



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

December 7, 2007

U-064-08

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: Quarterly Status Report (Quarter 2, Month 6 - October 2007) 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 quarterly report which summarizes 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 quarterly report contains data as specified by the subject Texas Commission on Environmental Quality (TCEQ) Underground Injection Control (UIC) permit for the period of August 1, 2007 through October 31, 2007. Due to elevated rainfall amounts, the groundwater injection system was not operated from July through the end of August 2007. Therefore twice-monthly samples of the injected groundwater for volatile organic concentrations and total dissolved solids were not collected for this period.

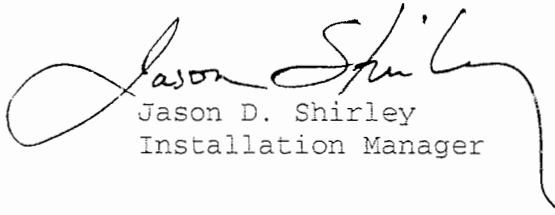
This quarterly report includes a summary of results for the twice-monthly collected samples of the injected groundwater. As required by the permit, these samples were analyzed for volatile organic concentrations and total dissolved solids. The results are presented in the attached Table 1. Field collected parameters including injection volumes, injection pressures and the pH of recovered groundwater for the month of October 2007 are also attached.

Between August 1, 2007 and October 31, 2007, approximately 471,700 gallons of groundwater from well CS-MW16-CC, were injected into SWMU B-3 bioreactor trench 1. A total of 1,047,200 gallons of recovered groundwater from CS-MW16-LGR and CS-MW16-CC have been injected into the bioreactor trench 1 since injection start date of April 24, 2007. Samples of the injected groundwater were collected on September 6 and 18 and October 5 and 15, 2007. Additionally monthly monitoring data,

including analytical results from the uppermost saturated zone (Zone 03B) of the multi-port monitoring wells and bioreactor trench 1 sumps, are summarized in Table 2 and Table 3, respectively. Laboratory data packages for twice monthly collected data for the period October 2007 and monthly collected data for 2<sup>nd</sup> quarterly 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  
Kent Rohlof, AFCEE (ltr only)  
Julie Burdey, Parsons  
Ken Rice, Parsons  
Brian Vanderglas, Parsons  
File: 744223.11000

Table 1  
B3 - UIC Analytical Results

	Sample ID			B3-UIC			B3-UIC			B3-UIC			B3-UIC		
	Sample Date			09/06/07			09/18/07			10/05/07			10/15/07		
	Sample Type			N1			N1			N1			N1		
Sampling Method			Grab			Grab			Grab			Grab			
Lab ID			AX67177			AX67481			AX68557			AX69191			
	B-3 UIC			Results			Results			Results			Results		
	Lab MDL	Lab PQL	Criteria (RCRA Haz.)	Flags	Dilution	Flags	Dilution	Flags	Dilution	Flags	Dilution	Flags	Dilution		
<b>SW8260B (µg/L)</b>															
Cis-DCE	0.16	1.2	--		1		1		1		1		1		
Trans-DCE	0.19	0.6	--		1		1		1		1		1		
TCE	0.16	1.0	500.		1		1		1		1		1		
PCE	0.15	1.4	700.		1		1		1		1		1		
Toluene	0.17	1.1	--	0.17	U	1	0.17	U	1	0.17	U	1	0.19	J	1
Vinyl Chloride	0.23	1.1	200.	0.23	U		0.23	U		0.23	U		0.23	U	
<b>EPA 160.1 (mg/L)</b>															
TDS	4.4	10.	--	382		1	337		1	388		1	345		1
<b>Field measured</b>															
pH				7.23			7.63			6.97			7.04		

Tables present all laboratory results for analytes. Data packages for laboratory analysis results are presented in Attachment 1. All samples were analyzed by APPL Laboratory Services. pH results reported were field measured. UIC criteria specified in 40 CFR 261.24 Table 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.

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

Personnel: <i>KRR/AL</i>									
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: <i>8/2</i>		Time: <i>1000</i>							
B3-T1-1	12.9	<i>2.28</i>	<i>6.54</i>	<i>25.2</i>	<i>0.691</i>	<i>-215.0</i>	<i>0.4</i>		
B3-T1-2	12.4	<i>1.90</i>	<i>6.63</i>	<i>27.37</i>	<i>0.857</i>	<i>-223.5</i>	<i>0.31</i>		
B3-T1-3	12.85	<i>1.53</i>	<i>6.68</i>	<i>20.35</i>	<i>1.137</i>	<i>-220.9</i>	<i>0.27</i>		
B3-T2-1	9.67	<i>3.69</i>	<i>6.41</i>	<i>28.68</i>	<i>1.360</i>	<i>-189.7</i>	<i>0.49</i>		
B3-T2-2	10.01	<i>3.98</i>	<i>6.58</i>	<i>29.75</i>	<i>3.451</i>	<i>-188.8</i>	<i>0.37</i>		
B3-T3-1	9.96	<i>6.23</i>	<i>6.49</i>	<i>25.04</i>	<i>0.936</i>	<i>-222.7</i>	<i>0.49</i>		
B3-T3-2	7.4	<i>6.33</i>	<i>6.61</i>	<i>28.35</i>	<i>1.220</i>	<i>-189.7</i>	<i>0.47</i>		
B3-T4-1	6.32	<i>5.5</i>	<i>6.6</i>	<i>28.52</i>	<i>1.307</i>	<i>-193.9</i>	<i>0.5</i>		
B3-T5-1	9.33	<i>8.18</i>	<i>6.54</i>	<i>25.64</i>	<i>0.975</i>	<i>-194.6</i>	<i>0.63</i>		
B3-T5-2	7.98	<i>4.90</i>	<i>6.47</i>	<i>25.08</i>	<i>0.835</i>	<i>-189.6</i>	<i>0.55</i>		
B3-T6-1	11.45	<i>9.70</i>	<i>6.35</i>	<i>25.41</i>	<i>1.127</i>	<i>-219.4</i>	<i>0.53</i>		
B3-T6-2	12.34	<i>9.45</i>	<i>6.42</i>	<i>24.45</i>	<i>0.978</i>	<i>-170.8</i>	<i>0.79</i>		
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	P-3	P-4		
T-1		/						<i>Injective system Bioreactor off due to elevated water levels in trenches 1+2</i>  Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi. Change filter.	
T-2		/							
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2))=					
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: *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: <i>8/9/07</i>		Time: <i>0800</i>							
B3-T1-1	12.9	<i>5.20</i>	<i>6.53</i>	<i>26.39</i>	<i>1.318</i>	<i>-207.1</i>	<i>0.71</i>		
B3-T1-2	12.4	<i>4.80</i>	<i>6.62</i>	<i>30.05</i>	<i>1.154</i>	<i>-208.9</i>	<i>0.47</i>		
B3-T1-3	12.85	<i>4.36</i>	<i>7.13</i>	<i>31.25</i>	<i>1.130</i>	<i>-209.9</i>	<i>0.40</i>		
B3-T2-1	9.67	<i>6.62</i>	<i>6.56</i>	<i>28.91</i>	<i>1.751</i>	<i>-201.4</i>	<i>0.48</i>		
B3-T2-2	10.01	<i>6.82</i>	<i>6.55</i>	<i>29.23</i>	<i>3.52</i>	<i>-181.4</i>	<i>0.64</i>		
B3-T3-1	9.96	<i>8.28</i>	<i>6.48</i>	<i>29.92</i>	<i>1.017</i>	<i>-190.9</i>	<i>0.45</i>		
B3-T3-2	7.4	<i>7.02</i>							
B3-T4-1	6.32	<i>6.18</i>							
B3-T5-1	9.33	<i>9.10</i>							
B3-T5-2	7.98	<i>7.72</i>							
B3-T6-1	11.45	<i>11.15</i>							
B3-T6-2	12.34	<i>12.07</i>							
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		<i>No low injection due to elevated water in Bioreactor.</i> Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi. Change filter.
T-2		/		P-4		
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2))=		
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		112.05	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: 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 (Y)	
Date: <u>8/15/07</u>		Time: <u>0830</u>							
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 (Fr)		/		PB-1:	PB-2:	=

Personnel <i>S. Elliott &amp; K. Caskey</i>						
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	↓	<del>1008</del>		<del>14.17</del>	<del>15.82</del> (60)

1011  
Week 16

50.91 127.66



Personnel: *S. Elliott + K. Rice*

**Bioreactor Monitoring  
Trench Sumps Water Levels ('BTOC)**

Sample Time:  
0930  
1000  
1235

Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp	SpCond	ORP	DO	Trench Currently Being Used (✓)	
Date: <i>8/23/07</i>		Time: <i>0900</i>		Bottom / Top					<i>flush flow</i>
B3-T1-1	12.9	<i>2.68</i>	<i>6.49</i>	<i>25.9/27.15</i>	<i>0.85</i>	<i>-171.0</i>	<i>0.72</i>		
B3-T1-2	12.4	<i>2.28</i>	<i>6.35</i>	<i>28.07/28.78</i>	<i>1.026</i>	<i>-152.3</i>	<i>0.69</i>		
B3-T1-3	12.85	<i>1.92</i>	<i>6.99</i>	<i>29.43/29.56</i>	<i>0.996</i>	<i>-151.0</i>	<i>0.40</i>		
B3-T2-1	9.67	<i>4.08</i>	<i>6.35</i>	<i>29.39</i>	<i>1.678</i>	<i>-174.5</i>	<i>0.59</i>		
B3-T2-2	10.01	<del><i>6.40</i></del> <i>4.40</i>	<i>6.49</i>	<i>29.98</i>	<i>3.365</i>	<i>-171.7</i>	<i>0.48</i>		
B3-T3-1	9.96	<i>6.80</i>	<i>6.42</i>	<i>25.57</i>	<i>1.068</i>	<i>-148.2</i>	<i>0.46</i>	<i>6.2'</i>	
B3-T3-2	7.4	<i>6.90</i>						<i>2'</i>	
B3-T4-1	6.32	<i>6.05</i>							
B3-T5-1	9.33	<i>9.10</i>						<i>1.7'</i>	
B3-T5-2	7.98	<i>6.05</i>	<i>6.46</i>	<i>26.68</i>	<i>0.919</i>	<i>-124.6</i>	<i>0.47</i>		
B3-T6-1	11.45	<i>11.15</i>						<i>7.6</i>	
B3-T6-2	12.34	<i>11.35</i>	<i>6.42</i>	<i>26.22</i>	<i>1.083</i>	<i>-149.6</i>	<i>0.48</i>	<i>8.6</i>	
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:	=	<i>*No water added to any of the trenches, trench 1 overflowing from last Thursdays rain.</i>
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. Cuskey				
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	39.04
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 <i>S. Elliott + K. Cuskey</i>									
Monthly Monitoring									
MPMWs	Sample Date	Sample Time	pH	Temp	SpCond	ORP	DO	Regulatory (N)	Performance (N)
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	-19.0	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	0.620	-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	3.04		
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	1050	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		

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.

5.80

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*

### 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: <i>8/24/07</i>		Time: <i>0945</i>							
B3-T1-1	12.9	<i>5.36</i>	<i>6.43</i>	<i>27.21</i>	<i>0.855</i>	<i>-163.2</i>	<i>0.61</i>	✓	
B3-T1-2	12.4	<i>5.00</i>	<i>6.79</i>	<i>30.68</i>	<i>1.057</i>	<i>-194.4</i>	<i>0.39</i>		
B3-T1-3	12.85	<i>4.55</i>	<i>7.13</i>	<i>29.19</i>	<i>0.836</i>	<i>-196.3</i>	<i>0.36</i>		
B3-T2-1	9.67	<i>6.79</i>	<i>6.43</i>	<i>29.45</i>	<i>1.542</i>	<i>-177.5</i>	<i>0.48</i>	<u>Flush Flow</u> <i>6.2</i>	
B3-T2-2	10.01	<i>6.99</i>	<i>6.47</i>	<i>29.99</i>	<i>3.206</i>	<i>-194.4</i>	<i>0.43</i>		
B3-T3-1	9.96	<i>7.11</i>	<i>6.45</i>	<i>26.01</i>	<i>1.034</i>	<i>-144.5</i>	<i>0.47</i>		
B3-T3-2	7.4	<i>7.11</i>							
B3-T4-1	6.32	<i>6.18</i>							
B3-T5-1	9.33	<i>9.12</i>							
B3-T5-2	7.98	<i>7.80</i>							
B3-T6-1	11.45	<i>11.15</i>							
B3-T6-2	12.34	<i>12.00</i>							
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		<i>1</i>		P-3		
T-2		<i>1</i>		P-4		
T-3		<i>1</i>		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		<i>1</i>				
T-5		<i>1</i>				
T-6		<i>1</i>				
B-3 (Mon)	<i>8.27.07/0955</i>	<i>7.15/13.28</i>	<i>519,587</i>	<i>PB-1: 34/50</i>	<i>PB-2: 20/10 = 14/40</i>	<i>-1430 - pressure change = 40, changed</i>
B-3 (Tues)	<i>8.28.07/0800</i>	<i>16.76/14.77</i>	<i>531,836</i>	<i>PB-1: 24</i>	<i>PB-2: 24 = 0</i>	<i>Filter 8/23/07</i>
B-3 (Wed)	<i>8.29.07/1045</i>	<i>17.41</i>	<i>548,158</i>	<i>PB-1: =</i>	<i>PB-2: =</i>	
B-3 (Thurs)	<i>8.30.07/0770</i>	<i>18.51</i>	<i>566,443</i>	<i>PB-1: =</i>	<i>PB-2: =</i>	
B-3 (Fri)	<i>8.31.07/</i>	<i>-</i>	<i>572,010</i>	<i>PB-1: =</i>	<i>PB-2: =</i>	<i>*bioreactor was not on on Friday 8/31</i>

Personnel		S. Elliott + K. Cushman				
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	8/29/07	0843	14.09	14.17	31.69
CS-WB05-LGR-02	182	↓	0842		14.21	69.00
CS-WB05-LGR-03A	216		0841		14.23	83.17
CS-WB05-LGR-03B	262		0840		25.86	103.10
CS-WB05-LGR-04A	277		0839		32.36	109.18
CS-WB05-LGR-04B	329		0838		54.99	131.66
CS-WB05-BS-01	362		0837		69.34	145.86
CS-WB05-CC-01	432		0836		99.73	162.77
CS-WB05-CC-02	460		✓		0834	111.88
CS-WB06-UGR-01	20		8/29/07	0914	14.12	14.14
CS-WB06-LGR-01	93	↓	0913	14.17		36.09
CS-WB06-LGR-02	174		0912	14.22		70.93
CS-WB06-LGR-03A	207		0911	14.23		84.66
CS-WB06-LGR-03B	260		0910	24.06		107.54
CS-WB06-LGR-04	320		✓	0909		50.11
CS-WB07-UGR-01	14		8/29/07	0932	14.12	14.14
CS-WB07-LGR-01	90	↓	0931	14.17		35.65
CS-WB07-LGR-02	175		0930	14.23		71.88
CS-WB07-LGR-03A	208		0929	14.22		84.70
CS-WB07-LGR-03B	257		0928	17.44		105.92
CS-WB07-LGR-04	318		✓	0927		44.50
CS-WB08-UGR-01	38		8/29/07	0857	14.11	14.13
CS-WB08-LGR-01	115	↓	0856	14.16		34.05
CS-WB08-LGR-02	193		0855	14.21		69.19
CS-WB08-LGR-03A	228		0854	14.23		82.00
CS-WB08-LGR-03B	273		0853	21.39		101.82
CS-WB08-LGR-04	341		✓	0852		50.92

Personnel: *S. Elliott*

### 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: <i>9/6/07</i>		Time: <i>0845</i>							<i>Mark Pina</i>
B3-T1-1	12.9	<i>5.27</i>	<i>6.28</i>	<i>28.44</i>	<i>1.342</i>	<i>-161.0</i>	<i>0.63</i>	✓	
B3-T1-2	12.4	<i>4.94</i>	<i>6.39</i>	<i>27.76</i>	<i>1.173</i>	<i>-149.9</i>	<i>0.38</i>		
B3-T1-3	12.85	<i>4.71</i>	<i>6.51</i>	<i>28.75</i>	<i>1.100</i>	<i>-185.1</i>	<i>0.35</i>		
B3-T2-1	9.67	<i>6.71</i>	<i>6.37</i>	<i>30.40</i>	<i>1.635</i>	<i>-176.1</i>	<i>0.48</i>		
B3-T2-2	10.01	<i>6.97</i>	<i>6.45</i>	<i>30.18</i>	<i>3.156</i>	<i>-183.9</i>	<i>0.43</i>		
B3-T3-1	9.96	<i>7.83</i>	<i>6.30</i>	<i>26.48</i>	<i>1.135</i>	<i>-176.3</i>	<i>0.36</i>		
B3-T3-2	7.4	<i>7.04</i>						<i>-71.8'</i>	
B3-T4-1	6.32	<i>6.13</i>						<i>-71.95'</i>	
B3-T5-1	9.33	<i>9.05</i>							
B3-T5-2	7.98	<i>6.71</i>	<i>6.44</i>	<i>27.46</i>	<i>0.911</i>	<i>-130.5</i>	<i>0.39</i>		
B3-T6-1	11.45	<i>11.09</i>						<i>-72.6'</i>	
B3-T6-2	12.34	<i>12.10</i>						<i>-72.85'</i>	
B3-UIC			<i>7.23</i>	<i>23.15</i>	<i>0.621</i>	<i>-49.6</i>	<i>4.53</i>		

Sample Time: 1500

### 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		<i>1</i>				
T-2		<i>1</i>				
T-3		<i>1</i>				
T-4		<i>1</i>				
T-5		<i>1</i>				
T-6		<i>1</i>				
				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.
B-3 (Mon)	<i>7/2/07</i>	<i>1</i>	<i>572,016</i>	<i>PB-1: 25</i>	<i>PB-2: 24</i>	<i>= 1</i>
B-3 (Tues)	<i>7/3/07 0145</i>	<i>16.81/135.78</i>	<i>572,016</i>	<i>PB-1: 25</i>	<i>PB-2: 24</i>	<i>= 1</i>
B-3 (Wed)	<i>7/4/07 0300</i>	<i>17.30/137.98</i>	<i>585,750</i>	<i>PB-1: 25</i>	<i>PB-2: 24</i>	<i>= 1</i>
B-3 (Thurs)	<i>7/5/07 0750</i>	<i>16.10/133.55</i>	<i>602,283</i>	<i>PB-1: 25</i>	<i>PB-2: 24</i>	<i>= 1</i>
B-3 (Fri)	<i>7/6/07 0745</i>	<i>16.24/133.55</i>	<i>616,731</i>	<i>PB-1: 25</i>	<i>PB-2: 24</i>	<i>= 1</i>

Personnel: S. Elliott + C. Reed						
Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in Well (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	9/6/07	1035	14.05	14.11	31.02
CS-WB05-LGR-02	182		1034		14.16	67.53
CS-WB05-LGR-03A	216		1033		14.18	82.44
CS-WB05-LGR-03B	262		1032		25.77	102.42
CS-WB05-LGR-04A	277		1031		32.30	109.05
CS-WB05-LGR-04B	329		1030		54.91	131.59
CS-WB05-BS-01	362		1029		69.25	145.16
CS-WB05-CC-01	432		1028		99.65	148.57
CS-WB05-CC-02	460		1027		111.80	161.25
CS-WB06-UGR-01	20		9/6/07		1108	14.06
CS-WB06-LGR-01	93	1107	14.11	35.56		
CS-WB06-LGR-02	174	1106	14.17	70.55		
CS-WB06-LGR-03A	207	1105	14.19	83.36		
CS-WB06-LGR-03B	260	1104	24.00	106.24		
CS-WB06-LGR-04	320	1103	50.04	131.43		
CS-WB07-UGR-01	14	9/6/07	1050	14.07	14.08	17.73
CS-WB07-LGR-01	90	1049	14.13		33.70	
CS-WB07-LGR-02	175	1048	14.17		69.65	
CS-WB07-LGR-03A	208	1047	14.18		83.12	
CS-WB07-LGR-03B	257	1046	17.94		104.31	
CS-WB07-LGR-04	318	1045	44.46		130.64	
CS-WB08-UGR-01	38	9/6/07	1126	14.10	14.09	19.76
CS-WB08-LGR-01	115	1125	14.12		33.62	
CS-WB08-LGR-02	193	1124	14.17		67.19	
CS-WB08-LGR-03A	228	1123	14.18		82.10	
CS-WB08-LGR-03B	273	1121	21.34		101.53	
CS-WB08-LGR-04	341	1119	50.87		131.82	



Personnel: *S. Elliott & K. A. ...*

### 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 (1)	
Date: <i>9/17/07</i>		Time: <i>0630</i>							
B3-T1-1	12.9	<i>6.83</i>	<i>6.22</i>	<i>26.22</i>	<i>1.037</i>	<i>-163.0</i>	<i>0.69</i>	✓	
B3-T1-2	12.4	<i>6.52</i>	<i>6.30</i>	<i>27.64</i>	<i>1.525</i>	<i>-194.5</i>	<i>0.40</i>		
B3-T1-3	12.85	<i>6.41</i>	<i>6.40</i>	<i>28.25</i>	<i>1.325</i>	<i>-229.8</i>	<i>0.34</i>		
B3-T2-1	9.67	<i>8.25</i>	<i>6.33</i>	<i>29.25</i>	<i>1.614</i>	<i>-167.3</i>	<i>0.52</i>		
B3-T2-2	10.01	<i>8.45</i>	<i>6.39</i>	<i>30.03</i>	<i>3.08</i>	<i>-195.6</i>	<i>0.49</i>		
B3-T3-1	9.96	<i>9.00</i>	<i>6.39</i>	<i>27.13</i>	<i>1.074</i>	<i>-146.3</i>	<i>0.41</i>		
B3-T3-2	7.4	<i>dry</i>							
B3-T4-1	6.32	<i>6.20</i>							
B3-T5-1	9.33	<i>9.08</i>							
B3-T5-2	7.98	<i>7.73</i>							
B3-T6-1	11.45	<i>11.15</i>							
B3-T6-2	12.34	<i>12.05</i>							
B3-UIC			<i>7.05</i>	<i>28.25</i>	<i>1.625</i>	<i>-214</i>	<i>4.77</i>		

### B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Date / Time	Rate (gravity fed) Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1	P-2	
T-1		/				
T-2		/				
T-3		/				
T-4		/				
T-5		/				
T-6		/				
				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.
B-3 (Mon)	<i>9-11-07/0240</i>	<i>15.16/30.61</i>	<i>620,979</i>	<i>PB-1: 26</i>	<i>PB-2: 22</i>	
B-3 (Tues)	<i>9-11-07/---</i>	<i>---</i>	<i>635,840</i>	<i>PB-1: ---</i>	<i>PB-2: ---</i>	<i>= ---</i>
B-3 (Wed)	<i>9-12-07/0600</i>	<i>17.25/33.22</i>	<i>635,840</i>	<i>PB-1: 26</i>	<i>PB-2: 23</i>	<i>= 3</i>
B-3 (Thurs)	<i>9-13-07/0630</i>	<i>1</i>	<i>651,070</i>	<i>PB-1: ---</i>	<i>PB-2: ---</i>	<i>= ---</i>
B-3 (Fri)	<i>9-14-07/---</i>	<i>1</i>		<i>PB-1: ---</i>	<i>PB-2: ---</i>	<i>= ---</i>



Personnel: S. Elliott & K. Rice						
Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft. BVC)	Sample Date	Sample Time	Pressure at POC (psi)	Pressure (MP (psi))	Zone Pressure (psi)
CS-WB05-LGR-01	99	9/17/07	1014	14.09	14.17	31.05
CS-WB05-LGR-02	182	↓	1016		11.20	67.35
CS-WB05-LGR-03A	216		1017		14.23	81.67
CS-WB05-LGR-03B	262		1014		25.78	101.59
CS-WB05-LGR-04A	277		1015		32.31	107.81
CS-WB05-LGR-04B	329		1014		54.91	130.28
CS-WB05-BS-01	362		1013		69.28	144.48
CS-WB05-CC-01	432		1012		99.67	151.52
CS-WB05-CC-02	460		↓		1011	111.82
CS-WB06-UGR-01	20		9/13/07	0948	14.09	14.13
CS-WB06-LGR-01	93	↓	0947	14.16		33.98
CS-WB06-LGR-02	174		0946	14.26		68.86
CS-WB06-LGR-03A	267		0945	14.21		82.68
CS-WB06-LGR-03B	260		0944	24.01		105.57
CS-WB06-LGR-04	320		↓	0943		50.05
CS-WB07-UGR-01	14		9/13/07	0934	14.04	14.12
CS-WB07-LGR-01	90	↓	0933	14.16		14.12
CS-WB07-LGR-02	175		0932	14.20		69.52
CS-WB07-LGR-03A	208		0931	14.21		82.63
CS-WB07-LGR-03B	257		0930	17.96		103.83
CS-WB07-LGR-04	318		↓	0928		44.46
CS-WB08-UGR-01	38		9/13/07	1002	14.08	14.13
CS-WB08-LGR-01	115	↓	1001	14.18		33.89
CS-WB08-LGR-02	193		1000	14.21		67.54
CS-WB08-LGR-03A	228		0959	14.23		81.08
CS-WB08-LGR-03B	273		0957	21.36		100.52
CS-WB08-LGR-04	341		↓	0956		50.87

Personnel: Ken Rie / Adrian Lindley / Eric Tompkins / Kyle Campbell

Weekly Water Level Monitoring

Well Interval	Sampling Pod Depth (ft BTCC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	9-21-07		14.06	14.12	30.09
CS-WB05-LGR-02	182	1			14.16	65.50
CS-WB05-LGR-03A	216	9-21-07	1006		14.18	79.52
CS-WB05-LGR-03B	262	9/18/07	1430		22.73	100.13
CS-WB05-LGR-04A	277	9-21-07	1002		33.11	105.65
CS-WB05-LGR-04B	329	1	0948		55.75	128.12
CS-WB05-BS-01	362	1	0944		70.10	142.56
CS-WB05-CC-01	432	1	0935		100.52	156.10
CS-WB05-CC-02	460	9-21-07	0920		112.70	170.17
CS-WB06-UGR-01	20	1	1450	14.09	14.06	17.08
CS-WB06-LGR-01	93	1	1440		14.11	31.36
CS-WB06-LGR-02	174	1	1430		14.16	66.29
CS-WB06-LGR-03A	207	1	1415		14.18	80.66
CS-WB06-LGR-03B	260	9/18/07	1100		14.19 <del>14.19</del>	83.56
CS-WB06-LGR-04	320	1	1400		50.24	127.84
CS-WB07-UGR-01	14	1	1335	14.09	14.09	16.87
CS-WB07-LGR-01	90	1	1325		14.13	32.36
CS-WB07-LGR-02	175	1	1315		14.18	67.38
CS-WB07-LGR-03A	208	9-20	1310		14.19	80.63
CS-WB07-LGR-03B	257	9/18/07	0445		15.02 <del>14.19</del>	101.83
CS-WB07-LGR-04	318	9-20-07	0830		45.31	126.98
CS-WB08-UGR-01	38	1	1605	14.09	14.06	17.08
CS-WB08-LGR-01	115	9/18	1555		14.09	33.16
CS-WB08-LGR-02	193	0	1545		14.14	65.56
CS-WB08-LGR-03A	228	1	1535		14.11	79.27
CS-WB08-LGR-03B	273	9/18/07	1330		22.7 <del>14.11</del>	92.14
CS-WB08-LGR-04	341	1	1523		51.76 <del>14.11</del>	128.48

tubes only 50% full

03.56

tubes 2/3 full

101.83

Personnel		Monthly Monitoring							
MPMVs	Sample Date	Sample Time	pH	Temp	SuCond	ORP	DO	Regulatory	Performance
CS-WB05-LGR-01	9-21-07	1045	6.96	22.45	0.903	-39.7	2.92		✓
CS-WB05-LGR-02	"	1030	6.92	22.60	0.714	-41.2	3.92		✓
CS-WB05-LGR03A	9-21-07	1015	7.00	22.77	.661	-58.0	4.39		✓
CS-WB05-LGR03B	9/18/07	1430	6.96	23.97	0.68	-10.2	5.91		✓
CS-WB05-LGR04A	9-21-07	1007	6.96	22.45	.591	-89.0	4.51		✓
CS-WB05-LGR04B		0950	7.01	22.45	.565	-26.0	6.03		✓
CS-WB05-BS-01		0950	7.13	22.48	.568	-67.7	7.96		✓
CS-WB05-CC-01		0930	7.14	22.65	.621	-76.0	4.22		✓
CS-WB05-CC-02	9-21-07	0928	7.46	22.73	0.631	-88.0	4.73		✓
CS-WB06-UGR-01	9/20	1450	6.84	23.30	.651	-6.5	4.10		✓
CS-WB06-LGR-01	9/20	1440	6.93	23.96	.662	-14.2	4.28		✓
CS-WB06-LGR-02	9/20	1430	6.86	23.68	.617	-20.6	4.89		✓
CS-WB06-LGR03A	9/20	1415	6.89	22.57	.586	-21.3	5.49		✓
CS-WB06-LGR03B	9/18/07	1100	7.14	23.69	0.605	-4.9	6.23		✓
CS-WB06-LGR-04	9/20	1400	7.14	23.20	.587	-19.5	5.00		✓
CS-WB07-UGR-01	9/20	1335	6.85	23.86	0.900	-103.7	2.73		✓
CS-WB07-LGR-01	9/20	1325	7.00	23.15	.769	-14.2	5.03		✓
CS-WB07-LGR-02	9/20	1315	7.03	22.99	.642	-35.7	5.37		✓
CS-WB07-LGR03A	9/20	1310	6.92	22.64	.575	-29.1	5.46		✓
CS-WB07-LGR03B	9/18/07	0930	7.28	22.80	0.582	-95.0	5.98		✓
CS-WB07-LGR-04	9-20	1250	7.64	23.64	0.577	-12.2	5.32		✓
CS-WB08-UGR-01	9/20	1605	6.83	24.41	.614	-10.8	2.87		✓
CS-WB08-LGR-01	9/20	1555	6.94	23.95	.793	-24.2	3.49		✓
CS-WB08-LGR-02	9/20	1545	6.91	23.53	.848	-28.8	4.10		✓
CS-WB08-LGR03A	9/20	1535	6.95	23.57	.609	-4.1	6.80		✓
CS-WB08-LGR03B	9/18/07	1330	6.90	24.26	0.623	3.7	3.90		✓
CS-WB08-LGR-04	9/20	1523	7.50	23.64	.653	-4.0	5.31		✓

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)	

week 21

Month 4

Personnel: *Ken Bunn / Adriano Landry* Week: *9/17/07* - *9/21/07*

### 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 (y)
Date: <i>9/17/07</i>		Time: <i>12:25</i>						
B3-T1-1	12.9	<i>8.29</i>	<i>6.02</i>	<i>26.44</i>	<i>1.120</i>	<i>-154.1</i>	<i>0.47</i>	✓
B3-T1-2	12.4	<i>7.92</i>	<i>6.20</i>	<i>27.42</i>	<i>0.972</i>	<i>-143.9</i>	<i>0.37</i>	
B3-T1-3	12.85	<i>7.71</i>	<i>6.27</i>	<i>28.62</i>	<i>1.016</i>	<i>-156.4</i>	<i>0.30</i>	
B3-T2-1	9.67	<i>8.99</i>	<i>6.39</i>	<i>29.72</i>	<i>1.606</i>	<i>-155.0</i>	<i>0.33</i>	
B3-T2-2	10.01	<i>8.95</i>	<i>6.34</i>	<i>30.18</i>	<i>2.900</i>	<i>-166.3</i>	<i>0.31</i>	
B3-T3-1	9.96	<i>9.12</i>	<i>6.48</i>	<i>27.49</i>	<i>1.057</i>	<i>-147.3</i>	<i>0.45</i>	
B3-T3-2	7.4	<i>7.4</i>						
B3-T4-1	6.32	<i>6.2</i>						
B3-T5-1	9.33	<i>9.08</i>						
B3-T5-2	7.98	<i>7.75</i>						
B3-T6-1	11.45	<i>11.16</i>						
B3-T6-2	12.34	<i>12.10</i>						
B3-UIC			<i>6.57</i>	<i>27.11</i>	<i>0.606</i>	<i>-151.7</i>	<i>0.21</i>	

### B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Date / Time	Rate (gravity fed) / Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1	P-2	
T-1	<i>9/17/1430</i>	<i>34.33</i>	<i>672.21</i>		<i>24/23</i>	
T-2		<i>1</i>				
T-3		<i>1</i>				
T-4		<i>1</i>				
T-5		<i>1</i>				
T-6		<i>1</i>				
				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.  <i>* Changed filter 40/20</i>
B-3 (Mon)		<i>1</i>		<i>PB-1: 24</i>	<i>PB-2: 22</i>	
B-3 (Tues)	<i>9/19/1340</i>	<i>41.29</i>		<i>PB-1: 37</i>	<i>PB-2: 37</i>	<i>= 0 *</i>
B-3 (Wed)	<i>9/19/07260</i>	<i>15.31/39.58</i>	<i>635,904</i>	<i>PB-1: 23</i>	<i>PB-2: 23</i>	<i>= 0</i>
B-3 (Thurs)	<i>9/20/07</i>	<i>17.01</i>	<i>709,316</i>	<i>PB-1: 0</i>	<i>PB-2: 0</i>	<i>= 0 **</i>
B-3 (Fri)	<i>9-21-07</i>	<i>1</i>		<i>PB-1:</i>	<i>PB-2:</i>	<i>=</i>

*6/27/07*

Week 3

Personnel: <i>Kyle Caskey</i> / <i>S. Elliott</i>								
Date: <i>9-26-07</i> 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 (Y)
Date: <i>9/26/07</i>		Time:						
B3-T1-1	12.9	<i>9.35</i>	<i>6.46</i>	<i>25.95</i>	<i>1.069</i>	<i>-166.6</i>	<i>0.86</i>	✓
B3-T1-2	12.4	<i>9.02</i>	<i>6.30</i>	<i>26.63</i>	<i>1.324</i>	<i>-178.4</i>	<i>0.56</i>	
B3-T1-3	12.85	<i>8.73</i>	<i>6.38</i>	<i>27.45</i>	<i>1.113</i>	<i>-171.6</i>	<i>0.41</i>	
B3-T2-1	9.67	<i>9.16</i>						
B3-T2-2	10.01	<i>9.23</i>	<i>6.27</i>	<i>30.45</i>	<i>2.788</i>	<i>-195.3</i>	<i>0.56</i>	
B3-T3-1	9.96	<i>9.16</i>						
B3-T3-2	7.4	<i>DRY</i>						
B3-T4-1	6.32	<i>6.23</i>						
B3-T5-1	9.33							
B3-T5-2	7.98							
B3-T6-1	11.45							
B3-T6-2	12.34							
B3-UIC								

B-3 Transfer System Monitoring

Flow meters readings				Pressure Readings		Notes
Meter	Date / Time	Rate (gravity fed) Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1	P-2	Gravity feed bioreactor  Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi, Change filter.
T-1		/		P-3		
T-2		/		P-4		
T-3		/		Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2))		
T-4		/				
T-5		/				
T-6		/				
B-3 (Mon)	<i>9-24-07/1045</i>	<i>10.481</i>	<i>710,389</i>	PB-1:	PB-2: =	
B-3 (Tues)	<i>9-25-07/0820</i>	<i>1.00</i>	<i>726,365</i>	PB-1:	PB-2: =	
B-3 (Wed)	<i>9-26-07/-</i>	<i>1</i>	<i>-</i>	PB-1:	PB-2: =	
B-3 (Thurs)	<i>9-27-07/0800</i>	<i>1</i>	<i>735,208</i>	PB-1:	PB-2: =	
B-3 (Fri)	<i>9-28-07/0236</i>	<i>1</i>	<i>748,007</i>	PB-1:	PB-2: =	

Personnel: <u>Kyle Caskey 9-26-07</u>						
Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft TOC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	↑	1010		19.18	29.32
CS-WB05-LGR-02	182		1008		14.21	63.92
CS-WB05-LGR-03A	216		1007		14.29	77.68
CS-WB05-LGR-03B	262		1005		25.60	97.59
CS-WB05-LGR-04A	277		1002		32.11	103.67
CS-WB05-LGR-04B	329		1000		59.74	126.11
CS-WB05-BS-01	362		0957		69.08	140.89
CS-WB05-CC-01	432		0954		99.47	159.71
CS-WB05-CC-02	460		0950		116.61	171.72
CS-WB06-UGR-01	20	↓	1045		19.16	16.66
CS-WB06-LGR-01	93		1043		19.18	29.02
CS-WB06-LGR-02	174		1041		14.22	63.64
CS-WB06-LGR-03A	207		1039		14.23	78.59
CS-WB06-LGR-03B	260		1037		23.94	101.47
CS-WB06-LGR-04	320		1035		49.79	125.47
CS-WB07-UGR-01	14	↓	1024		14.15	16.33
CS-WB07-LGR-01	90		1022		14.19	31.10
CS-WB07-LGR-02	175		1020		19.23	65.51
CS-WB07-LGR-03A	208		1018		19.24	78.59
CS-WB07-LGR-03B	257		1017		17.87	99.78
CS-WB07-LGR-04	318		1015		44.37	124.61
CS-WB08-UGR-01	38		1102		14.16	18.96
CS-WB08-LGR-01	115		1059		14.19	32.65
CS-WB08-LGR-02	193	1057		14.20	63.87	
CS-WB08-LGR-03A	228	1055		14.23	77.15	
CS-WB08-LGR-03B	273	1052		21.28	96.58	
CS-WB08-LGR-04	341	1050		50.81	126.14	

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 (Y)		
Date: 10/15/07										
B3-T1-1	12.9	8.92	6.59	25.19	1.007	-178.2	0.63			✓
B3-T1-2	12.4	8.62	6.27	26.20	1.082	-171.5	0.48			
B3-T1-3	12.85	8.45	6.38	27.02	1.070	-154.4	0.36			
B3-T2-1	9.67	9.45		30.44	2.447	-201.1	0.41			
B3-T2-2	10.01	9.47	6.26	28.59	1.001	-140.4	0.81			
B3-T3-1	9.96	9.12	6.38							
B3-T3-2	7.4									
B3-T4-1	6.32									
B3-T5-1	9.33									
B3-T5-2	7.98									
B3-T6-1	11.45	11.15								
B3-T6-2	12.34	12.10								
B3-UIC			6.97	23.37	0.557	-83.2	3.93			
B-3 Transfer System Monitoring										
Flow meters readings					Pressure Readings				Notes	
Meter	Date / Time	Rate (gravity fed) / Rate (pump fed) (GPM)	Cumulative Total (gal)	P-1 P-2 P-3 P-4				Note: If Bag Filter Pressure Drop is equal to or greater than 20 psi Change filter.		
T-1		/								
T-2		/								
T-3		/								
T-4		/								
T-5		/								
T-6		/								
B-3 (Mon)	10-1-07 / 0850	17.36	749,050	PB-1	PB-2					gravity fed only
B-3 (Tues)	10-2-07 / 0730	16.27	756,941	PB-1	PB-2					" "
B-3 (Wed)	10-3-07 / 0830	17.01	764,530	PB-1	PB-2					" "
B-3 (Thurs)	10-4-07 / 0830	17.19	771,783	PB-1	PB-2					" "
B-3 (Fri)	10-5-07 / 0830	17.19	776,715	PB-1	PB-2					" "

Week 33

Personnel		<i>Ken Rice / Kyle Costant</i>		<i>10/5/07</i>		
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	<i>10/5/07</i>	<i>1350</i>	<i>14.07</i>	<i>14.12</i>	<i>28.22</i>
CS-WB05-LGR-02	182	<i> </i>	<i>1347</i>		<i>14.17</i>	<i>59.47</i>
CS-WB05-LGR-03A	216		<i>1345</i>		<i>14.18</i>	<i>73.38</i>
CS-WB05-LGR-03B	262		<i>1343</i>		<i>25.51</i>	<i>93.30</i>
CS-WB05-LGR-04A	277		<i>1341</i>		<i>32.03</i>	<i>99.41</i>
CS-WB05-LGR-04B	329		<i>1339</i>		<i>54.64</i>	<i>121.83</i>
CS-WB05-BS-01	362		<i>1337</i>		<i>69.00</i>	<i>137.20</i>
CS-WB05-CC-01	432		<i>1335</i>		<i>99.39</i>	<i>139.01</i>
CS-WB05-CC-02	460		<i>1333</i>		<i>111.56</i>	<i>151.73</i>
CS-WB06-UGR-01	20		<i>10/6/07</i>	<i>1316</i>	<i>14.08</i>	<i>14.08</i>
CS-WB06-LGR-01	93	<i> </i>	<i>1314</i>	<i>14.13</i>		<i>25.35</i>
CS-WB06-LGR-02	174		<i>1312</i>	<i>14.16</i>		<i>59.18</i>
CS-WB06-LGR-03A	207		<i>1310</i>	<i>14.18</i>		<i>74.74</i>
CS-WB06-LGR-03B	260		<i>1308</i>	<i>23.87</i>		<i>97.62</i>
CS-WB06-LGR-04	320		<i>1306</i>	<i>49.93</i>		<i>121.15</i>
CS-WB07-UGR-01	14		<i> </i>	<i>1300</i>	<i>14.09</i>	<i>14.09</i>
CS-WB07-LGR-01	90	<i>1258</i>		<i>14.11</i>		<i>29.48</i>
CS-WB07-LGR-02	175	<i>1256</i>		<i>14.15</i>		<i>62.29</i>
CS-WB07-LGR-03A	208	<i>1255</i>		<i>14.17</i>		<i>74.68</i>
CS-WB07-LGR-03B	257	<i>1253</i>		<i>17.79</i>		<i>95.08</i>
CS-WB07-LGR-04	318	<i>10/5/07</i>		<i>1250</i>		<i>44.30</i>
CS-WB08-UGR-01	38	<i> </i>	<i>1330</i>	<i>14.07</i>	<i>14.11</i>	<i>17.96</i>
CS-WB08-LGR-01	115		<i>1328</i>		<i>14.12</i>	<i>32.10</i>
CS-WB08-LGR-02	193		<i>1326</i>		<i>14.14</i>	<i>60.26</i>
CS-WB08-LGR-03A	228		<i>1324</i>		<i>14.18</i>	<i>73.13</i>
CS-WB08-LGR-03B	273		<i>1322</i>		<i>21.22</i>	<i>92.57</i>
CS-WB08-LGR-04	341		<i>1320</i>		<i>50.75</i>	<i>121.81</i>



### Bioreactor Monitoring

Personnel: <i>S. Elliott</i>										
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>10/11/07</i>		Time: <i>1030</i>								
B3-T1-1	12.9	<i>10.18</i>	<i>6.19</i>	<i>25.18</i>	<i>0.979</i>	<i>-194.4</i>	<i>0.51</i>			
B3-T1-2	12.4	<i>9.77</i>	<i>6.25</i>	<i>25.72</i>	<i>1.020</i>	<i>-194.2</i>	<i>0.23</i>			
B3-T1-3	12.85	<i>9.40</i>	<i>6.27</i>	<i>26.55</i>	<i>1.001</i>	<i>-179.7</i>	<i>0.26</i>	✓		
B3-T2-1	9.67	<i>9.45</i>	<i>6.40</i>	<i>30.45</i>	<i>1.506</i>	<i>-233.1</i>	<i>0.21</i>			
B3-T2-2	10.01	<i>9.58</i>	<i>6.33</i>	<i>30.51</i>	<i>2.571</i>	<i>-212.0</i>	<i>0.20</i>			
B3-T3-1	9.96	<i>9.10</i>	<i>6.29</i>	<i>29.06</i>	<i>1.060</i>	<i>-175.1</i>	<i>0.26</i>			
B3-T3-2	7.4	<i>dry</i>								
B3-T4-1	6.32	<i>6.24</i>								
B3-T5-1	9.33	<i>9.06</i>								
B3-T5-2	7.98	<i>7.66</i>								
B3-T6-1	11.45	<i>11.14</i>								
B3-T6-2	12.34	<i>12.06</i>								
B3-UIC			<i>7.07</i>	<i>23.48</i>	<i>0.578</i>	<i>-57.2</i>	<i>4.24</i>			
B-3 Transfer System Monitoring										
Flow meters readings										
Meter	Monday		Tuesday		Wednesday		Thursday		Friday	
Date/Time:	<i>10/8/07</i>	<i>0755</i>	<i>10/9/07</i>	<i>0730</i>	<i>10/10/07</i>	<i>0750</i>	<i>10/11/07</i>	<i>0825</i>	<i>10/12/07 0730</i>	
	Rate (GPM) / Cumulative Total (gal)									
T-1	<i>16.87/34.16</i>	<i>805,829</i>	<i>16.43/33.77</i>	<i>818,828</i>	<i>17.03/34.78</i>	<i>833,219</i>	<i>16.06/ -</i>	<i>847,854</i>	<i>859,188</i>	
T-2										
T-3							<i>granby feed</i>			
T-4							<i>only</i>			
T-5										
T-6										
B-3 (Total)	<i>16.87/34.16</i>	<i>805,829</i>		<i>818,828</i>		<i>833,219</i>		<i>847,854</i>	<i>859,188</i>	
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 20 psi change filter.										
	<i>PB-1 - PB-2 = 24 - 24 = 0</i>		<i>PB-1 - PB-2 = 25 - 24 = 1</i>		<i>PB-1 - PB-2 = 25 - 25 = 0</i>		<i>PB-1 - PB-2 = /</i>		<i>PB-1 - PB-2 =</i>	
Pressure Readings	Notes									
P-1										
P-2										
P-3										
P-4										

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	10/11/07	0841	14.09	14.16	27.70
CS-WB05-LGR-02	182		0840		14.19	55.47
CS-WB05-LGR-03A	216		0839		14.21	69.04
CS-WB05-LGR-03B	262		0838		25.51	88.97
CS-WB05-LGR-04A	277		0837		32.04	94.93
CS-WB05-LGR-04B	329		0835		54.64	117.35
CS-WB05-BS-01	362		0834		69.00	133.26
CS-WB05-CC-01	432		0832		99.39	149.77
CS-WB05-CC-02	460		0831		111.55	162.50
CS-WB06-UGR-01	20			0921	14.10	14.16
CS-WB06-LGR-01	93	0920		14.17		21.61
CS-WB06-LGR-02	174	0919		14.20		54.58
CS-WB06-LGR-03A	207	0918		14.22		71.03
CS-WB06-LGR-03B	260	0917		23.91		93.92
CS-WB06-LGR-04	320	0916		49.95		116.76
CS-WB07-UGR-01	14			0936		14.11
CS-WB07-LGR-01	90		0935	14.17	26.98	
CS-WB07-LGR-02	175		0934	14.20	59.61	
CS-WB07-LGR-03A	208		0933	14.22	70.80	
CS-WB07-LGR-03B	257		0932	17.84	92.01	
CS-WB07-LGR-04	318		0931	44.34	115.50	
CS-WB08-UGR-01	38		0904	14.09	14.13	14.13
CS-WB08-LGR-01	115		0901		14.16	31.70
CS-WB08-LGR-02	193		0900		14.20	56.82
CS-WB08-LGR-03A	228		0859		14.21	68.96
CS-WB08-LGR-03B	273		0858		21.24	88.41
CS-WB08-LGR-04	341		0856		50.79	117.55

### Bioreactor Monitoring

Personnel: <i>S. Elliott + K. Caskey</i>									
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 (V)	Notes
Date: <i>10/16/07</i>		Time: <i>0950</i>							
<i>1030</i> B3-T1-1	<i>12.9</i>	<i>11.37</i>	<i>5.98</i>	<i>25.21</i>	<i>1.069</i>	<i>-151.4</i>	<i>0.53</i>	✓	<i>2 Liters pumped for ORA Samp.</i>
<i>1100</i> B3-T1-2	<i>12.4</i>	<i>10.91</i>	<i>6.00</i>	<i>25.65</i>	<i>1.055</i>	<i>-175.6</i>	<i>0.28</i>		
<i>1130</i> B3-T1-3	<i>12.85</i>	<i>10.59</i>	<i>6.13</i>	<i>26.05</i>	<i>1.059</i>	<i>-176.9</i>	<i>0.31</i>		
B3-T2-1	<i>9.67</i>	<i>9.49</i>							
B3-T2-2	<i>10.01</i>	<i>9.60</i>							
B3-T3-1	<i>9.96</i>	<i>9.13</i>							
B3-T3-2	<i>7.4</i>	<i>dry - no tone</i>							
B3-T4-1	<i>6.32</i>	<i>6.28</i>							
B3-T5-1	<i>9.33</i>	<i>9.08</i>							
B3-T5-2	<i>7.98</i>	<i>7.68</i>							
B3-T6-1	<i>11.45</i>	<i>11.13</i>							
B3-T6-2	<i>12.34</i>	<i>12.05</i>							
<i>0930</i> B3-UIC			<i>7.22</i>	<i>23.23</i>	<i>0.594</i>	<i>-67.1</i>	<i>5.08</i>		
B-3 Transfer System Monitoring									
Flow meters readings									
Meter	Monday		Tuesday		Wednesday		Thursday		Friday
Date/Time:	<i>10.15.07</i>	<i>0930</i>	<i>10.16.07</i>	<i>0845</i>	<i>10.17.07</i>	<i>0900</i>	<i>10.18.07</i>	<i>0835</i>	<i>10.19.07</i>
Rate (gpm) / Cumulative Total (gal)									
T-1	<i>15.77</i>	<i>866,843</i>	<i>15.78</i>	<i>874,392</i>	<i>14.99/33.72</i>	<i>883,819</i>	<i>15.01/33.39</i>	<i>895,835</i>	
T-2									
T-3									
T-4									
T-5									
T-6									
B-3 (Total)		<i>866,843</i>		<i>874,392</i>		<i>883,819</i>		<i>895,835</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>_____</i>		PB-1 - PB-2 = <i>_____</i>		PB-1 - PB-2 = <i>25-24 = 1</i>		PB-1 - PB-2 = <i>25-23 = 2</i>		PB-1 - PB-2 = <i>_____</i>	
Pressure Readings		Notes							
P-1									
P-2									
P-3									
P-4									

Week 25  
Quarter 2

Personnel		Tennison 10/15/07 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	10-15	1005	14.04	14.11	27.42
CS-WB05-LGR-02	182	10-15	1004		14.15	52.79
CS-WB05-LGR-03A	216	10-15	1003		14.17	66.31
CS-WB05-LGR-03B	262	10/15/07	1002		25.44	86.23
CS-WB05-LGR-04A	277	10-15	1001		31.97	92.14
CS-WB05-LGR-04B	329	10-15	1000		54.58	114.56
CS-WB05-BS-01	362	10-15	0958		68.92	130.68
CS-WB05-CC-01	432	10-15	0956		99.32	150.16
CS-WB05-CC-02	460	10-15	0954		111.47	163.19
CS-WB06-UGR-01	20	10-15	1302	13.99	14.03	15.99
CS-WB06-LGR-01	93	"	1300		14.04	19.24
CS-WB06-LGR-02	174	"	1459		14.07	52.23
CS-WB06-LGR-03A	207	"	1458		14.09	68.72
CS-WB06-LGR-03B	260	"	1457		23.81	91.61
CS-WB06-LGR-04	320	"	1455		49.82	113.97
CS-WB07-UGR-01	14	"	1310	14.01	14.08	28.50
CS-WB07-LGR-01	90	"	1309		14.09	25.28
CS-WB07-LGR-02	175	"	1308		14.12	57.78
CS-WB07-LGR-03A	208	"	1307		14.14	68.21
CS-WB07-LGR-03B	257	"	1306		17.80	89.39
CS-WB07-LGR-04	318	"	1305		44.24	112.53
CS-WB08-UGR-01	38	"	1438	14.00	14.00	14.01
CS-WB08-LGR-01	115	"	1437		14.03	31.19
CS-WB08-LGR-02	193	"	1436		14.06	54.37
CS-WB08-LGR-03A	228	"	1435		14.07	66.23
CS-WB08-LGR-03B	273	"	1434		21.12	85.67
CS-WB08-LGR-04	341	"	1432		50.66	114.83

### Bioreactor Monitoring

Personnel: <i>S. Elliott &amp; E. Tennyson</i>														
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>10/22/07</i>		Time: <i>1330</i>												
B3-T1-1	12.9	<i>11.60</i>	<i>6.11</i>	<i>25.29</i>	<i>1.093</i>	<i>-165.0</i>	<i>0.50</i>	✓						
B3-T1-2	12.4	<i>11.35</i>	<i>6.22</i>	<i>25.67</i>	<i>1.085</i>	<i>-177.9</i>	<i>0.49</i>							
B3-T1-3	12.85	<i>10.87</i>	<i>6.21</i>	<i>25.97</i>	<i>1.062</i>	<i>-175.1</i>	<i>0.39</i>							
B3-T2-1	9.67	<i>9.51</i>												
B3-T2-2	10.01	<i>9.61</i>												
B3-T3-1	9.96	<i>9.06</i>	<i>6.25</i>	<i>29.17</i>	<i>1.198</i>	<i>-161.0</i>	<i>0.32</i>							
B3-T3-2	7.4	<i>dry-no tank</i>												
B3-T4-1	6.32	<i>6.26</i>												
B3-T5-1	9.33	<i>9.07</i>												
B3-T5-2	7.98	<i>6.48</i>	<i>6.30</i>	<i>27.60</i>	<i>0.944</i>	<i>-109.1</i>	<i>0.38</i>							
B3-T6-1	11.45	<i>11.15</i>												
B3-T6-2	12.34	<i>12.10</i>												
B3-UIC			<i>6.97</i>	<i>22.00</i>	<i>0.607</i>	<i>-68.9</i>	<i>4.17</i>							
B-3 Transfer System Monitoring														
Flow meters readings														
Meter	Monday		Tuesday		Wednesday		Thursday		Friday					
Date/Time:	<i>10.22.07</i>	<i>0900</i>	<i>10/23/07</i>	<i>0845</i>	<i>10/24/07</i>	<i>0835</i>	<i>10/25/07</i>	<i>0915</i>	<i>10/26/07</i>	<i>0750</i>				
	Rate (gpm) / Cumulative Total (gal)													
T-1	<i>16.76/33.22</i>		<i>906.611</i>		<i>16.92/34.22</i>		<i>916.684</i>		<i>14.64/33.27</i>		<i>929,475</i>	<i>16.81/33.50</i>	<i>940,526</i>	<i>953,369</i>
T-2														
T-3														
T-4														
T-5														
T-6														
B-3 (Total)	<i>906,611</i>		<i>916,684</i>		<i>929,475</i>		<i>940,526</i>		<i>953,369</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>25-24=1</i> PB-1 - PB-2 = <i>26-24=2</i> PB-1 - PB-2 = <i>26-24=2</i> PB-1 - PB-2 = <i>26-24=2</i> PB-1 - PB-2 =														
Pressure Readings					Notes									
P-1														
P-2														
P-3														
P-4														

Week *26*  
Quarter *2*

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	10/22/07	0923	14.09	14.18	26.77
CS-WB05-LGR-02	182		0922		14.23	48.15
CS-WB05-LGR-03A	216		0921		14.24	61.93
CS-WB05-LGR-03B	262		0920		25.45	81.91
CS-WB05-LGR-04A	277		0919		31.97	87.96
CS-WB05-LGR-04B	329		0918		54.60	110.42
CS-WB05-BS-01	362		0917		68.94	126.53
CS-WB05-CC-01	432		0916		99.33	149.13
CS-WB05-CC-02	460		0915		111.47	161.91
CS-WB06-UGR-01	20		0956	14.13	14.17	16.12
CS-WB06-LGR-01	93		0955		14.20	16.68
CS-WB06-LGR-02	174		0954		14.24	50.32
CS-WB06-LGR-03A	207		0952		14.25	66.10
CS-WB06-LGR-03B	260		0951		23.84	89.00
CS-WB06-LGR-04	320		0950		49.87	110.49
CS-WB07-UGR-01	14		0941	14.13	14.15	15.54
CS-WB07-LGR-01	90		0940		14.19	22.91
CS-WB07-LGR-02	175		0939		14.24	55.60
CS-WB07-LGR-03A	208		0938		14.25	64.22
CS-WB07-LGR-03B	257		0936		17.81	85.41
CS-WB07-LGR-04	318		0935		44.30	108.54
CS-WB08-UGR-01	38		1010	14.12	14.16	14.16
CS-WB08-LGR-01	115		1009		14.21	30.83
CS-WB08-LGR-02	193		1008		14.25	50.63
CS-WB08-LGR-03A	228		1007		14.26	62.53
CS-WB08-LGR-03B	273		1006		21.25	81.96
CS-WB08-LGR-04	341	✓	1005		50.77	111.56

Personnel <i>S. Elliott + K. Caskey / E. Tennyson + A. Lindley</i>									
Quarterly Monitoring									
MPMWs	Sample Date	Sample Time	pH	Temp	SpCond	ORP	DO	Regulatory (✓)	Performance (✓)
CS-WB05-LGR-01	10/24/07	1045	7.40	21.86	0.863	10.9	4.12		✓
CS-WB05-LGR-02	10/24/07	1000	7.40	19.46	0.703	20.3	4.60		✓
CS-WB05-LGR03A	10/24/07	0930	7.46	18.67	0.590	35.1	4.84		✓
CS-WB05-LGR03B	10/15/07	1030	7.37	22.53	0.661	-19.2	5.80	✓	
CS-WB05-LGR04A	10/23/07	1500	7.19	22.25	0.586	-102.7	3.98		✓
CS-WB05-LGR04B	10/23/07	1410	6.87	23.80	0.601	-10.9	4.60		✓
CS-WB05-BS-01	10/23/07	1110	7.11	20.32	0.537	-21.3	8.04?		✓
CS-WB05-CC-01	10/23/07	1040	7.25	18.82	0.570	-82.1	6.07		✓
CS-WB05-CC-02	10/23/07	0945	7.06	16.07	0.589	-53.1	7.28		✓
CS-WB06-UGR-01	10/17/07	1445	6.49	26.30	1.075	7.5	2.80		✓
CS-WB06-LGR-01	10/17/07	1355	7.08	25.97	0.636	-6.0	3.45		✓
CS-WB06-LGR-02	10/17/07	1310	7.10	25.80	0.635	-11.8	3.93		✓
CS-WB06-LGR03A	10/17/07	1045	6.80	22.80	0.581	19.9	6.79		✓
CS-WB06-LGR03B	10/10/07	1030	6.87	22.35	0.577	-44.0	6.25	✓	
CS-WB06-LGR-04	10/17/07	1000	6.82	22.98	0.567	24.4	6.80		✓
CS-WB07-UGR-01	10/18/07	1345	6.56	25.18	0.991	-114.5	2.67		✓
CS-WB07-LGR-01	10/18/07	1250	6.77	23.97	0.749	11.0	4.70		✓
CS-WB07-LGR-02	10/18/07	1100	6.96	23.00	0.592	2.7	5.43		✓
CS-WB07-LGR03A	10/18/07	1030	6.94	23.08	0.538	16.0	6.43		✓
CS-WB07-LGR03B	10/15/07	1330	7.13	23.22	0.528	-33.9	6.35	✓	
CS-WB07-LGR-04	10/18/07	0925	6.79	23.07	0.520	29.2	7.36	6.91	✓
CS-WB08-UGR-01	10/25/07								✓
CS-WB08-LGR-01	10/25/07	1045	6.88	19.85	0.689	-3.8	6.07		✓
CS-WB08-LGR-02	10/25/07	1000	6.88	17.58	0.671	-0.8	6.78		✓
CS-WB08-LGR03A	10/24/07	1410	6.79	22.90	0.582	36.8	6.32		✓
CS-WB08-LGR03B	10/16/07	1330	7.20	23.05	0.586	-0.9	6.74	✓	
CS-WB08-LGR-04	10/24/07	<del>0925</del> 1330	6.82	23.27	0.600	50.3	8.24	7.67	✓
CS-MW1-LGR	10/15/07	1400	7.14	21.86	0.453	-20.5	1.14		
B3-MW01	10/15/07	1010	6.65	21.07	2.842	6.45-169.8	6.45		
CS-D	10/15/07	1445	7.22	24.20	0.505	-15.7	2.57		
CS-MW16-LGR	10/15/07	1330	7.40	21.99	0.494	-11.1	1.73		
CS-MW16-CC	10/15/07	1120	7.30	23.35	0.574	-77.7	1.33		

*DO/A Sample volume*

*1/4 liter x 2*

*liters  
2 liters*

Quarter 2  
Week 25 + 26