	6.44	26.73	1.731	-162.0	0.95	
B3-T1-2	12.4	7.67	6.57	30.39	1.502	-150.2	0.53	
B3-T1-3	12.85	7.43	6.81	30.79	1.274	-181.4	0.37	
B3-T2-1	9.67	8.98	6.59	28.68	1.714	-184.3	0.65	
B3-T2-2	10.01	8.86	6.66	29.76	3.429	-178.8	0.42	
B3-T3-1	9.96	8.99	6.49	26.26	1.034	-152.4	0.43	
B3-T3-2	7.4	7.04						
B3-T4-1	6.32	6.18						
B3-T5-1	9.33	9.11						
B3-T5-2	7.98	7.85						
B3-T6-1	11.45	11.14						
B3-T6-2	12.34	12.06						
B3-UIC								

B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Data / Time	Rate (gravity fed)/ Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1		
				P-2		
T-1		/		P-3		
T-2		/		P-4		
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)=		Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi Change filter
T-4		/				
T-5		/				
T-6		/				
B-3 (Mon)		/		PB-1:	PB-2: =	
B-3 (Tues)		/		PB-1:	PB-2: =	
B-3 (Wed)		/		PB-1:	PB-2: =	
B-3 (Thurs)		/		PB-1:	PB-2: =	
B-3 (Fri)		/		PB-1:	PB-2: =	

Personnel	S. Elliott & K. Rice

Weekly Water Level Monitoring

Well Interval	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	8/8/07	0919	14.07	14.13	30.12
CS-WB05-LGR-02	182		0918		14.19	68.64
CS-WB05-LGR-03A	216		0917		14.21	82.79
CS-WB05-LGR-03B	262		0916		26.02	102.73
CS-WB05-LGR-04A	277		0915		32.54	108.70
CS-WB05-LGR-04B	329		0914		55.16	131.15
CS-WB05-BS-01	362		0913		69.49	145.38
CS-WB05-CC-01	432		0912		99.91	166.28
CS-WB05-CC-02	460	↓	0911		110.05	178.30
CS-WB06-UGR-01	20	8/8/07	0846	14.10	14.11	17.75
CS-WB06-LGR-01	93		0845		14.14	36.50
CS-WB06-LGR-02	174		0844		14.18	71.21
CS-WB06-LGR-03A	207		0843		14.20	84.59
CS-WB06-LGR-03B	260		0842		24.07	107.48
CS-WB06-LGR-04	320	↓	0839		50.11	130.86
CS-WB07-UGR-01	14	8/8/07	0828	14.07	14.08	17.92
CS-WB07-LGR-01	90		0827		14.12	35.74
CS-WB07-LGR-02	175		0825		14.18	72.35
CS-WB07-LGR-03A	208		0824		14.17	84.87
CS-WB07-LGR-03B	257		0822		17.96	106.08
CS-WB07-LGR-04	318	↓	0820		44.45	130.06
CS-WB08-UGR-01	38	8/8/07	0901	14.07	14.09	19.69
CS-WB08-LGR-01	115		0900		14.12	32.18
CS-WB08-LGR-02	193		0859		14.17	69.01
CS-WB08-LGR-03A	228		0858		14.20	81.74
CS-WB08-LGR-03B	273		0857		21.41	101.18
CS-WB08-LGR-04	341	↓	0856		50.95	131.27

Personnel: Ken Rice

Bioreactor Monitoring
Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp	SpCond	ORP	DO	Trench Currently Being Used (√)
Date: 8/9/07		Time: 0800						
B3-T1-1	12.9	5.20	6.53	26.39	1.318	-207.1	0.71	
B3-T1-2	12.4	4.80	6.62	30.05	1.154	-208.9	0.47	
B3-T1-3	12.85	4.36	7.13	31.25	1.130	-209.9	0.40	
B3-T2-1	9.67	6.62	6.56	28.91	1.751	-201.4	0.46	
B3-T2-2	10.01	6.82	6.55	29.23	3.52	-181.4	0.64	
B3-T3-1	9.96	8.28	6.48	25.52	1.017	-190.9	0.45	
B3-T3-2	7.4	7.02						
B3-T4-1	6.32	6.18						
B3-T5-1	9.33	9.10						
B3-T5-2	7.98	7.72		No Water				
B3-T6-1	11.45	11.15						
B3-T6-2	12.34	12.07						
B3-UIC								

B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Data / Time	Rate (gravity fed)/ Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1		
				P-2		
T-1		/	0	P-3		No GW injection due to elevated water in Bioreactor.
T-2		/		P-4		
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)=		Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi. Change filter.
T-4		/				
T-5		/				
T-6		/				
B-3 (Mon)		/		PB-1:	PB-2: =	
B-3 (Tues)		/		PB-1:	PB-2: =	
B-3 (Wed)		/		PB-1:	PB-2: =	
B-3 (Thurs)		/		PB-1:	PB-2: =	
B-3 (Fri)		/		PB-1:	PB-2: =	

Personnel: KRR / AL

Bioreactor Monitoring
Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp	SpCond	ORP	DO	Trench Currently Being Used (√)
Date: 8/2		Time: 1000						
B3-T1-1	12.9	2.28	6.54	25.2	0.691	-215.0	0.4	
B3-T1-2	12.4	1.90	6.63	27.37	0.857	-223.5	0.31	
B3-T1-3	12.85	1.53	6.68	30.35	1.137	-220.9	0.27	
B3-T2-1	9.67	3.69	6.41	28.68	1.380	-189.7	0.49	
B3-T2-2	10.01	3.98	6.58	29.75	3.451	-188.8	0.37	
B3-T3-1	9.96	6.23	6.49	25.04	0.936	-222.7	0.49	
B3-T3-2	7.4	6.33	6.61	28.35	1.220	-189.7	0.47	
B3-T4-1	6.32	5.5	6.6	28.52	1.307	-193.9	0.5	
B3-T5-1	9.33	8.18	6.54	25.64	0.975	-194.6	0.63	
B3-T5-2	7.98	4.90	6.47	25.08	0.835	-189.6	0.55	
B3-T6-1	11.45	9.70	6.35	25.41	1.127	-219.4	0.53	
B3-T6-2	12.34	9.45	6.42	24.45	0.978	-170.8	0.79	
B3-UIC								

B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Data / Time	Rate (gravity fed)/ Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1		
T-1		/		P-2		Injection system
T-2		/		P-3		Bioreactor off due to elevated
T-3		/		P-4		water levels in trenchs 1+2
T-4		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)=		Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi Change filter
T-5		/				
T-6		/				
B-3 (Mon)		/		PB-1: PB-2: =		
B-3 (Tues)		/		PB-1: PB-2: =		
B-3 (Wed)		/		PB-1: PB-2: =		
B-3 (Thurs)		/		PB-1: PB-2: =		
B-3 (Fri)		/		PB-1: PB-2: =		