



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

April 21, 2008

U-115-08

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 (Month 10 - February 2008) 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:

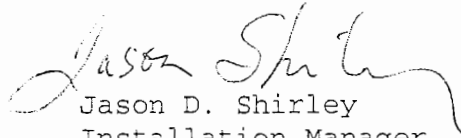
The Camp Stanley Storage Activity (CSSA), McAlester Army Ammunition Plant, U.S. Army Field Support Command, Army Materiel Command, U.S. Army, is submitting this monthly report summarizing the injection activities performed at the on-post Solid Waste Management Unit (SWMU) B-3 site. The activities performed 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 contains data as specified by the subject Texas Commission on Environmental Quality (TCEQ) Underground Injection Control (UIC) permit for the month of February 2008 (Month 10). The monthly reporting data includes twice monthly samples of the injected groundwater for volatile organic concentrations (VOCs) and total dissolved solids (TDS) and field collected parameters including injection volumes, injection pressures and the pH of recovered groundwater.

Between February 1, 2008 and February 29, approximately 1,124,823 gallons of groundwater from wells CS-MW16-CC (17,500 gallons), and CS-MW16-LGR (1,107,277 gallons) were injected into SWMU B-3 bioreactor trench 1. A total of 3,045,529 gallons of recovered groundwater from CS-MW16-LGR and CS-MW16-CC have been injected into the bioreactor trench 1 since startup of the bioreactor. Samples of the injected groundwater, for this reporting period, were collected on February 7, 2008 and February 18, 2008. Results of analysis are summarized in Table 1 with the laboratory data packages attached. Field forms which contain operating pressures and pH readings for the reporting period are also attached.

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
Robert Bowersock, USACE (ltr only)
Julie Burdey, Parsons
Ken Rice, Parsons
Brian Vanderglas, Parsons
File: 744223.11000

Table 1
B3 - UIC Analytical Results

SW8260B (µg/L)	Lab MDL		Lab POL		B-3 UIC Criteria (RCRA Haz.)	Sample ID		Sample Date		Sample Type		Sampling Method		Lab ID	
	0.16	0.19	0.6	1.2		---	11/19/07	12/03/07	12/18/07	01/09/08	01/22/08	02/07/08	02/18/08	N1	N1
Cis-DCE	0.16	0.19	0.6	1.2	---	89	21	67	93	46	110	110	1	1	1
Trans-DCE	0.16	0.19	0.6	1.2	---	4.5	0.19	1.60	1.5	0.71	0.45	0.68	1	1	1
TCE	0.16	0.19	0.6	1.2	500	95	28	78	96	59	100	110	1	1	1
PCE	0.15	0.19	1.4	700	---	28	27	71	88	31	110	110	1	1	1
Toluene	0.17	0.19	1.1	---	---	0.17	1.0	0.17	0.17	0.17	0.17	0.17	U	U	U
Vinyl Chloride	0.23	0.19	1.1	200	---	0.23	0.23	0.23	0.23	0.23	0.23	0.23	U	U	U
EPA 160.1 (mg/L)	4.4	10	---	---	---	382	328	331	326	349	326	320	1	1	1
Field measured pH						7.15	7.09	6.96	7.02	7.06	7.04	7.15			

Tables present all laboratory results for analytes.
Data packages for laboratory analysis results are presented in Attachment 1.

Data Qualifiers:
J- The analyte was positively identified, the quantitation is an estimation.
U- The analyte was analyzed for, but not detected. The associated numerical value is the MDL.

All samples were analyzed by APPL Laboratory Services.
pH results reported were field measured
UIC criteria specified in 40 CFR 261.24 Table 1

Abbreviations and Notes:
POL Practical Quantitation Limit
MDL Method Detection Limit
N1 Environmental Sample
SQL Sample Quantitation Limit
UIC Underground Injection Control

Bioreactor Monitoring

Personnel: S. Elliott

Trench Sumps Water Levels (BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp. (deg. C)	SpCond. (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (Y)	Notes
Date: 2/4/08 Time: 1330									
B3-T1-1	12.9	7.33	6.19	21.29	0.725	-148.5	0.51	✓	took 2nd reading on way out. (1350)
B3-T1-2	12.4	7.04	6.24	21.45	0.587	-207.0	0.43		2/5 (1530)
B3-T1-3	12.85	6.75	6.34	21.58	0.655	-145.9	0.35		6.99/01 6.08 6.41
B3-T2-1	9.67	dry							2/7/08 1300
B3-T2-2	10.01	dry							Total = 0
B3-T3-1	9.96	dry							T1 = 522432
B3-T3-2	7.4	dry							16-LGR = 8689
B3-T4-1	6.32	dry							16-CC = 690,998
B3-T5-1	9.33	dry							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	dry							
B3-T6-2	12.34	dry							
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings					
	Monday	Tuesday	Wednesday	Thursday	Friday	
Date/Time	2.4.08 1020	2.5.08 0735	2.6.08 0500	2.7.08 0850	2.8.08 0800	
Rate (gpm) / Cumulative Total (gal)						
T-1	30.1	425,558	32.3	513,675	28.8	554,357
T-2						
T-3						
T-4						
T-5						
T-6						
B-3 (Total)	* 96,180	1207,500	162,214	168,277	29.3	328,772
CS-MW16-LGR	28.36	934,658	28.2	943,125	28.14	968,000
CS-MW16-CC	2	677,447	32.8	684,300	34.72	690,998
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = Note: if bag filter pressure drop is > or = 20 psi change filter.						
PB-1 - PB-2 = 25-24=1 PB-1 - PB-2 = 25-23=2 PB-1 - PB-2 = 25-23=2 PB-1 - PB-2 = 26-24=2						

Notes: * new meter installed on main line before trench flow meters, installed 1/31 or 2/1, numbers are off, need to check K factor, reset - DHC bacteria injected into trench 1 sumps on 2/5/08 (1400)

Week 41

UPS Pick up confirmation # 10361514

2/7, 5:00 PM note

Personnel		S. Elliott + K. Ried				
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	2/5/06	16 09	13.96	14.02	24.96
CS-WB05-LGR-02	182		1608		14.06	18.69
CS-WB05-LGR-03A	216		1607		14.07	28.69
CS-WB05-LGR-03B	262		1606		22.60	48.62
CS-WB05-LGR-04A	277		1605		29.12	54.86
CS-WB05-LGR-04B	329		1604		51.75	77.74
CS-WB05-BS-01	362		1603		66.08	93.65
CS-WB05-CC-01	432		1602		96.47	123.13
CS-WB05-CC-02	460		1601		108.41	135.21
CS-WB06-UGR-01	20		1539	13.92	13.96	15.95
CS-WB06-LGR-01	93		1538		14.00	16.31
CS-WB06-LGR-02	174		1537		14.04	27.17
CS-WB06-LGR-03A	207		1536		14.06	40.31
CS-WB06-LGR-03B	260		1535		23.36	63.21
CS-WB06-LGR-04	320		1534		49.90	81.48
CS-WB07-UGR-01	14		1552	13.94	13.98	14.72
CS-WB07-LGR-01	90		1551		14.01	18.78
CS-WB07-LGR-02	175		1551		14.06	36.49
CS-WB07-LGR-03A	208		1550		14.07	35.97
CS-WB07-LGR-03B	257		1549		17.51	57.17
CS-WB07-LGR-04	318		1548		44.01	77.49
CS-WB08-UGR-01	38		1526	13.93	13.97	13.97
CS-WB08-LGR-01	115		1525		14.00	29.41
CS-WB08-LGR-02	193		1524		14.04	24.44
CS-WB08-LGR-03A	228		1523		14.06	31.86
CS-WB08-LGR-03B	273		1522		20.70	51.32
CS-WB08-LGR-04	341		1520		50.24	82.43

Bioreactor Monitoring

Personnel S Elliott

Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp (deg. C)	SpCond. (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (✓)	Notes
Date <u>2/7/08</u> Time <u>1300</u>									
B3-T1-1	12.9	<u>6.68</u>	<u>6.63</u>	<u>22.38</u>	<u>3.317</u>	<u>-253.6</u>	<u>0.35</u>	✓	
B3-T1-2	12.4	<u>6.32</u>	<u>6.47</u>	<u>22.08</u>	<u>1.500</u>	<u>-233.2</u>	<u>0.26</u>		
B3-T1-3	12.85	<u>6.04</u>	<u>6.67</u>	<u>21.07</u>	<u>0.631</u>	<u>-146.4</u>	<u>0.35</u>		
B3-T2-1	9.67	<u>8.15</u>	<u>6.34</u>	<u>22.06</u>	<u>1.545</u>	<u>-195.4</u>	<u>0.38</u>		
B3-T2-2	10.01	<u>8.53</u>	<u>6.48</u>	<u>22.19</u>	<u>1.599</u>	<u>-157.2</u>	<u>0.32</u>		
B3-T3-1	9.96	<u>9.27</u>							
B3-T3-2	7.4	<u>dry</u>							
B3-T4-1	6.32	<u>dry</u>							
B3-T5-1	9.33	<u>dry</u>							
B3-T5-2	7.98	<u>dry</u>							
B3-T6-1	11.45	<u>11.13</u>							
B3-T6-2	12.34	<u>11.98</u>							
B3-UIC			<u>7.04</u>	<u>23.31</u>	<u>0.553</u>	<u>-92.4</u>	<u>3.76</u>		

Sump Line
1300

B-3 Transfer System Monitoring

Meter Date/Time	Monday	Tuesday	Wednesday	Thursday	Friday
Flow Meters Readings					
Rate (gpm) / Cumulative Total (gal)					
T-1					
T-2					
T-3					
T-4					
T-5					
T-6					
B-3 (Total)					
CS-MW16-LGR					
CS-MW16-CC					
Bag Filter Pressure Reading (Pressure Drop (PB-1)-(PB-2)) = *Note: if bag filter pressure PB-1 - PB-2 = PB-1 - PB-2 =					
Notes:					

water levels (0708) 2/9/08
S. Elliott rhine
 MW16-CC = 256.5' 257.8'
 MW16-CC = 181.6' 181.4'

Personnel: *Tennyson*

Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp. (deg. C)	SpCond. (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (✓)	Notes
Date: <i>2/11/08</i> Time: <i>0940</i>									
B3-T1-1	12.9	<i>6.18</i>	<i>6.58</i>	<i>20.33</i>	<i>2.035</i>	<i>-255.9</i>	<i>0.37</i>	✓	
B3-T1-2	12.4	<i>5.85</i>	<i>6.62</i>	<i>21.90</i>	<i>0.518</i>	<i>-211.1</i>	<i>0.32</i>		
B3-T1-3	12.85	<i>5.62</i>	<i>6.76</i>	<i>21.68</i>	<i>0.530</i>	<i>-214.2</i>	<i>0.36</i>		
B3-T2-1	9.67	<i>7.69</i>	<i>6.42</i>	<i>22.01</i>	<i>1.154</i>	<i>-216.9</i>	<i>0.37</i>		
B3-T2-2	10.01	<i>7.98</i>	<i>6.42</i>	<i>21.91</i>	<i>1.184</i>	<i>-199.3</i>	<i>0.32</i>		
B3-T3-1	9.96	<i>9.31</i>							
B3-T3-2	7.4	<i>dry</i>							
B3-T4-1	6.32								
B3-T5-1	9.33	<i>dry</i>							
B3-T5-2	7.98	<i>dry</i>							
B3-T6-1	11.45	<i>11.14</i>							
B3-T6-2	12.34	<i>11.97</i>							
B3-UIC			<i>7.00</i>	<i>20.93</i>	<i>0.458</i>	<i>-66.1</i>	<i>3.73</i>		

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time: <i>2-11-08 08:51</i>		<i>2-12-08 10:15</i>	<i>2-13-08 08:34</i>	<i>2-14-08 08:26</i>	<i>2-15-08 10:57</i>
GPM					
T-1	<i>29.5</i>	<i>676722</i>	<i>27.3</i>	<i>719188</i>	<i>29.2</i>
T-2					<i>796,733</i>
T-3					
T-4					
T-5					
T-6					
B-3 (Total)	<i>29.5</i>	<i>158730</i>	<i>29.9</i>	<i>20769</i>	<i>28,240</i>
CS-MW16-LGR	<i>28.14</i>	<i>162920</i>	<i>28.03</i>	<i>205509</i>	<i>27.92</i>
CS-MW16-CC	<i>off</i>	<i>691454</i>	<i>off</i>	<i>off</i>	<i>off</i>
Rate (gpm) / Cumulative Total (gal)					
		<i>27.0</i>	<i>756,594</i>	<i>29.2</i>	<i>841,754</i>
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) = *Note: If bag filter pressure drop is > or = 20 psi change filter.					
		<i>26-25=1</i>	<i>26-25=1</i>	<i>26-25=1</i>	<i>26-25=1</i>

Notes: *Sunday 0810/08 (0830)*
Total = 116,259 29.3 gpm
T-1 = 65,5648 29.8 gpm
PB-1 - PB-2 = 26-25=1
PB-1 - PB-2 = 26-25=1
PB-1 - PB-2 = 26-25=1
(at 0936)*
All week tank is 3/4 to 13/16 full, except Friday tank shows 5/8 full at 11:00.
 Week *42*

PB-1 = 26 PB-2 = 25
MW16-LGR = 131,555 28.11 gpm
MW16-CC = 640,998

Personnel: S. Elliott & E. Tennyson						
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	2/14/08	0841	14.07	14.16	24.88
CS-WB05-LGR-02	182		0838		14.20	16.04
CS-WB05-LGR-03A	216		0837		14.21	26.80
CS-WB05-LGR-03B	262		0836		22.69	46.76
CS-WB05-LGR-04A	277		0835		29.21	53.19
CS-WB05-LGR-04B	329		0834		51.84	76.19
CS-WB05-BS-01	362		0833		66.19	91.64
CS-WB05-CC-01	432		0832		96.57	124.10
CS-WB05-CC-02	460		0831		108.72	136.20
CS-WB06-UGR-01	20		0912	14.09	14.12	15.27
CS-WB06-LGR-01	93		0911		14.17	14.44
CS-WB06-LGR-02	174		0910		14.21	28.39
CS-WB06-LGR-03A	207		0910		14.21	40.09
CS-WB06-LGR-03B	260		0909		23.50	62.98
CS-WB06-LGR-04	320		0908		49.53	80.26
CS-WB07-UGR-01	14		0929	14.09	14.10	15.31
CS-WB07-LGR-01	90		0927		14.14	18.82
CS-WB07-LGR-02	175		0926		14.18	35.87
CS-WB07-LGR-03A	208		0925		14.21	34.61
CS-WB07-LGR-03B	257		0924		17.63	55.80
CS-WB07-LGR-04	318		0923		44.14	76.05
CS-WB08-UGR-01	38		0858	14.08	14.12	14.11
CS-WB08-LGR-01	115		0856		14.16	29.58
CS-WB08-LGR-02	193		0855		14.19	23.27
CS-WB08-LGR-03A	228		0854		14.23	30.28
CS-WB08-LGR-03B	273		0853		20.85	49.75
CS-WB08-LGR-04	341	↓	0852		50.38	81.08

Bioreactor Monitoring

Personnel: *Tenzey, Lindley, Rice*

Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft. BTOC)	Sump Water Level (ft. BTOC)	pH	Temp. (deg. C)	SpCond. (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (N)	Notes
Date: <i>2-18-08</i> Time: <i>1025</i>									
B3-T1-1	12.9	<i>6.32</i>	<i>6.70</i>	<i>22.31</i>	<i>1.932</i>	<i>-254.4</i>	<i>0.56</i>	<input checked="" type="checkbox"/>	
B3-T1-2	12.4	<i>5.90</i>	<i>6.80</i>	<i>22.27</i>	<i>1.630</i>	<i>-257.8</i>	<i>0.50</i>		
B3-T1-3	12.85	<i>5.65</i>	<i>6.76</i>	<i>21.40</i>	<i>0.601</i>	<i>-188.0</i>	<i>0.60</i>		
B3-T2-1	9.67	<i>7.72</i>	<i>6.69</i>	<i>22.75</i>	<i>1.133</i>	<i>-169.1</i>	<i>0.30</i>		
B3-T2-2	10.01	<i>8.10</i>	<i>6.56</i>	<i>21.91</i>	<i>1.460</i>	<i>-158.0</i>	<i>0.37</i>		
B3-T3-1	9.96	<i>9.29</i>							
B3-T3-2	7.4	<i>dry</i>							
B3-T4-1	6.32	<i>dry</i>							
B3-T5-1	9.33	<i>dry</i>							
B3-T5-2	7.98	<i>dry</i>							
B3-T6-1	11.45	<i>11.10</i>							
B3-T6-2	12.34	<i>11.99</i>							
B3-UIC			<i>7.15</i>	<i>23.08</i>	<i>0.560</i>	<i>+2.1</i>	<i>3.86</i>		<i>1600 on 2-18-08</i>

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time	<i>2-18-08 15:57</i>	<i>2-19-08 10:19</i>	<i>2-20-08 08:40</i>	<i>2-21-08 09:27</i>	<i>2-22-08 07:45</i>
T-1	<i>28.1</i>	<i>991451</i>	<i>28.5</i>	<i>1,027,29</i>	<i>1,106,568</i>
T-2					<i>29.2</i>
T-3					
T-4					
T-5					
T-6					
B-3 (Total)	<i>30.0</i>	<i>448,790</i>	<i>28.6</i>	<i>5,175,36</i>	<i>29.2</i>
CS-MW16-LGR	<i>27.86</i>	<i>446,325</i>	<i>27.86</i>	<i>5,147,90</i>	<i>27.6</i>
CS-MW16-CC	<i>off</i>	<i>off</i>	<i>off</i>	<i>off</i>	<i>off</i>
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = Note: If bag filter pressure drop is > or = 20 psi change filter. PB-1 - PB-2 = <i>26 - 25 = 1</i> PB-1 - PB-2 = <i>26 - 25 = 1</i> PB-1 - PB-2 = <i>26 - 25 = 1</i> PB-1 - PB-2 = <i>25 - 22 = 3</i>					

Notes: ** 21055 (tank full)*
(tank 9/16)
(tank 105/16)
(tank - same)
(tank - 5/8)
 MONDAY, 2/18, SCF working on B3 transfer pump & off. MAIN valve WAS closed & water was recirculating to tanks, repaired @ 11:58.
 2/18 16:00 off @ 11:55 for SCF work.
 Week 43
 Month 10

Personnel		Tennyson Lindley								
Monthly Monitoring										
MPMWs	Sample Date	Sample Time	pH	Temp	SpCond	ORP	DO	Regulatory (y)	Performance (y)	
CS-WB05-LGR-01										
CS-WB05-LGR-02										
CS-WB05-LGR03A										
CS-WB05-LGR03B	18-Feb-08	1055	7.29	19.73	0.625	-3.6	4.04	✓	✓	
CS-WB05-LGR04A										
CS-WB05-LGR04B										
CS-WB05-BS-01										
CS-WB05-CC-01										
CS-WB05-CC-02										
CS-WB06-UGR-01										
CS-WB06-LGR-01										
CS-WB06-LGR-02										
CS-WB06-LGR03A										
CS-WB06-LGR03B	18-Feb-08	1450	7.36	20.81	0.566	+1.5	4.97	✓	✓	
CS-WB06-LGR-04										
CS-WB07-UGR-01										
CS-WB07-LGR-01										
CS-WB07-LGR-02										
CS-WB07-LGR03A										
CS-WB07-LGR03B	18-Feb-08	1355	7.42	21.06	0.557	+3.9	4.82	✓	✓	
CS-WB07-LGR-04										
CS-WB08-UGR-01										
CS-WB08-LGR-01										
CS-WB08-LGR-02										
CS-WB08-LGR03A										
CS-WB08-LGR03B	18-Feb-08	1540	7.00	21.06	0.565	+11.1	5.95	✓	✓	
CS-WB08-LGR-04										

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 been 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)	

Personnel		Tennyson				
		Lindley				
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	18-Feb-08	1032	14.15	14.21	24.89
CS-WB05-LGR-02	182	18-Feb-08	1031		14.25	19.99
CS-WB05-LGR-03A	216	18-Feb-08	1030		14.27	26.26
CS-WB05-LGR-03B	262	18-Feb-08	1029		22.76	46.19
CS-WB05-LGR-04A	277	18-Feb-08	1029		29.29	52.69
CS-WB05-LGR-04B	329	18-Feb-08	1025		51.91	75.67
CS-WB05-BS-01	362	18-Feb-08	1023		66.26	91.07
CS-WB05-CC-01	432	18-Feb-08	1020		96.64	123.58
CS-WB05-CC-02	460	18-Feb-08	1015		108.8*	135.69**
CS-WB06-UGR-01	20	18-Feb-08	1439	14.12	14.14	16.33
CS-WB06-LGR-01	93	18-Feb-08	1438		14.18	16.48
CS-WB06-LGR-02	174	18-Feb-08	1437		14.20	28.53
CS-WB06-LGR-03A	207	18-Feb-08	1436		14.23	39.89
CS-WB06-LGR-03B	260	18-Feb-08	1434		23.51	62.78
CS-WB06-LGR-04	320	18-Feb-08	1432		49.55	80.29
CS-WB07-UGR-01	14	18-Feb-08	1329	14.13	14.15	15.48
CS-WB07-LGR-01	90	18-Feb-08	1328		14.19	18.77
CS-WB07-LGR-02	175	18-Feb-08	1327		14.23	35.67
CS-WB07-LGR-03A	208	18-Feb-08	1325		14.25	34.15
CS-WB07-LGR-03B	257	18-Feb-08	1323		17.71	55.36
CS-WB07-LGR-04	318	18-Feb-08	1321		44.21	76.65
CS-WB08-UGR-01	38	18-Feb-08	1525	14.12	14.14	14.20
CS-WB08-LGR-01	115	18-Feb-08	1524		14.19	29.63
CS-WB08-LGR-02	193	18-Feb-08	1523		14.22	22.86
CS-WB08-LGR-03A	228	18-Feb-08	1521		14.25	30.57
CS-WB08-LGR-03B	273	18-Feb-08	1519		20.88	50.02
CS-WB08-LGR-04	341	18-Feb-08	1517		50.41	81.31

* Need to check, should be ~111 psi.
** Zone reading is accurate, however.

Bioreactor Monitoring

Personnel: Rice, Tennyson

Trench Sumps Water Levels ('BTOC)

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp. (deg. C)	SpCond. (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (N)	Notes
Date: 2-29-08 Time: 1530									
B3-T1-1	12.9	5.93	6.66	22.60	1.014	-227.2	0.84	✓	
B3-T1-2	12.4	5.59	6.71	22.59	0.898	-249.3	0.67		
B3-T1-3	12.85	5.35	6.94	21.83	0.668	-240.0	0.45		
B3-T2-1	9.67	7.41	6.55	23.18	6.056	-212.2	0.47		
B3-T2-2	10.01	7.73	6.57	22.14	1.531	-200.6	0.54		
B3-T3-1	9.96	9.30							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	dry							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	11.11							
B3-T6-2	12.34	11.98							
B3-UIC			7.02	23.97	0.565	-59.7	3.41		

B-3 Transfer System Monitoring

Flow Meters Readings									
Meter	Monday	Tuesday	Wednesday	Thursday	Friday				
Date/Time:	2/25/08 0730	2-26-08 0745	2-27-08 0826	2-28-08 0815	2-29-08 0915				
T-1	29.4	1267488	28.7	1343993	28.6				
T-2									
T-3									
T-4									
T-5									
T-6									
B-3 (Total)	29.8	760828	28.7	838580	29.3				
CS-MW16-LGR	27.6	709,341	27.36	829321	27.30				
CS-MW16-CC	No pump	off	off	off	off				
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 20 psi change filter.									
PB-1 - PB-2 = 25-24 = 1 PB-1 - PB-2 = 27-25 = 2 PB-1 - PB-2 = 27-25 = 2 PB-1 - PB-2 = 27-24 = 3									

Notes: 16LGR = 266.5' by sensor
16LGR head = 268.5' by sensor
16LGR level = 268.5' by sensor

* Standing water on surface at SW corner T-1 is higher (deeper) than last week. Pond is growing.

Week 44
Month 10

Personnel		Terryson, 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	29-Feb-08		14.11	14.15	24.77
CS-WB05-LGR-02	182	29-Feb-08			14.20	14.18
CS-WB05-LGR-03A	216	29-Feb-08			14.22	24.41
CS-WB05-LGR-03B	262	29-Feb-08			22.60	44.34
CS-WB05-LGR-04A	277	29-Feb-08			29.10	50.71
CS-WB05-LGR-04B	329	29-Feb-08	1503		51.74	73.69
CS-WB05-BS-01	362	29-Feb-08	1501		66.08	89.04
CS-WB05-CC-01	432	29-Feb-08	1459		96.47	121.69
CS-WB05-CC-02	460	29-Feb-08	1456		108.63	133.80
CS-WB06-UGR-01	20	29-Feb-08		14.10	14.13	16.33
CS-WB06-LGR-01	93	29-Feb-08			14.17	16.48
CS-WB06-LGR-02	174	29-Feb-08			14.20	28.39
CS-WB06-LGR-03A	207	29-Feb-08			14.23	39.12
CS-WB06-LGR-03B	260	29-Feb-08			23.47	62.01
CS-WB06-LGR-04	320	29-Feb-08	1406		49.51	78.05
CS-WB07-UGR-01	14	29-Feb-08		14.10	14.11	15.62
CS-WB07-LGR-01	90	29-Feb-08			14.15	18.59
CS-WB07-LGR-02	175	29-Feb-08			14.20	35.11
CS-WB07-LGR-03A	208	29-Feb-08			14.21	32.96
CS-WB07-LGR-03B	257	29-Feb-08			17.58	54.16
CS-WB07-LGR-04	318	29-Feb-08	1431		44.10	73.67
CS-WB08-UGR-01	38	29-Feb-08	1354	14.10	14.13	14.15
CS-WB08-LGR-01	115	29-Feb-08	1352	14.10	14.17	29.53
CS-WB08-LGR-02	193	29-Feb-08	1350		14.21	22.03
CS-WB08-LGR-03A	228	29-Feb-08	1348		14.22	27.75
CS-WB08-LGR-03B	273	29-Feb-08	1346		20.81	47.20
CS-WB08-LGR-04	341	29-Feb-08	1344		50.35	78.74