



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

June 28, 2012

U-065-12

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: Biannual Status Report (Month 55 – Month 60, November 1, 2011 - April 30, 2012) 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 biannual 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 biannual report contains data as specified by the Texas Commission on Environmental Quality (TCEQ) Underground Injection Control (UIC) permit for the months of November, 2011 through April, 2012 (Months 55-60). The biannual reporting data includes 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. Data indicates that concentrations of contaminants did not exceed limits specified in 40 CFR §261.24 Table 1 as referenced in CSSA's UIC permit authorization.

Between November 1, 2011 and April 30, 2012 approximately 8,139,248 gallons of groundwater from wells CS-MW16-CC (~3,507,615 gallons), CS-MW16-LGR (~1,464,758 gallons), B3-EXW-01 (~2,122,179 gallons), B3-EXW-02 (~2,702,000) were injected into SWMU B-3 bioreactor trenches 1 and 2. A total of 51,195,841 gallons of recovered groundwater from CS-MW16-LGR, CS-MW16-CC, B3-EXW-01, and B3-EXW-02 have been injected into bioreactor trenches 1 and 2 since normal bioreactor operations began. Samples of the injected groundwater, for this reporting period, were collected on November 18 and December 21, 2010, and January 19, February 24, March 22, and April 19, 2011. Results of analysis are summarized in the attached Table 1. An additional 12,000 gallons of water were injected into trench 4. This additional water was generated from additional well drilling efforts located on post. The laboratory data packages for characterization of the managed water for the newly drilled well CS-13 (TW-2) are included in the accompanying CD. Field forms which contain operating pressures and pH readings for the reporting period are also attached and the laboratory data packages are included in the accompanying CD.

A modification request changing the reporting frequency from a semi-annual to an annual basis was reviewed and approved by TCEQ UIC staff on February 17, 2012 (correspondence attached); therefore, this is the final biannual report. Future reports summarizing the injection activities performed at the on-post SWMU B-3 site will be submitted on an annual basis; the first of which will be submitted in June 2013.

If you have any questions regarding the information contained in this letter, please feel free to contact Gabriel Moreno-Fergusson, CSSA Environmental Program Manager, at (210) 295-7453 or Ken Rice, Parsons, at (512) 719-6050.

Sincerely,



Jason D. Shirley
Installation Manager

Enclosures

cc: Gabriel Moreno-Fergusson, CSSA Environmental Program Manager
Julie Burdey, Parsons (ltr only)
Ken Rice, Parsons
File: 748350.01000

TCEQ Correspondence

February 17, 2012

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 17, 2012

Mr. Jason Shirley
Installation Manager
U.S. Army, Camp Stanley Storage Activity
25800 Ralph Fair Road
Boerne, TX 78015

Re: Amendment to Class V Authorization
TCEQ Authorization No. 5X2600431
CN602728206/RN104431655
Camp Stanley Storage Activity
25800 Ralph Fair Road
Boerne, TX 78015

Dear Mr. Shirley:

The Underground Injection Control (UIC) staff has completed review of the modification request dated August 29, 2011 requesting approval to change the data collection and reporting requirements for the above authorization. The following change has been made to the above Class V authorization.

Injection volumes, pressures, and concentrations of contaminants (including pH and total dissolved solids) in the injected groundwater shall be sampled quarterly at the point of reinjection (prior to fluids being released into the trenches). The concentration of contaminants in the trench bioreactor monitoring sumps and the surrounding monitoring wells shall be sampled semiannually. All monitoring and sampling data shall be submitted to the UIC Permits Team, Radioactive Materials Divisions, at mail code MC 233 on an annual basis. All other requirements of the above mentioned authorization remain in effect.

If you have any questions regarding this matter, please contact me at (512) 239-6075. If you will be corresponding by mail, please use mail code MC 233.

Sincerely,

A handwritten signature in black ink that reads "Bryan S. Smith".

Bryan S. Smith
Underground Injection Control Permits Team
Radioactive Materials Division

BSS/nlc

cc: Mr. Ken Rice, Parsons, 8000 Centre Park Drive, Suite 200, Austin, TX 78754

Analytical Summary Data

Table 1

B3-UIC Analytical Results
November 2011 - April 2012

SW8260B (µg/L)	Sample ID		Sample Date		Sample Type		Sampling Method		Lab ID		B3-UIC Criteria		Results		Flags		Dilution		Results		Flags		Dilution		
	Lab	Lab	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	MDL	PQL	
	0.07	0.08	0.05	0.06	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	0.06	0.08	
cis-DCE					131									111						99					115
trans-DCE					3.1									3.5						2.8					2.1
TCE					116									100						93					95
PCE					102									85						80					91
Toluene					0.06									0.06						0.06					0.06
Vinyl chloride					0.08									0.08						0.08					0.08
EPA 160.1 (mg/L)					351									346						359					346
TDS					7.41									7.31						7.40					7.20
Field measured																									
pH																									

Tables present all laboratory results for analytes.

Data packages for laboratory 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:

U - The analyte was analyzed for, but not detected. The associated numerical value is the MDL.

J - The analyte was positively identified, but the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

Abbreviations:

- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- N1 Environmental Sample
- UIC Underground Injection Control

Field Forms

Bioreactor Monitoring

Personnel: Elliott, Baych, E. 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 (✓)	Notes
Date: 11.9.11 Time: 1330									
B3-T1-1	12.9	8.46	6.30	23.85	0.906	150.6	0.23		
B3-T1-2	12.4	8.05	6.91	22.14	0.126	41.3	0.03	✓	
B3-T1-3	12.85	7.88	6.77	23.42	0.465	83.7	0.07		
B3-T2-1	9.67	9.26							
B3-T2-2	10.01	9.60							
B3-T3-1	9.96	9.19							
B3-T3-2	7.4	0.4							
B3-T4-1	6.32	0.4							
B3-T5-1	9.33	0.4							
B3-T5-2	7.98	0.4							
B3-T6-1	11.45	0.4							
B3-T6-2	12.34	0.4	6.56	25.78	0.570	-33.9	0.10	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	11/31/11 0815	11/11 0900	11/21 1425	11/21 0700	11/21 1410
T-1	1868808	1885633	1904526	1916761	1935365
T-2					
T-3					
T-4					
T-5					
T-6	4793814	4830973	4873857	4901611	4943819
B-3 (Total)					
CS-MW16-LGR	7.35	969326	7.31	981570	7.25
CS-MW16-CC	11.7	600144	11.1	636479	11.1
B3-EXW01	6.73	8097546	6.660	811351	812621
B3-EXW02	8.51	4524422	8.49	4537312	8.31
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: if bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR	294.73	293.85
MW16CC	368.87	369.60
B3EXW01	307.40	308.10
B3EXW02	319.70	320.70
SCADA		

Week 235 230

Personnel: <i>J. Smith, E. Lee</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	11-2-11	1423	14.08	^{14.10} 14.14	20.17
CS-WB05-LGR-02	182		1422		^{14.15} 14.17	14.17
CS-WB05-LGR-03A	216		1421		^{14.17} 14.20	14.17
CS-WB05-LGR-03B	262		1420		^{18.56} 17.90	15.87
CS-WB05-LGR-04A	277		1419		^{25.11} 24.43	18.89
CS-WB05-LGR-04B	329		1418		^{47.74} 47.05	41.44
CS-WB05-BS-01	362		1417		^{62.10} 61.41	56.57
CS-WB05-CC-01	432		1416		^{92.50} 91.80	59.47
CS-WB05-CC-02	460		1415		^{104.66} 103.96	71.79
CS-WB06-UGR-01	20		1457	14.07	^{14.07} 14.08	17.41
CS-WB06-LGR-01	93		1456		^{14.12} 14.11	16.45
CS-WB06-LGR-02	174		1454		^{14.16} 14.15	17.97
CS-WB06-LGR-03A	207		1453		^{14.18} 14.18	20.44
CS-WB06-LGR-03B	260		1452		^{26.37} 26.10	43.35
CS-WB06-LGR-04	320		1451		^{52.44} 52.19	40.14
CS-WB07-UGR-01	14		1356	14.08	^{14.08} 14.07	14.36
CS-WB07-LGR-01	90		1357		^{14.12} 14.10	25.97
CS-WB07-LGR-02	175		1356		^{14.16} 14.13	23.44
CS-WB07-LGR-03A	208		1355		^{14.20} 14.15	14.34
CS-WB07-LGR-03B	257		1354		^{14.22} 14.19	26.88
CS-WB07-LGR-04	318		1353		^{24.62} 24.47	39.98
CS-WB08-UGR-01	38		1440	14.04	^{14.19} 14.10	18.28
CS-WB08-LGR-01	115		1437		^{14.10} 14.13	19.62
CS-WB08-LGR-02	193		1438		^{14.14} 14.15	17.26
CS-WB08-LGR-03A	228		1437		^{14.18} 14.10	14.14
CS-WB08-LGR-03B	273		1435		^{26.47} 26.22	14.18
CS-WB08-LGR-04	341		1434		^{56.08} 55.80	41.33

Personnel <u>J. Bauch, E. Rice</u>					
Quarterly Monitoring					
MPMWs	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Inside Pressure	Zone Pressure
CS-WB05-LGR-01	99	10.27.11	1145	14.01	20.25
CS-WB05-LGR-02	182	10.27.11	DRY	14.05	14.10
CS-WB05-LGR03A	216	10.27.11	DRY	14.10	14.07
CS-WB05-LGR03B	262	10/19/11	1020	20.41	20.26
CS-WB05-LGR04A	277	10/27/11	DRY	14.05	14.07
CS-WB05-LGR04B	329	10.27.11	1000	49.13	41.81
CS-WB05-BS-01	362	10.26.11	1400	63.52	57.59
CS-WB05-CC-01	432	10.26.11	1110	94.12	60.34
CS-WB05-CC-02	460	10.26.11	1010	106.40	72.65
CS-WB06-UGR-01	20	11.1.11	1455	14.04	17.38
CS-WB06-LGR-01	93	11.1.11	1400	14.09	16.40
CS-WB06-LGR-02	174	11.1.11	1305	14.15	18.12
CS-WB06-LGR03A	207	11.1.11	1050	14.14	20.47
CS-WB06-LGR03B	260	10.20.11	0940	28.28	43.93
CS-WB06-LGR-04	320	11.1.11	1000	54.26	40.25
CS-WB07-UGR-01	14	11.2.11	1345	14.01	14.35
CS-WB07-LGR-01	90	11.2.11	1110	14.11	24.26
CS-WB07-LGR-02	175	11.2.11	1025	14.13	23.87
CS-WB07-LGR03A	208	11.2.11	1015	14.14	14.33
CS-WB07-LGR03B	257	10.20.11	1100	14.21	27.87
CS-WB07-LGR-04	318	11.2.11	0940	26.52	40.01
CS-WB08-UGR-01	38	11.3.11	0930	14.22	18.47
CS-WB08-LGR-01	115	11.3.11	1030	14.26	19.62
CS-WB08-LGR-02	193	11.3.11	1140	14.27	16.78
CS-WB08-LGR03A	228	11.3.11	DRY	14.25	14.17
CS-WB08-LGR03B	273	10.19.11	1340	24.53	16.55
CS-WB08-LGR-04	341	11.3.11	1400	57.85	41.40

DRY
DRY
14.10/14.70

DRY

DRY

DRY

Bioreactor Monitoring

Personnel: *S. Bouch, E. 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 (✓)	Notes
Date: 11.11.11 Time: 10:00									
B3-T1-1	12.9	6.40	6.79	23.55	1.070	136.2	0.14	✓	
B3-T1-2	12.4	6.26	6.89	22.10	0.937	127.0	0.15	✓	
B3-T1-3	12.85	6.04	6.73	23.12	0.573	76.0	0.14		
B3-T2-1	9.67	9.32							
B3-T2-2	10.01	9.72							
B3-T3-1	9.96	9.74							
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	11.70							
B3-T6-2	12.34	11.33	6.51	22.60	0.632	-49.0	0.06	✓	
B3-UIC				24.53					

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	11.07.11 15:35		11.09.11 15:50	11.10.11 16:00	11.11.11 11:00
T-1	11.3	1983346	11.6	2025925	10.1
T-2				294743	2040236
T-3					
T-4					
T-5					
T-6	28.4	5050605	26.3	5118201	27.8
B-3 (Total)			7.48	45460	7.81
CS-MW16-LGR	7.36	28546	11.06	750524	11.01
CS-MW16-CC	11.11	118284			
B3-EXW01	6.574	6168565	6.602	6189114	6.402
B3-EXW02	6.275	4610177	6.244	4632089	6.257
Bag Filter Pressure Reading (Pressure Drop (PB-1) - PB-2) = *Note: If bag filter pressure drop is > or = 10 psi change filter. PB-1 - PB-2 = 291.87 - 81.60 = 210.27 PB-1 - PB-2 = 371.24 - 308.10 = 63.14 PB-1 - PB-2 = 307.40 - 323.10 = -15.70					
Notes:	MW16LGR 292.22		291.87 - 81.60	241.11	288.69
	MW16CC 370.71		371.24	371.62	371.65
	B3EXW01 307.40		308.10	310.20	307.40
	B3EXW02 321.50		323.10	321.90	322.40
	SCADA				

Week 237

Personnel <i>J. Bown, E. Rice</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	11-10-11	1029	14.23	^{14.10} 14.39	20.22	
CS-WB05-LGR-02	182	↓	1028		^{14.15} 14.44	14.35	
CS-WB05-LGR-03A	216		1027		^{14.17} 14.46	14.23	
CS-WB05-LGR-03B	262		1026		^{18.56} 18.13	14.88	
CS-WB05-LGR-04A	277		1025		^{25.11} 24.67	19.06	
CS-WB05-LGR-04B	329		1025		^{47.74} 47.31	41.55	
CS-WB05-BS-01	362		1024		^{62.10} 61.64	56.35	
CS-WB05-CC-01	432		1023		^{92.50} 92.05	58.89	
CS-WB05-CC-02	460		1022		^{104.66} 104.21	71.22	
CS-WB06-UGR-01	20		↓		1058	14.30	^{14.07} 14.34
CS-WB06-LGR-01	93			1057	^{14.12} 14.39		16.69
CS-WB06-LGR-02	174	1056		^{14.16} 14.43	17.96		
CS-WB06-LGR-03A	207	1055		^{14.18} 14.46	20.36		
CS-WB06-LGR-03B	260	1054		^{26.37} 26.38	43.26		
CS-WB06-LGR-04	320	1054		^{52.44} 52.46	40.10		
CS-WB07-UGR-01	14	↓	1041	14.33	^{14.08} 14.35	14.68	
CS-WB07-LGR-01	90		1040		^{14.12} 14.40	27.38	
CS-WB07-LGR-02	175		1039		^{14.16} 14.43	23.73	
CS-WB07-LGR-03A	208		1038		^{14.20} 14.45	14.42	
CS-WB07-LGR-03B	257		1037		^{14.22} 14.49	26.87	
CS-WB07-LGR-04	318		1035		^{24.62} 24.72	40.00	
CS-WB08-UGR-01	38	↓	1109	14.30	^{14.19} 14.36	18.48	
CS-WB08-LGR-01	115		1108		^{14.10} 14.40	19.59	
CS-WB08-LGR-02	193		1107		^{14.14} 14.44	16.90	
CS-WB08-LGR-03A	228		1106		^{14.18} 14.45	14.29	
CS-WB08-LGR-03B	273		1105		^{26.47} 25.38	14.30	
CS-WB08-LGR-04	341		1104		^{56.08} 54.95	41.26	

Bioreactor Monitoring

Personnel: E. Rice, J. Bauch

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
B3-T1-1	12.9	8.49	6.84	23.23	1.364	195	0.33		
B3-T1-2	12.4	8.06	6.91	22.04	0.1054	146.6	0.55		
B3-T1-3	12.85	7.89	6.76	22.80	0.802	147.3	0.24	✓	
B3-T2-1	9.67	9.04							
B3-T2-2	10.01	9.47							
B3-T3-1	9.96	9.07							
B3-T3-2	7.4	DRY							
B3-T4-1	6.32	DRY							
B3-T5-1	9.33	DRY							
B3-T5-2	7.98	7.07							
B3-T6-1	11.45	11.18							
B3-T6-2	12.34	11.24	6.55	24.61	0.867	-49.8	0.11	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	11-14-11 1600	11-15-11 1600	11-16-11 1500	11-17-11 1520	11-18-11 0130
T-1	9.79	2089.84	11.8	2105.49	11.4
T-2	19.7	528.065	17.4	2105.49	11.6
T-3					
T-4					
T-5					
T-6	19.7	528.065	27.1	5317.89	26.2
B-3 (Total)					
CS-MW16-LGR	0	633.54	7.31	91.841	7.42
CS-MW16-CC	11.28	830.786	11.06	840.838	10.95
B3-EXW01	6.973	8237.076	6.603	8246.824	6.502
B3-EXW02	9.286	4684.897	6.152	4695.711	8.11
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					
MW16LGR 272.82 MW16CC 373.04 B3EXW01 311.40 B3EXW02 322.30 SCADA					
PB-1 - PB-2 =					
285.46 371.63 306.20 320.20					
PB-1 - PB-2 =					
290.30 371.89 308.00 321.80					
PB-1 - PB-2 =					
243.50 371.82 308.30 322.20					

Week 237 (238) 238

Personnel J. Brown

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	11-18-11	0930	14.18	14.10 14.24	20.22
CS-WB05-LGR-02	182		0937		14.15 14.30	14.29
CS-WB05-LGR-03A	216		0936		14.17 14.31	14.24
CS-WB05-LGR-03B	262		0935		18.56 17.98	14.36
CS-WB05-LGR-04A	277		0934		25.11 24.50	19.05
CS-WB05-LGR-04B	329		0933		47.74 47.12	41.48
CS-WB05-BS-01	362		0932		62.10 61.47	56.17
CS-WB05-CC-01	432		0931		92.50 91.88	58.84
CS-WB05-CC-02	460	✓	0930		104.66 104.04	71.15
CS-WB06-UGR-01	20		0952	14.19	14.07 14.21	17.53
CS-WB06-LGR-01	93		0950		14.12 14.24	16.56
CS-WB06-LGR-02	174		0948		14.16 14.28	17.81
CS-WB06-LGR-03A	207		0947		14.18 14.31	20.23
CS-WB06-LGR-03B	260		0946		26.37 26.23	43.13
CS-WB06-LGR-04	320	✓	0945		52.44 52.30	40.24
CS-WB07-UGR-01	14		1007	14.18	14.08 14.22	14.61
CS-WB07-LGR-01	90		1004		14.12 14.25	27.66
CS-WB07-LGR-02	175		1003		14.16 14.29 14.35 (circled)	23.59 26.66 (circled)
CS-WB07-LGR-03A	208		1002		14.20 14.31	14.41
CS-WB07-LGR-03B	257		1001		14.22 14.35	26.66
CS-WB07-LGR-04	318	✓	1000		24.62 24.57	40.04
CS-WB08-UGR-01	38		1015	14.19	14.19 14.21	18.31
CS-WB08-LGR-01	115		1014		14.10 14.24	19.40
CS-WB08-LGR-02	193		1013		14.14 14.29	16.90
CS-WB08-LGR-03A	228		1012		14.18 14.31	14.29
CS-WB08-LGR-03B	273		1011		26.47 25.23	14.34
CS-WB08-LGR-04	341	✓	1010		56.08 54.81	41.29

Bioreactor Monitoring

Personnel: J. Bouch

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: 11.21.11 Time: 1400									
B3-T1-1	12.9								
B3-T1-2	12.4								
B3-T1-3	12.85								
B3-T2-1	9.67								
B3-T2-2	10.01								
B3-T3-1	9.96								
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								
B3-T6-2	12.34								
B3-UIC			7.41	23.13	0.617	158.9	5.20		1400

No Sump Data

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	11.21.11 1400	11.22.11	11.23.11 1500	11.24.11	11.25.11
T-1	12.9	19.7349	12.2		
T-2				HAPPY	
T-3					
T-4					
T-5					
T-6	27.2	55.4199			
B-3 (Total)					
CS-MW16-LGR	9.64	138.676	25.5	558.3290	
CS-MW16-CC	10.90	940.533	7.31	154.930	
B3-EXW01	6.5	820.4147	11.01	973.023	
B3-EXW02	8.14	448.025	6.5	832.4074	
			8.16	478.901	

Thanksgiving! OFF

Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 10 psi change filter.

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR 208.38			
MW16CC 341.56	294.43		
B3EXW01 307.50	372.28		
B3EXW02 320.00	307.60		
SCADA	320.30		

Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft BTOD)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99			No Profile Data for week of 11-21-11 to 11-23-11	14.10	
CS-WB05-LGR-02	182				14.15	
CS-WB05-LGR-03A	216				14.17	
CS-WB05-LGR-03B	262				18.56	
CS-WB05-LGR-04A	277				25.11	
CS-WB05-LGR-04B	329				47.74	
CS-WB05-BS-01	362				62.10	
CS-WB05-CC-01	432				92.50	
CS-WB05-CC-02	460				104.66	
CS-WB06-UGR-01	20					14.07
CS-WB06-LGR-01	93				14.12	
CS-WB06-LGR-02	174				14.16	
CS-WB06-LGR-03A	207				14.18	
CS-WB06-LGR-03B	260				26.37	
CS-WB06-LGR-04	320				52.44	
CS-WB07-UGR-01	14				14.08	
CS-WB07-LGR-01	90				14.12	
CS-WB07-LGR-02	175				14.16	
CS-WB07-LGR-03A	208				14.20	
CS-WB07-LGR-03B	257				14.22	
CS-WB07-LGR-04	318				24.62	
CS-WB08-UGR-01	38				14.19	
CS-WB08-LGR-01	115				14.10	
CS-WB08-LGR-02	193				14.14	
CS-WB08-LGR-03A	228				14.18	
CS-WB08-LGR-03B	273				26.47	
CS-WB08-LGR-04	341				56.08	

Bioreactor Monitoring

Personnel: J. Bouch

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: 12.2.11 Time: 1410									
B3-T1-1	12.9	8.38	6.91	22.51	1.321	145.0	0.29	✓	
B3-T1-2	12.4	7.96	6.85	21.98	0.407	107.1	0.36		
B3-T1-3	12.85	7.12	6.68	22.11	0.454	107.1	0.04		
B3-T2-1	9.67	9.07	7.10	24.69	1.315	136.8	1.41		
B3-T2-2	10.01	9.35							
B3-T3-1	9.96	9.19							
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	11.16	6.52	23.78	0.915	140.1	0.30	✓	
B3-T6-2	12.34	11.33							
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time: 11.28.11	10.10	13.10	11.30.11	13.30	12.2.11
T-1	2308.054	10.7	2324.841	2343.788	2349.516
T-2					9.48
T-3					
T-4					
T-5	5746.737	21.1	5785.972	5821.471	5858.975
T-6	24.9				21.8
B-3 (Total)					
CS-MW16-LGR	7.14	20.839	0	209.858	318.508
CS-MW16-CC	10.95	49.636	49.390	63.021	100.699
B3-EXW01	4.57	83.1086	7.11	83.9240	840.326
B3-EXW02	8.34	483.4250	9.14	485.9800	487.3531
*Note: If bag filter pressure drop is > or = 10 psi change filter.					

Notes:	Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) =)	
	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR 291.96	270.79	267.64
MW16CC 372.10	373.44	373.12
B3EXW01 307.10	310.30	310.22
B3EXW02 318.30	323.50	323.22
SCADA		
		New Meter 16LGR
		Flow Rate = 10.03
		12/11 - 4PM

291.57
373.13
307.20
321.90

Personnel: J. Bowler ; C. Beal						
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	12-1-11	1528	14.13	14.10 14.18	20.25
CS-WB05-LGR-02	182		1527		14.15 14.21	14.26
CS-WB05-LGR-03A	216		1526		14.17 14.24	14.29
CS-WB05-LGR-03B	262		1525		18.56 17.88	14.36
CS-WB05-LGR-04A	277		1524		25.11 24.40	19.38
CS-WB05-LGR-04B	329		1523		47.74 47.03	41.93
CS-WB05-BS-01	362		1522		62.10 61.39	56.33
CS-WB05-CC-01	432		1521		92.50 91.78	59.09
CS-WB05-CC-02	460	↓	1520		104.66 103.98	71.44
CS-WB06-UGR-01	20		1602		14.11	14.07 14.13
CS-WB06-LGR-01	93		1601	14.12 14.18		16.54
CS-WB06-LGR-02	174		1600	14.16 14.22		17.70
CS-WB06-LGR-03A	207		1609	14.18 14.22		20.04
CS-WB06-LGR-03B	260		1608	26.37 26.14		42.93
CS-WB06-LGR-04	320	↓	1607	52.44 52.21		40.72
CS-WB07-UGR-01	14		1602	14.13	14.08 14.14	14.59
CS-WB07-LGR-01	90		1601		14.12 14.16	28.42
CS-WB07-LGR-02	175		1600		14.16 14.20	23.51
CS-WB07-LGR-03A	208		1559		14.20 14.25	14.42
CS-WB07-LGR-03B	257		1558		14.22 14.26	26.70
CS-WB07-LGR-04	318	↓	1557		24.62 24.50	40.44
CS-WB08-UGR-01	38		1633	14.12	14.19 14.15	18.28
CS-WB08-LGR-01	115		1632		14.10 14.19	19.56
CS-WB08-LGR-02	193		1631		14.14 14.22	16.92
CS-WB08-LGR-03A	228		1630		14.18 14.23	14.31
CS-WB08-LGR-03B	273		1628		26.47 25.16	14.35
CS-WB08-LGR-04	341	↓	1627		56.08 54.74	41.84

Bioreactor Monitoring

Personnel: CBEAR J. Bonch

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: 12-11-11 Time: 0930									
B3-T1-1	12.9	8.16	6.70	21.73	1.128	149.1	0.16	✓	
B3-T1-2	12.4	7.75	6.81	20.75	0.582	92.8	0.61		
B3-T1-3	12.85	7.53	6.63	20.07	0.744	128.0	0.11		
B3-T2-1	9.67	9.08							
B3-T2-2	10.01	9.12	7.08	22.80	1.297	134.2	1.14		
B3-T3-1	9.96	9.24							
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	11.17							
B3-T6-2	12.34	11.32	6.53	23.53	0.878	-15.9	0.23	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	12/5/11 9:15	12/6/11 13:30	12/7/11 12:15	12/8/11 14:45	12/9/11 9:20
T-1	10.2	244,048	13.6	345,689	13.4
T-2					2473,749
T-3					
T-4					
T-5					
T-6	22.5	594,664	30	602,767	27.4
B-3 (Total)					609,7435
CS-MW16-LGR	0	24,344	10.36	32,154	45,299
CS-MW16-CC	11.28	160,134	10.73	198,924	211,370
B3-EXW01	7.76	843,673	6.15	845,034	846,682
B3-EXW02	8.9	4,918,647	7.8	493,3024	494,4544
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR	219.86	210.39	285.17
MW16CC	372.71	372.61	370.18
B3EXW01	308.50	307.40	307.20
B3EXW02	521.50	316.00	316.60
SCADA			

Personnel		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	12-9-11	0940	14.20	14.10 14.26	20.30
CS-WB05-LGR-02	182	↓	0938		14.15 14.28	14.26
CS-WB05-LGR-03A	216		0937		14.17 14.29 (adj)	14.32
CS-WB05-LGR-03B	262		0936		18.56 17.97	14.39
CS-WB05-LGR-04A	277		0934		25.11 24.49	19.80
CS-WB05-LGR-04B	329		0933		47.74 47.11	42.31
CS-WB05-BS-01	362		0932		62.10 61.49	56.71
CS-WB05-CC-01	432		0931		92.50 91.86	59.66
CS-WB05-CC-02	460		0930		104.66 104.02	71.98
CS-WB06-UGR-01	20		1025		14.17	14.07 14.24
CS-WB06-LGR-01	93		1024	14.12 14.28		16.59
CS-WB06-LGR-02	174	1023	14.16 14.32	17.82		
CS-WB06-LGR-03A	207	1021	14.18 14.33	20.02		
CS-WB06-LGR-03B	260	1020	26.37 26.26	42.92		
CS-WB06-LGR-04	320	1018	52.44 52.34	41.26		
CS-WB07-UGR-01	14	1010	14.19	14.08 14.24		15.12
CS-WB07-LGR-01	90	1009		14.12 14.27	29.87	
CS-WB07-LGR-02	175	1007		14.16 14.31	23.56	
CS-WB07-LGR-03A	208	1006		14.20 14.34	14.51	
CS-WB07-LGR-03B	257	1005		14.22 14.36	27.22	
CS-WB07-LGR-04	318	1003		24.62 24.61	40.87	
CS-WB08-UGR-01	38	1036	14.19	14.19 14.26	19.60	
CS-WB08-LGR-01	115	1035		14.10 14.29	19.61	
CS-WB08-LGR-02	193	1034		14.14 14.31	16.94	
CS-WB08-LGR-03A	228	1033		14.18 14.33	14.43	
CS-WB08-LGR-03B	273	1032		26.47 25.27	14.44	
CS-WB08-LGR-04	341	1031		56.08 44.82	57.34	
					54.84	42.32

Bioreactor Monitoring

Personnel: CS + ELI

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: 12.12.11 Time: 9:39									
B3-T1-1	12.9	8.00	6.88	21.43	1.205	149.7	0.37	✓	
B3-T1-2	12.4	7.59	6.93	21.31	0.653	145.4	1.11	✓	
B3-T1-3	12.85	7.38	6.67	20.92	0.428	141.2	0.16	✓	
B3-T2-1	9.67	8.95							
B3-T2-2	10.01	9.07	7.13	22.52	1.608	141.6	0.20	✓	
B3-T3-1	9.96	9.25							
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	11.15	6.54	21.82	0.754	146.6	1.11	✓	PRAY BE "CAP" WATER
B3-T6-2	12.34	11.37	6.68	23.15	0.992	-17.9	0.14	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings			
	Monday	Tuesday	Wednesday	Thursday
Date/Time:	12/12/11 10:30	12-13-11 09:15	12/14/11 15:00	12/15/11 13:15
T-1	2535209	13.7	2550061	11.9
T-2			Rate (gpm)/Cumulative Total (gal)	2583321
T-3				9.45
T-4				12
T-5				
T-6	6227833	27.4	6303344	22
B-3 (Total)				6334755
CS-MW16-LGR	70781			93274
CS-MW16-CC	271963	11.22	306701	11.22
B3-EXW01	0504967	6.10	852566	7.15
B3-EXW02	5004892	7.82	503693	9.05
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: if bag filter pressure drop is > or = 10 psi change filter.				
PB-1 - PB-2 =				
PB-1 - PB-2 =				

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR	285.72	281.01	270.12
MW16CC	369.66	370.94	368.77
B3EXW01	306.80	306.90	305.20
B3EXW02	316.40	320.40	309.20
SCADA			323.50

Personnel		C. Beal, E. 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	12/13/11	0934	14.18	^{14.10} 14.26	20.31
CS-WB05-LGR-02	182		0933		^{14.15} 14.30	14.28
CS-WB05-LGR-03A	216		0932		^{14.17} 14.31	14.34
CS-WB05-LGR-03B	262		0931		^{18.56} 17.93	14.36
CS-WB05-LGR-04A	277		0930		^{25.11} 24.47	19.95
CS-WB05-LGR-04B	329		0929		^{47.74} 47.09	42.47
CS-WB05-BS-01	362		0928		^{62.10} 61.41	56.85
CS-WB05-CC-01	432		0926		^{92.50} 91.83	60.01
CS-WB05-CC-02	460	↓	0924		^{104.66} 103.99	72.34
CS-WB06-UGR-01	20	12/13/11	1014	14.19	^{14.07} 14.22	17.55
CS-WB06-LGR-01	93		1013		^{14.12} 14.26	16.57
CS-WB06-LGR-02	174		1012		^{14.16} 14.29	17.83
CS-WB06-LGR-03A	207		1011		^{14.18} 14.31	20.01
CS-WB06-LGR-03B	260		1009		^{26.37} 26.27	42.90
CS-WB06-LGR-04	320	↓	1008		^{52.44} 52.30	41.46
CS-WB07-UGR-01	14	12/13/11	0957	14.19	^{14.08} 14.21	14.66
CS-WB07-LGR-01	90		0956		^{14.12} 14.25	30.54
CS-WB07-LGR-02	175		0955		^{14.16} 14.31	23.58
CS-WB07-LGR-03A	208		0953		^{14.20} 14.33	14.62
CS-WB07-LGR-03B	257		0952		^{14.22} 14.34	27.83
CS-WB07-LGR-04	318	↓	0951		^{24.62} 24.60	41.04
CS-WB08-UGR-01	38	12/13/11		14.18	^{14.19} 14.21	18.46
CS-WB08-LGR-01	115				^{14.10} 14.26	19.62
CS-WB08-LGR-02	193				^{14.14} 14.29	16.97
CS-WB08-LGR-03A	228				^{14.18} 14.32	14.35
CS-WB08-LGR-03B	273				^{26.47} 25.25	14.36
CS-WB08-LGR-04	341	↓		^{56.08} 56.81	42.44	

Bioreactor Monitoring

Personnel: J. Boush, C. Beal

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: 12/10/11 Time: 10:15									
B3-T1-1	12.9	7.61	6.85	21.40	0.678	140.90	0.24	✓	
B3-T1-2	12.4	7.20	6.92	21.42	0.404	142.9	0.60	✓	
B3-T1-3	12.85	7.06	6.79	20.07	0.477	137.3	0.26		
B3-T2-1	9.67	8.97	6.90	21.78	1.385	145.3	2.98		
B3-T2-2	10.01	8.94	7.05	21.74	1.078	145.1	0.29		
B3-T3-1	9.96	9.29							
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	11.17		23.36	0.630	-4.1	0.29	✓	
B3-T6-2	12.34	11.39	6.60	21.94	0.400	146	6.77	✓	
B3-UIC			7.44						12/19/11 @ 13:0

B-3 Transfer System Monitoring

Meter	Flow Meters Readings			
	Monday	Tuesday	Wednesday	Thursday
Date/Time:	12/19/11 13:45	12/20/11 10:20	12/21/11 11:40	12/22/11 12:11
T-1	7648.416	2662063	9.8	2695577
T-2				9.15
T-3				
T-4				
T-5				
T-6	6774.46	28.0	6540.401	28.1
B-3 (Total)				6408357
CS-MW16-LGR	12510	0.0	137869	10.8
CS-MW16-CC	38567	11.28	415354	10.79
B3-EXW01	8573471	6.17	8591931	6.26
B3-EXW02	5098559	7.9	516036	8.12
*Note: if bag filter pressure drop is > or = 10 psi change filter.				
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2))				
PB-1 - PB-2 =				
PB-1 - PB-2 =				
PB-1 - PB-2 =				

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
T-1	2648.416	2662063	9.8	2695577	2710281
T-2					9.40
T-3					
T-4					
T-5					
T-6	6774.46	28.0	6540.401	28.1	6408357
B-3 (Total)					152607
CS-MW16-LGR	12510	0.0	137869	10.8	152607
CS-MW16-CC	38567	11.28	415354	10.79	446136
B3-EXW01	8573471	6.17	8591931	6.26	8610782
B3-EXW02	5098559	7.9	516036	8.12	5140076
*Note: if bag filter pressure drop is > or = 10 psi change filter.					
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2))					
PB-1 - PB-2 =					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes: MW16LGR 210.24
 MW16CC 369.91
 B3EXW01 301.80
 B3EXW02 362.10
 SCADA 362.10

280.31
 367.84
 306.30
 316.90

274.76
 349.42
 306.20
 319.80

292.32
 349.45
 305.40
 318.40

Week 242-243

Personnel: J. Bouch, C. Beal						
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	12/20/11	1427	14.05	14.10 14.12	20.26
CS-WB05-LGR-02	182		1426		14.15 14.16	14.17
CS-WB05-LGR-03A	216		1425		14.17 14.19	14.24
CS-WB05-LGR-03B	262		1424		18.56 17.76	14.27
CS-WB05-LGR-04A	277		1423		25.11 24.30	20.40
CS-WB05-LGR-04B	329		1422		47.74 46.92	42.90
CS-WB05-BS-01	362		1421		62.10 61.27	57.24
CS-WB05-CC-01	432		1420		92.50 91.67	60.62
CS-WB05-CC-02	460	✓	1419		104.66 103.83	72.94
CS-WB06-UGR-01	20		1454	14.09	14.07 14.09	17.50
CS-WB06-LGR-01	93		1456		14.12 14.14	16.48
CS-WB06-LGR-02	174	1455	1455		14.16 14.18	17.83
CS-WB06-LGR-03A	207		1454		14.18 14.21	19.96
CS-WB06-LGR-03B	260		1453		26.37 24.11	42.86
CS-WB06-LGR-04	320	✓	1452		52.44 52.15	42.20
CS-WB07-UGR-01	14		1441	14.06	14.08 14.10	14.61
CS-WB07-LGR-01	90		1440		14.12 14.13	31.37
CS-WB07-LGR-02	175		1439		14.16 14.18	23.93
CS-WB07-LGR-03A	208		1438		14.20 14.21	14.65
CS-WB07-LGR-03B	257	✓	1437		14.22 14.23	28.06
CS-WB07-LGR-04	318		1436		24.62 24.45	41.55
CS-WB08-UGR-01	38		1510	14.07	14.19 14.11	18.62
CS-WB08-LGR-01	115		1509		14.10 14.13	19.58
CS-WB08-LGR-02	193		1508		14.14 14.17	16.95
CS-WB08-LGR-03A	228		1507		14.18 14.21	14.24
CS-WB08-LGR-03B	273	✓	1506		26.47 25.11	14.27
CS-WB08-LGR-04	341		1505		56.08 54.68	43.15

Bioreactor Monitoring

Personnel: *Bouch, C. Beal*

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: 12.27.11 Time: 11:00									
B3-T1-1	12.9	7.71	6.95	20.91	1.015	57.2	0.30	✓	
B3-T1-2	12.4	6.64	6.96	20.60	0.615	79.2	0.48		
B3-T1-3	12.85	6.75	6.91	18.98	0.675	112.4	0.07		
B3-T2-1	9.67	8.48	7.31	20.40	2.080	112.5	4.20		
B3-T2-2	10.01	8.90	7.15	20.71	1.709	123.4	1.24		
B3-T3-1	9.96	9.19		18.39					
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	11.00							
B3-T6-2	12.34	11.28	6.63	22.75	1.038	4.1	0.52	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	12.24.11	12.25.11	12.26.11	12.27.11	12.30.11
T-1	9.89	277.349	0.1	278.747	10.1
T-2					
T-3					
T-4					
T-5					
T-6		215	674.570	23.0	681.762
B-3 (Total)					
CS-MW16-LGR		1748.09	1748.09*	OFF	
CS-MW16-CC		11.27	510.277	11.78	545.453
B3-EXW01		7.40	865.140	3.40	867.438
B3-EXW02		0.64	519.342	9.56	522.347
Rate (gpm) / Cumulative Total (gal)					
*Note: if bag filter pressure drop is > 10 = 10 psi change filter.					

Notes:	Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) =	
	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR	257.90	258.13
MW16CC	348.38	347.53
B3EXW01	300.70	301.40
B3EXW02	310.90	312.30
SCADA		

Week 24/2011
 2011 11/26/2011
 150-off

Personnel <i>J. Bouch, C. Beal</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	12-27-11	1418	14.19	14.10 14.26	20.31
CS-WB05-LGR-02	182		1417		14.15 14.29	14.30
CS-WB05-LGR-03A	216		1416		14.17 14.32 ²⁹ ₁₀₀₅	14.40
CS-WB05-LGR-03B	262		1415		18.56 17.87	15.09
CS-WB05-LGR-04A	277		1414		25.11 24.41	23.85
CS-WB05-LGR-04B	329		1413		47.74 47.03	46.35
CS-WB05-BS-01	362		1412		62.10 61.37	59.80
CS-WB05-CC-01	432		1411		92.50 91.78	61.27
CS-WB05-CC-02	460		1410		104.66 103.93	73.60
CS-WB06-UGR-01	20		12-27-11		1447	14.17
CS-WB06-LGR-01	93	1446		14.12 14.25	16.58	
CS-WB06-LGR-02	174	1445		14.16 14.28	17.92	
CS-WB06-LGR-03A	207	1444		14.18 14.31	20.08	
CS-WB06-LGR-03B	260	1444		26.37 26.22	42.98	
CS-WB06-LGR-04	320	1443		52.44 52.26	45.80	
CS-WB07-UGR-01	14	12-27-11		1434	14.18	
CS-WB07-LGR-01	90		1433	14.12 14.24		33.65
CS-WB07-LGR-02	175		1432	14.16 14.29		24.26
CS-WB07-LGR-03A	208		1431	14.20 14.31		15.34
CS-WB07-LGR-03B	257		1430	14.22 14.34		30.90
CS-WB07-LGR-04	318		1429	24.62 24.58		44.69
CS-WB08-UGR-01	38		12-27-11	1500		1418
CS-WB08-LGR-01	115	1459		14.10 14.26	19.59	
CS-WB08-LGR-02	193	1458		14.14 14.30	16.90	
CS-WB08-LGR-03A	228	1457		14.18 14.32 ²⁹ ₁₀₀₅	14.31	
CS-WB08-LGR-03B	273	1456		26.47 25.22	16.94	
CS-WB08-LGR-04	341	1455		56.08 54.80	46.76	

Bioreactor Monitoring

Personnel: E. Rice, J. Bauld, 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: 1-5-12		Time: 0845							
B3-T1-1	12.9	7.86	6.99	20.72	1.047	129.7	0.33	✓	
B3-T1-2	12.4	7.50	6.90	21.38	0.651	134.9	0.89		
B3-T1-3	12.85	7.39	6.86	18.21	0.675	139.3	0.17		
B3-T2-1	9.67	9.08		20.52	1.846	146.0	1.08		
B3-T2-2	10.01	9.22	7.06						
B3-T3-1	9.96	9.26							
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	11.20		22.66	1.086	125.5	0.76	✓	
B3-T6-2	12.34	11.56	6.61						
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	1-3-12 0900	1-4-12 1025	1-5-12 0830	1-6-12 1320	
T-1	2872070 10.0	2887335 10.0	2900504 10.1	2959224 10.8	2914504 10.8
T-2					
T-3					
T-4					
T-5	6955124 22.5	6965970 22.7	7014319 20.3	7038319 21.8	7132444 21.8
T-6	6955124 22.5	6965970 22.7	7014319 20.3	7038319 21.8	7132444 21.8
B-3 (Total)					
CS-MW16-LGR	174809 0	174809 0	off - STOP electric panel	OFF 1670 547	
CS-MW16-CC	22408 11.22	631462 11.28	654342 11.28	721055 11.3	721055 11.3
B3-EXW01	8725348 7.26	8730297 7.28	8745396 7.32	8750463 7.25	8750463 7.25
B3-EXW02	5287864 4.21	5301597 4.13	531674 9.15	5329197 8.95	5329197 8.95
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) = *Note: if bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR 260.13		
MW16CC 306.75	Quick trends looks good	306.51
B3EXW01 305.50		309.10
B3EXW02 320.50		324.60
SCADA		

Cell No: 14 DST 32 A

Siemens 48ASE3M10 (bottom)

Week: 24/215

END

Personnel		J. Bonch, E. 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	1-3-12	1318	14.31	14.10 14.37	20.34
CS-WB05-LGR-02	182		1317		14.15 14.40	14.42
CS-WB05-LGR-03A	216		1316		14.17 14.43	14.45
CS-WB05-LGR-03B	262		1315		18.56 17.94	16.36
CS-WB05-LGR-04A	277		1314		25.11 24.49	22.67
CS-WB05-LGR-04B	329		1313		47.74 47.10	45.09
CS-WB05-BS-01	362		1312		62.10 61.46	59.54
CS-WB05-CC-01	432		1311		92.50 91.85	62.13
CS-WB05-CC-02	460		1310		104.66 104.02	74.46
CS-WB06-UGR-01	20		↓		1357	14.30
CS-WB06-LGR-01	93	1356		14.12 14.36	16.71	
CS-WB06-LGR-02	174	1355		14.16 14.41	17.95	
CS-WB06-LGR-03A	207	1354		14.18 14.42	20.09	
CS-WB06-LGR-03B	260	1353		26.37 26.30	42.99	
CS-WB06-LGR-04	320	1352		52.44 52.35	43.80	
CS-WB07-UGR-01	14	↓	1333	14.29	14.08 14.34	14.68
CS-WB07-LGR-01	90		1332		14.12 14.38	33.56
CS-WB07-LGR-02	175		1331		14.16 14.41	24.35
CS-WB07-LGR-03A	208		1330		14.20 14.43	14.60
CS-WB07-LGR-03B	257		1329		14.22 14.45	30.25
CS-WB07-LGR-04	318		1328		24.62 24.67	43.39
CS-WB08-UGR-01	38	↓	1333 ⁽¹⁰⁾ 1410	14.29 14.30 (10.2)	14.19 14.32	18.79
CS-WB08-LGR-01	115		1331 ⁽¹⁰⁾ 1409		14.10 14.36	19.58
CS-WB08-LGR-02	193		1331 ⁽¹⁰⁾ 1408		14.14 14.39	16.86
CS-WB08-LGR-03A	228		1330 ⁽¹⁰⁾ 1407		14.18 14.40	14.20
CS-WB08-LGR-03B	273		1329 ⁽¹⁰⁾ 1406		26.47 25.32 26.30 31	15.53 42.99
CS-WB08-LGR-04	341		1405 1328 ⁽¹⁰⁾		56.08 52.35	43.80

Week 244/245

54.88 44.94

Bioreactor Monitoring

Personnel: J. Bouch, C. 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 (Y)	Notes
Date: <u>1.13.12</u> Time: <u>1233</u>									
B3-T1-1	12.9	8.36	7.0	21.19	0.914	114.8	0.39	✓	
B3-T1-2	12.4	7.95	6.91	20.39	0.607	100.8	0.80		
B3-T1-3	12.85	7.82	6.92	18.61	0.431	113.4	0.28		
B3-T2-1	9.67	9.17							
B3-T2-2	10.01	9.45	7.15	19.87	1.681	125.6	3.34	✓	
B3-T3-1	9.96	9.32							
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	11.18						✓	
B3-T6-2	12.34	11.60	6.60	22.83	0.974	120.6	1.28	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	1.9.11 10:30	1.10.11 14:00	1.11.12 15:05	1.12.12	1.13.12 12:46
T-1	3.14	2959304	10.6	2975683	10.9
T-2				2990681	3004329
T-3					
T-4					
T-5					
T-6	14.4	7135418	21.3	7197299	21.4
B-3 (Total)					7223932
CS-MW16-LGR	OFF	OFF	OFF	OFF	OFF
CS-MW16-CC	11.9	7210401	11.28	756500	772.034
B3-EXW01	7.23	878.855	7.2	8811684	8821663
B3-EXW02	8.1	5316786	9.2	5387394	5397030
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) = *Note: if bag filter pressure drop is > 10 psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Notes:	MW16LGR 241.47	261.46	246.36	261.89	261.89
	MW16CC 347.07	366.10	365.88	366.06	366.06
	B3EXW01 309.50	308.60	307.70	308.80	308.80
	B3EXW02 290.10	314.40	323.70	321.08	321.08
	SCADA OK	OK	OK	OK	OK

Week: 27 246

Personnel J. Bouch & E. 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	1-13-12 #13	1133	14.25	14.10 14.30	20.21	
CS-WB05-LGR-02	182	↓	1132		14.15 14.33	14.30	
CS-WB05-LGR-03A	216		14.17 14.37		14.25		
CS-WB05-LGR-03B	262		18.56 17.80		16.12		
CS-WB05-LGR-04A	277		25.11 24.41		21.60		
CS-WB05-LGR-04B	329		47.74 47.01		43.97		
CS-WB05-BS-01	362		62.10 61.37		58.59		
CS-WB05-CC-01	432		92.50 91.78		62.38		
CS-WB05-CC-02	460		104.66 103.93		74.72		
CS-WB06-UGR-01	20		↓		1205	14.22	14.07 14.24
CS-WB06-LGR-01	93			1204	14.12 14.30		16.63
CS-WB06-LGR-02	174	1203		14.16 14.35	17.99		
CS-WB06-LGR-03A	207	1202		14.18 14.37	20.03		
CS-WB06-LGR-03B	260	1201		26.37 26.24	42.92		
CS-WB06-LGR-04	320	1200		52.44 52.29	42.63		
CS-WB07-UGR-01	14	↓		1149	14.24		14.08 14.21
CS-WB07-LGR-01	90		1148	14.12 14.30		32.44	
CS-WB07-LGR-02	175		1147	14.16 14.34		24.22	
CS-WB07-LGR-03A	208		1146	14.20 14.35		14.45	
CS-WB07-LGR-03B	257		1145	14.22 14.40		29.60	
CS-WB07-LGR-04	318		1144	24.62 24.61		42.30	
CS-WB08-UGR-01	38		↓	1221		14.21	14.19 14.26
CS-WB08-LGR-01	115	1221		14.10 14.31	19.49		
CS-WB08-LGR-02	193	1220		14.14 14.35	16.81		
CS-WB08-LGR-03A	228	1219		14.18 14.38	14.30		
CS-WB08-LGR-03B	273	1218		26.47 25.24	14.31		
CS-WB08-LGR-04	341	1217		56.08 54.81	43.60		

Bioreactor Monitoring

Personnel: E. Rice, J. Bouch

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: 1-18-12 Time: 1310									
B3-T1-1	12.9	8.44	6.94	21.12	0.956	121.8	0.34	✓	① 1310
B3-T1-2	12.4	8.05	6.94	20.95	0.667	114.2	0.87	✓	② 1355
B3-T1-3	12.85	7.90	6.64	18.62	0.718	51.8	0.08	✓	③ 1410
B3-T2-1	9.67	9.20							
B3-T2-2	10.01	9.55							
B3-T3-1	9.96	9.35	7.11	23.06	1.219	111.5	4.76		
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	11.18		22.97	1.042	109.7	0.77	✓	④ 1430
B3-T6-2	12.34	11.64	6.49	22.97	6.631	106.9	5.29	✓	⑤ 1420
B3-UIC			7.31						⑥ 1440

B-3 Transfer System Monitoring

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	1-16-12	1-17-12	1-18-12	1-19-12	1-20-12
T-1		8.55	8.55		
T-2		12.35	5445.64		
T-3		307.641	9.34	3094.76	2.46
T-4					
T-5					
T-6		21.2	7359.98	13.1	7415.80
B-3 (Total)					
CS-MW16-LGR	CFF	CFF	CFF	CFF	CFF
CS-MW16-CC		11.28	8508.47	11.33	8831.20
B3-EXW01		7.07	827.244	7.03	8894.340
B3-EXW02		9.55	5445.64	6.99	5456.782
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) = *Note: If bag filter pressure drop is > or = 10psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Notes:					
MW16LGR					
MW16CC					
B3EXW01					
B3EXW02					
SCADA					
	261.97	262.10	262.02	262.00	
	366.33	366.07	366.24	345.91	
	309.30	309.40	310.80	309.60	
	319.10	324.60	304.30	323.00	
	0K	OK			

Week 440 247

Personnel: J. Bouch; E. 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	1-19-12	0945	14.11	14.10 14.17	20.25
CS-WB05-LGR-02	182		0944		14.15 14.19	14.21
CS-WB05-LGR-03A	216		0943		14.17 14.24	14.29
CS-WB05-LGR-03B	262		0942		18.56 17.71	15.97
CS-WB05-LGR-04A	277		0941		25.11 24.24	21.35
CS-WB05-LGR-04B	329		0940		47.74 46.85	43.75
CS-WB05-BS-01	362		0939		62.70 61.21	58.33
CS-WB05-CC-01	432		0938		92.50 91.61	62.43
CS-WB05-CC-02	460		0937		104.66 103.77	74.77
CS-WB06-UGR-01	20		1-19-12		1107	14.10
CS-WB06-LGR-01	93	1106		14.12 14.15	16.51	
CS-WB06-LGR-02	174	1105		14.16 14.22	18.08	
CS-WB06-LGR-03A	207	1104		14.18 14.23	20.06	
CS-WB06-LGR-03B	260	1103		26.37 24.15	42.95	
CS-WB06-LGR-04	320	1102		52.44 52.20	42.32	
CS-WB07-UGR-01	14	1-19-12	1034	14.10	14.08 14.12	14.38
CS-WB07-LGR-01	90		1033		14.12 14.17	31.89
CS-WB07-LGR-02	175		1032		14.16 14.22	24.20
CS-WB07-LGR-03A	208		1031		14.20 14.23	14.39
CS-WB07-LGR-03B	257		1030		14.22 14.27	29.46
CS-WB07-LGR-04	318		1029		24.62 24.51	42.06
CS-WB08-UGR-01	38	1-19-12	1139	14.08	14.19 14.12	18.30
CS-WB08-LGR-01	115		1138		14.10 14.15	19.51
CS-WB08-LGR-02	193		1137		14.14 14.19	16.77
CS-WB08-LGR-03A	228		1136		14.18 14.21	14.25
CS-WB08-LGR-03B	273		1135		26.47 25.13	14.26
CS-WB08-LGR-04	341		1134		56.08 54.71	43.32

ATM 14.10
17.65/
15.96
100% Sample

ATM: 14.11
27.53/42.95
118 sample time

ATM 14.10
14.23/29.45
1040 sample time

ATM 14.08
26.54/14.34

Bioreactor Monitoring

Trench Sumps Water Levels ('BTOC)										
Meter	Monday	Tuesday	Wednesday	Thursday	Friday					
Date/Time	1.23.17	1.24.17	1.25.17	1.26.17	1.27.17	1100				
T-1	12.5	317.838	10.2	319.204	12.2	321.2405	12.2	323.0197	14.3	324.7837
T-2										
T-3										
T-4										
T-5										
T-6	22.7	753.2445	14.1	755.6780	23.8	757.1149	23.1	762.3182	24.9	765.5663
B-3 (Total)										
CS-MW16-LGR	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CS-MW16-CC	11.20	951.772	11.49	965.108	11.28	984.683	11.22	990	11.26	17094
B3-EXW01	7.05	893.6914	7.69	894.5827	7.18	895.8378	7.23	896.8784	7.24	897.9195
B3-EXW02	9.5	550.6298	8	551.9515	9.12	552.6852	9.32	554.0176	9.40	555.3601
PB-1 - PB-2 =						PB-1 - PB-2 =				
Notes:	MW16LGR 242.31	242.23	241.32	240.31	239.52					
	MW16CC 345.76	346.78	345.90	345.86	345.89					
	B3EXW01 310.40	311.70	308.90	306.30	305.20					
	B3EXW02 318.21	293.10	323.40	318.00	314.50					
	SCADA OK	OK								

B-3 Transfer System Monitoring										
Meter	Monday	Tuesday	Wednesday	Thursday	Friday					
Date/Time	1.23.17	1.24.17	1.25.17	1.26.17	1.27.17	1100				
T-1	12.5	317.838	10.2	319.204	12.2	321.2405	12.2	323.0197	14.3	324.7837
T-2										
T-3										
T-4										
T-5										
T-6	22.7	753.2445	14.1	755.6780	23.8	757.1149	23.1	762.3182	24.9	765.5663
B-3 (Total)										
CS-MW16-LGR	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CS-MW16-CC	11.20	951.772	11.49	965.108	11.28	984.683	11.22	990	11.26	17094
B3-EXW01	7.05	893.6914	7.69	894.5827	7.18	895.8378	7.23	896.8784	7.24	897.9195
B3-EXW02	9.5	550.6298	8	551.9515	9.12	552.6852	9.32	554.0176	9.40	555.3601
PB-1 - PB-2 =						PB-1 - PB-2 =				

Week 249

Personnel					
Weekly Water Level Monitoring					
CS-WB05-LGR-01	99				14.10
CS-WB05-LGR-02	182				14.15
CS-WB05-LGR-03A	216				14.17
CS-WB05-LGR-03B	262				18.56
CS-WB05-LGR-04A	277				25.11
CS-WB05-LGR-04B	329				47.74
CS-WB05-BS-01	362	Did not Profile week ending 1/27/12			62.10
CS-WB05-CC-01	432				92.50
CS-WB05-CC-02	460				104.66
CS-WB06-UGR-01	20				14.07
CS-WB06-LGR-01	93				14.12
CS-WB06-LGR-02	174				14.16
CS-WB06-LGR-03A	207				14.18
CS-WB06-LGR-03B	260				26.37
CS-WB06-LGR-04	320				52.44
CS-WB07-UGR-01	14				14.08
CS-WB07-LGR-01	90				14.12
CS-WB07-LGR-02	175				14.16
CS-WB07-LGR-03A	208				14.20
CS-WB07-LGR-03B	257				14.22
CS-WB07-LGR-04	318				24.62
CS-WB08-UGR-01	38				14.19
CS-WB08-LGR-01	115				14.10
CS-WB08-LGR-02	193				14.14
CS-WB08-LGR-03A	228				14.18
CS-WB08-LGR-03B	273				26.47
CS-WB08-LGR-04	341				56.08

Bioreactor Monitoring

Personnel: <u>Ellis</u>		Trench Sumps Water Levels ("BTOC")						
Date:	Time:	0830						
B3-T1-1	12.9	7.97	6.98	21.60	0.987	206.3	0.20	
B3-T1-2	12.4	7.60	6.97	22.15	0.616	195.1	0.40	
B3-T1-3	12.85	7.54	6.74	19.29	0.756	-30.7	6.17	
B3-T2-1	9.67	8.99 9.10						
B3-T2-2	10.01	9.25	7.04	20.43	1.411	204.9	2.31	
B3-T3-1	9.96	9.20						
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	11.29						
B3-T6-2	12.34	11.58	6.49	22.69	1.141	-67.0	0.45	
B3-UIC								

B-3 Transfer System Monitoring						
Meter Date/Time:	Monday	Tuesday	Wednesday	Thursday	Friday	
T-1	12.5	330143	12.5	3333587	12.7	3350377 13.0
T-2						
T-3						
T-4						
T-5						
T-6	25.1	3755197	24.9	7814609	25.1	7846343 25.6
B-3 (Total)						7889423
CS-MW16-LGR						
CS-MW16-CC	11.22	65787	11.28	90596	11.28	109690 11.28
B3-EXW01	7.27	901042	7.24	9029224	7.26	9038956 7.23
B3-EXW02	9.40	559406	9.40	5618456	9.37	563033 9.24
						5647879
						OFF
						11.28
						7.23
						9.24
						5.647879

	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
Notes:	MW16LGR	Quick trends look good,	259.49
	MW16CC	all wells running	365.42
	B3EXW01	constantly except 16-LGR	307.70
	B3EXW02		317.80
	SCADA		

Personnel		E. Rice, K. Rice				
Weekly Water Level Monitoring						
CS-WB05-LGR-01	99	2-2-12	1448	14.07	^{14.10} 14.10	14.23 ^{EX} 20.23
CS-WB05-LGR-02	182		1447		^{14.16} 14.16	14.20
CS-WB05-LGR-03A	216		1446		^{14.17} 14.19	14.29
CS-WB05-LGR-03B	262		1445		^{18.56} 17.62	16.32
CS-WB05-LGR-04A	277		1444		^{25.11} 24.14	22.81
CS-WB05-LGR-04B	329		1443		^{47.78} 46.78	45.26
CS-WB05-BS-01	362		1442		^{62.10} 61.12	59.55
CS-WB05-CC-01	432		1440		^{92.50} 91.52	62.61
CS-WB05-CC-02	460	↓	1437		^{104.66} 101.07	^{ER} 150.61 ^{ER}
CS-WB06-UGR-01	20	2-2-12	1525	14.08	^{14.07} 14.08	17.22
CS-WB06-LGR-01	93		1524		^{14.12} 14.12	16.51
CS-WB06-LGR-02	174		1523		^{14.16} 14.17	21.95
CS-WB06-LGR-03A	207		1522		^{14.18} 14.20	21.82
CS-WB06-LGR-03B	260		1520		^{26.37} 26.06	44.72
CS-WB06-LGR-04	320	↓	1519		^{52.44} 52.10	44.40
CS-WB07-UGR-01	14	2-2-12	1508	14.09	^{14.08} 14.07	14.46
CS-WB07-LGR-01	90		1507		^{14.12} 14.11	32.47
CS-WB07-LGR-02	175		1506		^{14.16} 14.16	24.78
CS-WB07-LGR-03A	208		1504		^{14.20} 14.20	14.84
CS-WB07-LGR-03B	257		1503		^{14.22} 14.22	31.27
CS-WB07-LGR-04	318	↓	1500		^{24.62} 24.42	43.68
CS-WB08-UGR-01	38	2-2-12	1540	14.07	^{14.19} 14.08	18.50
CS-WB08-LGR-01	115		1539		^{14.10} 14.14	19.45
CS-WB08-LGR-02	193		1538		^{14.14} 14.17	20.41
CS-WB08-LGR-03A	228		1537		^{14.18} 14.19	14.26
CS-WB08-LGR-03B	273		1536		^{26.47} 25.03	15.71
CS-WB08-LGR-04	341	↓	1534		^{56.08} 54.61	45.33

103.69 | 74.9A

Bioreactor Monitoring

Personnel: E. Rice, Elliott

Trench Sumps Water Levels (BTOC)

Sump ID	Sump Depth (ft)	Water Level (ft)	Water Level (ft)	Water Level (ft)	Water Level (ft)	Water Level (ft)	Notes
Date: 2.18.12 Time: 0830							
B3-T1-1	12.9	7.91	6.90	21.45	0.918	102.4	0.23
B3-T1-2	12.4	7.54	6.97	21.35	0.638	164	0.00 0.57 ✓
B3-T1-3	12.85	7.48	6.75	19.43	0.795	51.1	0.35
B3-T2-1	9.67	7.08					
B3-T2-2	10.01	9.17	7.01	20.14	1.474	141.7	1.74
B3-T3-1	9.96	9.19					
B3-T3-2	7.4	dry					
B3-T4-1	6.32	dry					
B3-T5-1	9.33	dry					
B3-T5-2	7.98	7.86					
B3-T6-1	11.45	11.28					
B3-T6-2	12.34	11.11	6.50	21.95	1.277	-69.3	0.48 ✓
B3-UIC							

← tried to take readings but could tell probe was not fully submerged

B-3 Transfer System Monitoring

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	2-6-12	2-7-12	2-8-12	2-9-12	2-10-12
T-1	3421503	12.9	1445.284	13.2	3481417
T-2			3443667		
T-3					
T-4					
T-5					
T-6	7992158	25.2	8055612	25.5	8135809
B-3 (Total)					
CS-MW16-LGR	off	174.809	off	off	
CS-MW16-CC	11.28	176.121	11.24	11.28	244044
B3-EXW01	7.30	9082907	7.29	9101762	9125310
B3-EXW02	9.25	8687207	9.34	5311301	5741663

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR	259.71	259.32	258.84
MW16CC	365.64	365.58	365.52
B3EXW01	306.30	305.40	304.50
B3EXW02	318.80	317.20	316.50
SCADA			

Week 251

Personnel		J Bouch, E Rice						
Weekly Water Level Monitoring								
CS-WB05-LGR-01	99	2.9.12	1026	14.21	14.10	14.28	20.28	
CS-WB05-LGR-02	182	↓	1025		14.15	14.33	14.34	
CS-WB05-LGR-03A	216		1024		14.17	14.36	14.35	
CS-WB05-LGR-03B	262		1023		17.77	14.36	14.35	16.71
CS-WB05-LGR-04A	277		1022		25.11	24.30	23.13	
CS-WB05-LGR-04B	329		1021		47.74	46.92	45.60	
CS-WB05-BS-01	362		1020		62.10	61.27	59.82	
CS-WB05-CC-01	432		1019		92.50	91.67	62.90	
CS-WB05-CC-02	460		1018		104.66	103.82	75.23	
CS-WB06-UGR-01	20		↓	0949	14.23	14.07	14.27	17.47
CS-WB06-LGR-01	93	0948		14.12		14.31	16.64	
CS-WB06-LGR-02	174	0947		14.16		14.35	22.19	
CS-WB06-LGR-03A	207	0946		14.18		14.37	22.05	
CS-WB06-LGR-03B	260	0945		26.37		26.20	44.93	
CS-WB06-LGR-04	320	0944		52.44		52.25	45.05	
CS-WB07-UGR-01	14	↓	1007	14.25	14.08	14.27	14.62	
CS-WB07-LGR-01	90		1006		14.12	14.30	33.54	
CS-WB07-LGR-02	175		1005		14.16	14.35	24.92	
CS-WB07-LGR-03A	208		1004		14.20	14.37	14.95	
CS-WB07-LGR-03B	257		1003		14.22	14.38	31.60	
CS-WB07-LGR-04	318		1000		24.62	24.59	44.09	
CS-WB08-UGR-01	38	↓	1051	14.22	14.19	14.26	18.85	
CS-WB08-LGR-01	115		1050		14.10	14.30	19.50	
CS-WB08-LGR-02	193		1048		14.14	14.33	21.22	
CS-WB08-LGR-03A	228		1047		14.18	14.38	14.36	
CS-WB08-LGR-03B	273		1046		26.47	25.21	16.02	
CS-WB08-LGR-04	341		1044		56.08	54.78	45.89	

Bioreactor Monitoring

Personnel: E. Rise, Elliott

Trench Sumps Water Levels ("BTOC")

Sump ID	Sump Depth (BTOC)	Time	0830	0900	0930	1000	1030	1100	1130	1200
B3-T1-1	12.9	7.09	21.16	0.465	135.6	0.49				
B3-T1-2	12.4	7.02	21.74	0.639	135.8	0.67				
B3-T1-3	12.85	7.57	19.63	0.862	139.4	0.35				
B3-T2-1	9.67	9.13								
B3-T2-2	10.01	9.36	20.04	1.509	145.2	2.64				
B3-T3-1	9.96	9.24								
B3-T3-2	7.4	dn								
B3-T4-1	6.32	dn								
B3-T5-1	9.33	dn								
B3-T5-2	7.98	7.94								
B3-T6-1	11.45	11.28								
B3-T6-2	12.34	11.18	22.11	1.254	-59.8	0.54				
B3-UIC										

B-3 Transfer System Monitoring

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time	2-13-12 1055	2-14-12 1105	2-15-12 1330	2-16-12 0820	2-17-12 1111
T-1	13.5	13.8	3576622	14.5	3598369
T-2					
T-3					
T-4					
T-5					
T-6	26.1	25.5	8274678	26.8	8313957
B-3 (Total)					
CS-MW16-LGR	off	off	off	off	off
CS-MW16-CC	11.28	290522	306800	11.33	324629
B3-EXW01	7.35	9155311	9165849	7.28	9173321
B3-EXW02	9.20	5779931	5803850	9.27	5818733
B3-EXW03					
B3-EXW04					
B3-EXW05					
B3-EXW06					
B3-EXW07					
B3-EXW08					
B3-EXW09					
B3-EXW10					
B3-EXW11					
B3-EXW12					
B3-EXW13					
B3-EXW14					
B3-EXW15					
B3-EXW16					
B3-EXW17					
B3-EXW18					
B3-EXW19					
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B3-EXW92					
B3-EXW93					
B3-EXW94					
B3-EXW95					
B3-EXW96					
B3-EXW97					
B3-EXW98					
B3-EXW99					
B3-EXW100					

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR 258.71	258.79	259.23	259.25
MW16CC 364.84	365.02	365.23	364.92
B3EXW01 304.60	304.70	305.70	305.90
B3EXW02 317.80	318.20	320.70	321.60
SCADA		OK	
SCADA Down!!!			

Personnel							
Weekly Water Level Monitoring							
CS-WB05-LGR-01	99					14.10	
CS-WB05-LGR-02	182					14.15	
CS-WB05-LGR-03A	216					14.17	
CS-WB05-LGR-03B	262					18.56	
CS-WB05-LGR-04A	277					25.11	
CS-WB05-LGR-04B	329					47.74	
CS-WB05-BS-01	362	No Water Levels			Taken		62.10
CS-WB05-CC-01	432					92.50	
CS-WB05-CC-02	460					104.66	
CS-WB06-UGR-01	20					14.07	
CS-WB06-LGR-01	93					14.12	
CS-WB06-LGR-02	174					14.16	
CS-WB06-LGR-03A	207					14.18	
CS-WB06-LGR-03B	260					26.37	
CS-WB06-LGR-04	320					52.44	
CS-WB07-UGR-01	14					14.08	
CS-WB07-LGR-01	90					14.12	
CS-WB07-LGR-02	175					14.16	
CS-WB07-LGR-03A	208					14.20	
CS-WB07-LGR-03B	257					14.22	
CS-WB07-LGR-04	318					24.62	
CS-WB08-UGR-01	38					14.19	
CS-WB08-LGR-01	115					14.10	
CS-WB08-LGR-02	193					14.14	
CS-WB08-LGR-03A	228					14.18	
CS-WB08-LGR-03B	273					26.47	
CS-WB08-LGR-04	341					56.08	

Bioreactor Monitoring

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: 12.05 Personnel: J. Bowen									
Time: 2.22.12									
B3-T1-1	12.9	6.98	6.79	21.39	0.534	103.9	0.38	✓	
B3-T1-2	12.4	6.62	7.03	21.76	0.402	134.1	0.52		
B3-T1-3	12.85	6.66	6.64	19.67	0.543	95.3	0.44	✓	
B3-T2-1	9.67	8.46	6.90	19.39	1.250	145.7	4.24		
B3-T2-2	10.01	8.79	6.85	20.13	1.026	144.7	0.42		
B3-T3-1	9.96	7.28							
B3-T3-2	7.4	DR-							
B3-T4-1	6.32	DR-							
B3-T5-1	9.33	DR-							
B3-T5-2	7.98	DR-							
B3-T6-1	11.45	11.38							
B3-T6-2	12.34	11.09	6.53	22.65	0.779	-41.2	0.58	✓	
B3-UIC			7.40	23.62	0.406	129.8	4.91		12.10
B-3 Transfer System Monitoring									
Flow Meters Readings									
Meter	Monday	Tuesday	Wednesday	Thursday	Friday				
Date/Time:	2.20.12 1530	2.21.12 1534	2.22.12 1558	2.23.12 145	2.24.12 1016				
T-1	12.4	3720.23	12.7	3735.195	13.1				
T-2				3753.167	13.0				
T-3									
T-4									
T-5									
T-6	28.6	8502.184	29.9	8570.775	27.8				
B-3 (Total)				8615.45	30.2				
CS-MW16-LGR									
CS-MW16-CC	11.28	407.667	11.33	537.915	11.29				
B3-EXW01	8.38	925.2316	8.51	925.4691	8.47				
B3-EXW02	10.50	587.6699	10.75	5905.049	10.75				
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: If bag filter pressure drop is > or = 10' psi change filter.									
PB-1 - PB-2 =									
PB-1 - PB-2 =									
PB-1 - PB-2 =									
Notes: MW16LGR 217.23 *Screen not working * in GAC									
MW16CC 342.01									
B3EXW01 244.80									
B3EXW02 242.90									
SCADA									
220.63 *Screen									
359.92 fixed									
271.40 itself *									
286.20 (magically!)									
222.97									
358.55									
271.70									
285.30									

Personnel: J. Bouch; S. Elliott						
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	2/24/12	1036	14.14	14.10 14.24	20.11
CS-WB05-LGR-02	182		1035		14.15 14.27	14.16
CS-WB05-LGR-03A	216		1035		14.17 14.30	14.40
CS-WB05-LGR-03B	262		1034		18.56 17.71	23.84
CS-WB05-LGR-04A	277		1033		25.11 24.25	37.80
CS-WB05-LGR-04B	329		1032		47.74 46.87	60.40
CS-WB05-BS-01	362		1031		62.10 61.22	72.25
CS-WB05-CC-01	432		1030		92.50 91.65	66.06
CS-WB05-CC-02	460		1029		104.66 103.78	78.37
CS-WB06-UGR-01	20		1104		14.17	14.07 14.20
CS-WB06-LGR-01	93		1103	14.12 14.23		16.50
CS-WB06-LGR-02	174		1102	14.16 14.29		29.71
CS-WB06-LGR-03A	207		1101	14.18 14.32		25.87
CS-WB06-LGR-03B	260		1100	26.37 26.17		48.76
CS-WB06-LGR-04	320		1059	52.44 52.22		60.83
CS-WB07-UGR-01	14		1053	14.19		14.08 14.22
CS-WB07-LGR-01	90		1052		14.12 14.27	34.87
CS-WB07-LGR-02	175		1051		14.16 14.31	26.38
CS-WB07-LGR-03A	208		1050		14.20 14.34	17.34
CS-WB07-LGR-03B	257		1049		14.22 14.35	37.76
CS-WB07-LGR-04	318		1048		24.62 24.53	59.32
CS-WB08-UGR-01	38		1124		14.18	14.19 14.21
CS-WB08-LGR-01	115		1123	14.10 14.25		19.45
CS-WB08-LGR-02	193		1122	14.14 14.31		21.71
CS-WB08-LGR-03A	228		1121	14.18 14.33		14.18
CS-WB08-LGR-03B	273		1120	26.47 25.23		30.87
CS-WB08-LGR-04	341		1119	56.08 54.76		60.99

Bioreactor Monitoring

Personnel: *Bauch, 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 (N)	Notes
Date: 3.1.12 Time: 0915									
B3-T1-1	12.9	6.33	6.98	21.79	0.771	25.9	0.32		
B3-T1-2	12.4	5.90	7.14	22.26	0.588	77.3	0.30	✓	
B3-T1-3	12.85	5.97	6.82	20.20	0.759	114.9	0.26		
B3-T2-1	9.67	7.79	6.95	19.69	1.728	110.0	0.46		
B3-T2-2	10.01	8.12	6.90	20.46	1.240	114.0	0.40		
B3-T3-1	9.96	9.22							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	dry							
B3-T5-2	7.98	7.74							
B3-T6-1	11.45	11.10							
B3-T6-2	12.34	10.85	6.65	22.64	1.133	-26.0	0.56	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings			
	Monday	Tuesday	Wednesday	Thursday
Date/Time: 1.26.12	1355	2028.12	1115	2.24.12
				0705
T-1	15.5	3830481	14.1	3848154
T-2				15.6
T-3				3868724
T-4				
T-5				
T-6	38.2	6783344	36.10	8828448
B-3 (Total)				8873041
CS-MW16-LGR	14.934	10.52	9.05	18.5944
CS-MW16-CC	52193	10.90	11.01	535014
B3-EXW01	7.36	93592	7.01	9325321
B3-EXW02	7.5	5983614	9.19	5995409
				9.79
				6007809
				8873041
				35.6
				892232
				36.4
				8970498
				230633
				501392
				9255259
				6021030
				9.17
				1034671

Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) = 'Notis: if bag filter pressure drop is > dr = 10 psi change filter.

	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
Notes:	MW16LGR 255.60	241.75	281.24	287.22
	MW16CC 352.90	350.26	350.26	349.41
	B3EXW01 376.90	279.50	279.90	283.90
	B3EXW02 286.90	286.90	249.40	293.00
	SCADA OK	OK	OK	
				Quick trends = all wells running good
				is not reading flow *

Fixed mul while LGR, turn on well @ 1440

Week 53

Personnel: <u>A. Lindley, S. Reed, J. Borch</u>							
Weekly Water Level Monitoring							
Well Interval	Sampling Port Depth (ft. BTOC)	Sample Date	Sample Time	Pressure at TOC (psf)	Pressure in MP (psi)	Zone Pressure (psi)	
CS-WB05-LGR-01	99	3.2.12	1019	13.99	14.10 14.03	20.15	
CS-WB05-LGR-02	182	↓	1018		14.15 14.08	14.06	
CS-WB05-LGR-03A	216		1017		14.17 14.11	14.10	
CS-WB05-LGR-03B	262		1016		18.56 17.47	25.52	
CS-WB05-LGR-04A	277		1015		25.11 24.01	27.93	
CS-WB05-LGR-04B	329		1014		47.74 46.63	50.59	
CS-WB05-BS-01	362		1013		62.10 60.98	66.22	
CS-WB05-CC-01	432		1012		92.50 91.36	68.83	
CS-WB05-CC-02	460		1011		104.66 103.53	81.14	
CS-WB06-UGR-01	20		↓		1053	13.98	14.07 13.99
CS-WB06-LGR-01	93			1052	14.12 14.02		16.35
CS-WB06-LGR-02	174	1050		14.16 14.05	27.35		
CS-WB06-LGR-03A	207	1049		14.18 14.07	25.01		
CS-WB06-LGR-03B	260	1048		26.37 25.92	47.90		
CS-WB06-LGR-04	320	1045		52.44 51.95	68.92		
CS-WB07-UGR-01	14	↓	1038	13.99	14.08 13.99	14.66	
CS-WB07-LGR-01	90		1037		14.12 14.03	35.68	
CS-WB07-LGR-02	175		1036		14.16 14.07	26.45	
CS-WB07-LGR-03A	208		1035		14.20 14.10	16.52	
CS-WB07-LGR-03B	257		1034		14.22 14.11	36.27	
CS-WB07-LGR-04	318		1033		24.62 24.30	50.01	
CS-WB08-UGR-01	38	↓	1427	13.96	14.19 13.97	19.04	
CS-WB08-LGR-01	115		1426		14.10 14.00	19.45	
CS-WB08-LGR-02	193		1425		14.14 14.02	21.90	
CS-WB08-LGR-03A	228		1424		14.18 14.04	14.10	
CS-WB08-LGR-03B	273		1423		26.47 24.87	22.50	
CS-WB08-LGR-04	341		1422		56.08 54.45	53.27	

Bioreactor Monitoring

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: 3-7-12 Time: 1630									
B3-T1-1	12.9	6.39	6.95	22.13	0.811	15.0	0.43	✓	
B3-T1-2	12.4	5.98	6.98	22.27	0.627	76.9	0.42	✓	
B3-T1-3	12.85	6.02	7.00	20.08	0.134	88.9	0.06	✓	
B3-T2-1	9.67	7.84							
B3-T2-2	10.01	8.14							
B3-T3-1	9.96	9.24							
B3-T3-2	7.4	DRY							
B3-T4-1	6.32	DRY							
B3-T5-1	9.33	DRY							
B3-T5-2	7.98	7.84							
B3-T6-1	11.45	10.99							
B3-T6-2	12.34	10.75	6.48	22.65	1.145	-51.9	0.39		
B3-UIC									

B-3 Transfer System Monitoring					
Flow Meters Readings					
Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	3-5-12 1430	3-6-12 1105	3-7-12 1100	3-8-12 1007	3-9-12 1000
T-1	15.5	3994747	15.2	4019243	14.3
T-2					4033047
T-3					
T-4					
T-5					
T-6	35.6	9119886	33.5	9205439	32.9
B-3 (Total)					9237189
CS-MW16-LGR	13.31	266936	13.48	277207	13.15*
CS-MW16-CC	10.90	632096	10.90	44559	10.90
B3-EXW01	6.74	9387485	6.61	9378918	6.76
B3-EXW02	8.70	6076885	8.60	6061544	8.70
*Note: if bag filter pressure drop is > or = 10 psi change filter.					
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2) =					
PB-1 - PB-2 =					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes:	
MW16LGR	290.52
MW16CC	285.55
B3EXW01	349.70
B3EXW02	289.70
SCADA	291.90
	300.30
	273.14
	352.32
	295.40
	308.20
	OK
	291.41
	350.00
	293.40
	309.90

* adjusted flow to 11.60

Week 154

Personnel: J. Bouch; E. 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	3.8.12	1503	14.03	^{14.10} 14.09	20.16
CS-WB05-LGR-02	182		1502		^{14.15} 14.14	14.15
CS-WB05-LGR-03A	216		1501		^{14.17} 14.17	14.07
CS-WB05-LGR-03B	262		1500		^{18.56} 17.51	22.90
CS-WB05-LGR-04A	277		1459		^{25.11} 24.03	24.28
CS-WB05-LGR-04B	329		1458		^{47.74} 46.63	46.84
CS-WB05-BS-01	362		1457		^{62.10} 61.00	62.67
CS-WB05-CC-01	432		1456		^{92.50} 91.40	68.69
CS-WB05-CC-02	460	✓	1455		^{104.66} 103.55	81.00
CS-WB06-UGR-01	20		1536		14.08	^{14.07} 14.06
CS-WB06-LGR-01	93		1535	^{14.12} 14.11		16.45
CS-WB06-LGR-02	174		1534	^{14.16} 14.14		23.74
CS-WB06-LGR-03A	207		1533	^{14.18} 14.16		23.69
CS-WB06-LGR-03B	260		1532	^{26.37} 25.98		46.58
CS-WB06-LGR-04	320	✓	1530	^{52.44} 52.04		48.43
CS-WB07-UGR-01	14		1522	14.07	^{14.08} 14.08	14.66
CS-WB07-LGR-01	90		1521		^{14.12} 14.09	35.73
CS-WB07-LGR-02	175		1520		^{14.16} 14.15	25.96
CS-WB07-LGR-03A	208		1519		^{14.20} 14.17	15.55
CS-WB07-LGR-03B	257		1518		^{14.22} 14.20	33.52
CS-WB07-LGR-04	318	✓	1517		^{24.62} 24.37	45.82
CS-WB08-UGR-01	38		1553	14.05	^{14.19} 14.07	18.89
CS-WB08-LGR-01	115		1552		^{14.19} 14.10	19.49
CS-WB08-LGR-02	193		1551		^{14.14} 14.13	21.92
CS-WB08-LGR-03A	228		1551		^{14.18} 14.16	14.16
CS-WB08-LGR-03B	273		1550		^{26.47} 24.97	18.56
CS-WB08-LGR-04	341	✓	1548		^{56.08} 54.55	48.99

Bioreactor Monitoring

Personnel: E. Rice / Elliott / MacQueen

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: <u>3.10.12</u> Time: <u>1420</u>									
B3-T1-1	12.9	5.79	6.91	21.51	0.740	23.1	0.22	✓	T1-3 MS/cm: 0.1682 T: 20.34
B3-T1-2	12.4	5.40	6.96	21.33	0.596	40.2	0.37		
B3-T1-3	12.85	5.33	6.98	21.33	0.596	70.5	0.15		
B3-T2-1	9.67	7.24	6.69	19.95	1.344	119.5	0.30		
B3-T2-2	10.01	7.55	6.70	20.34	1.033	113.9	0.22		
B3-T3-1	9.96	9.15							
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	11.17							
B3-T6-2	12.34	11.10	6.41	22.81	1.073	-28.0	0.67	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time: <u>3.12-12.7.9.15</u>			<u>3.14.12</u>	<u>3.15.12</u>	<u>3.16.12</u>
T-1	16.3	41237.42	1345	1315	1410
T-2					
T-3					
T-4					
T-5					
T-6	34.7	44312.75	9515.083	20.3	95710.69
B-3 (Total)					
CS-MW16-LGR	12.6	3543.75	385.655	14.5	406.073
CS-MW16-CC	10.9	7463.62	724.110	11.44	7903.41
B3-EXW01	7.31	9459.958	9479.200	0	9479.500
B3-EXW02	9.47	6175.454	6175.118	0	6175.573
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: if bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					

Notes:	PB-1 - PB-2 =	PB-1 - PB-2 =	PB-1 - PB-2 =
MW16LGR 269.3	EXW01 + EXW02 shut	quick trends looks good	EXW01, EXW02 still
MW16CC 249.3	down to be plumbed		OFF for line work
B3EXW01 275.4	into new manifold,		* Screen not working
B3EXW02 287.5	quick trends looks good		
SCADA ✓			

Week 255

Personnel		S. Elliott				
		J. MacQueen				
Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft. BTCC)	Sample Date	Sample Time	Pressure at TOC (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	3/15/12	1437	14.18	14.10 14.17	20.18
CS-WB05-LGR-02	182		1436		14.15 14.23	14.24
CS-WB05-LGR-03A	216		1436		14.17 14.26	14.44
CS-WB05-LGR-03B	262		1435		18.56 17.60	23.89
CS-WB05-LGR-04A	277		1434		25.11 24.11	37.89
CS-WB05-LGR-04B	329		1433		47.74 46.74	60.90
CS-WB05-BS-01	362		1432		62.10 61.08	72.23
CS-WB05-CC-01	432		1431		92.50 91.48	69.44
CS-WB05-CC-02	460		1430		104.66 103.65	81.74
CS-WB06-UGR-01	20		1402		14.16	14.07 14.18
CS-WB06-LGR-01	93		1401	14.12 14.20		16.55
CS-WB06-LGR-02	174		1400	14.16 14.24		33.79
CS-WB06-LGR-03A	207		1359	14.18 14.27		28.14
CS-WB06-LGR-03B	260		1358	26.37 26.08		51.03
CS-WB06-LGR-04	320		1356	52.44 52.13		65.32
CS-WB07-UGR-01	14		1420	14.16	14.08 14.16	14.91
CS-WB07-LGR-01	90		1418		14.12 14.19	40.27
CS-WB07-LGR-02	175		1417		14.16 14.24	27.96
CS-WB07-LGR-03A	208		1417		14.20 14.26	17.68
CS-WB07-LGR-03B	257		1416		14.22 14.29	38.26
CS-WB07-LGR-04	318		1415		24.62 24.47	61.40
CS-WB08-UGR-01	38		1342	14.15	14.19 14.19	19.50
CS-WB08-LGR-01	115		1341		14.10 14.22	19.51
CS-WB08-LGR-02	193		1340		14.14 14.26	22.19
CS-WB08-LGR-03A	228		1339		14.18 14.26	14.30
CS-WB08-LGR-03B	273		1338		26.47 25.13	32.64
CS-WB08-LGR-04	341		1337		56.08 54.69	65.03

Bioreactor Monitoring

Personnel: J. Dowd, E. Rice, K. 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 (✓)	Notes
Date: 3-22-17 Time: 10:30									
B3-T1-1	12.9	4.95	7.12	21.62	0.785	127.9	0.60	✓	Standing water in the southern end of T-1. Wp to T1-3
B3-T1-2	12.4	4.59	7.22	21.72	6.597	80.2	0.98		
B3-T1-3	12.85	4.30	7.24	20.40	0.605	109.2	0.40		
B3-T2-1	9.67	6.42	6.84	20.22	1.383	132.0	0.74		
B3-T2-2	10.01	6.71	6.98	21.12	1.173	-39.0	0.33		
B3-T3-1	9.96	6.12							
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	10.65	6.52	22.16	0.711	81.4	0.43		
B3-T6-2	12.34	10.35	6.67	23.19	1.141	86.7	0.37		
B3-UIC			7.70	23.97	0.559	110.7	2.86	✓	(B) 1410

B-3 Transfer System Monitoring

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	3-20-17 10:51	3-21-17 16:30	3-22-17 10:30	3-23-17 08:00	
T-1	12.7	41.65	18.7	4308.19	12.4
T-2					
T-3					
T-4					
T-5					
T-6	20.7	91.75	35.9	9718.19	36.9
B-3 (Total)					
CS-MW16-LGR	14.50	50.64	14.02	5314.85	13.90
CS-MW16-CC	11.49	37.14	10.84	8919.29	10.95
B3-EXW01	OF	OF	7.95	9483.93	9.14
B3-EXW02	OF	OF	11.5	6200.77	13.68

Rate (gpm) / Cumulative Total (gal)

Notes:	MW16LGR	MW16CC	B3EXW01	B3EXW02	SCADA
	255.65	349.02	211.03	217.50	
	208.90	339.54	223.00	246.00	
	207.33	337.57	219.00	242.00	

* turned off 11wells so Sam chiz could plumb in a valve @ 0815

Week 250

*Note: If bag filter pressure drop is > or = 10 psi change filter.

PB-1 - PB-2 =

PB-1 - PB-2 =

PB-1 - PB-2 =

PB-1 - PB-2 =

Personnel: Elliott & Bouch						
Weekly Water Level Monitoring						
Well Interval	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Pressure at T.O.C. (psi)	Pressure in MP (psi)	Zone Pressure (psi)
CS-WB05-LGR-01	99	3/22/12	1425	14.05	14.10 14.07	20.10
CS-WB05-LGR-02	182		1424		14.15 14.14	14.17
CS-WB05-LGR-03A	216		1423		14.17 14.16	19.85
CS-WB05-LGR-03B	262		1422		18.56 17.49	39.76
CS-WB05-LGR-04A	277		1421		25.11 24.04	57.55
CS-WB05-LGR-04B	329		1420		47.74 46.66	80.84
CS-WB05-BS-01	362		1419		62.10 61.01	87.68
CS-WB05-CC-01	432		1418		92.50 91.40	73.81
CS-WB05-CC-02	460		1417		104.66 103.54	86.07
CS-WB06-UGR-01	20		1506		14.07	14.07 14.06
CS-WB06-LGR-01	93		1505	14.12 14.09		16.50
CS-WB06-LGR-02	174		1504	14.16 14.12		41.25
CS-WB06-LGR-03A	207		1504	14.18 14.15		31.65
CS-WB06-LGR-03B	260		1503	26.37 25.98		54.54
CS-WB06-LGR-04	320		1502	52.44 52.03		83.73
CS-WB07-UGR-01	14		1451	14.05	14.08 14.05	15.07
CS-WB07-LGR-01	90		1450		14.12 14.09	42.17
CS-WB07-LGR-02	175		1448		14.16 14.12	30.99
CS-WB07-LGR-03A	208		1448		14.20 14.15	31.09
CS-WB07-LGR-03B	257		1446		14.22 14.17	52.27
CS-WB07-LGR-04	318		1445		24.62 24.36	82.66
CS-WB08-UGR-01	38		1521	14.02	14.19 14.05	20.05
CS-WB08-LGR-01	115		1520		14.10 14.10	19.46
CS-WB08-LGR-02	193		1519		14.14 14.13	22.51
CS-WB08-LGR-03A	228		1518		14.18 14.15	29.57
CS-WB08-LGR-03B	273		1517		26.47 25.03	49.01
CS-WB08-LGR-04	341		1516		56.08 54.57	80.85

Bioreactor Monitoring

Personnel: J. Boucka + 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>3/29/12</u> Time: <u>0800</u>									
B3-T1-1	12.9	5.20	7.13	22.23	0.759	102.3	0.32	✓	
B3-T1-2	12.4	4.79	7.14	22.42	0.623	96.4	1.33		
B3-T1-3	12.85	4.73	7.10	14.90	0.711	-64.9	0.08		
B3-T2-1	9.67	6.67	6.77	20.24	1.318	121.9	0.26		
B3-T2-2	10.01	6.98	6.84	21.46	1.270	-10.2	0.25		
B3-T3-1	9.96	9.26							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	9.24							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	10.42	6.48	22.12	0.728	73.3	0.40	✓	
B3-T6-2	12.34	10.67	6.61	23.37	1.156	-1.2	0.28		
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings			
	Monday	Tuesday	Wednesday	Thursday
Date/Time: 3-26-12 11:18	3:27:12	09:36	2:28:12	10:07
T-1	11.4	438218	12.4	440016
T-2				
T-3				
T-4				
T-5				
T-6	15.0	9868798	18.7	1091846
B-3 (Total)		12.20		17.5
CS-MW16-LGR	9.54	561125	* 14.00	580437
CS-MW16-OC	11.2	914579	12.20	933480
B3-EXW01	7.59	954358	OFF	954487
B3-EXW02	11.23	639117	OFF	629307
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: if bag filter pressure drop is > or = 10 psi change filter.				
PB-1 - PB-2 =				
PB-1 - PB-2 =				
PB-1 - PB-2 =				

Meter	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time: 3-26-12 11:18	3:27:12	09:36	2:28:12	10:07	3:30:12
T-1	11.4	438218	12.4	440016	18.8
T-2					4406390
T-3					
T-4					
T-5					
T-6	15.0	9868798	18.7	1091846	33.4
B-3 (Total)		12.20		17.5	33.4
CS-MW16-LGR	9.54	561125	* 14.00	580437	9.44
CS-MW16-OC	11.2	914579	12.20	933480	11.71
B3-EXW01	7.59	954358	OFF	954487	7.90
B3-EXW02	11.23	639117	OFF	629307	11.81
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) = *Note: if bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes:

- MW16LGR 213.92
- MW16CC 288.05
- B3EXW01 227.00
- B3EXW02 248.00
- SCADA OK

* Turned on 16 wells *
 recently turned on on Friday @ 11:00

* adjusted flow - valve may be water away - may need to replace

* Screen out *
 * Turned on EXW01 and EXW02 @ 10:15

Week 257

Quick trends looks good, all wells running

... for Sanchez to connect new lines x

Personnel		Bouch & Elliott				
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	3.27.12	0954	14.10	14.10 14.18	20.13
CS-WB05-LGR-02	182		0953		14.15 14.21	14.20
CS-WB05-LGR-03A	216		0953		14.17 14.25	28.79
CS-WB05-LGR-03B	262		0952		18.56 17.56	48.69
CS-WB05-LGR-04A	277		0951		25.11 24.12	55.65
CS-WB05-LGR-04B	329		0950		47.74 46.74	78.50
CS-WB05-BS-01	362		0949		62.10 61.08	89.79
CS-WB05-CC-01	432		0948		92.50 91.49	83.23
CS-WB05-CC-02	460		0947		104.66 103.64	95.54
CS-WB06-UGR-01	20		1026	14.12	14.07 14.15	17.96
CS-WB06-LGR-01	93		1025		14.12 14.18	16.53
CS-WB06-LGR-02	174		1024		14.16 14.23	40.31
CS-WB06-LGR-03A	207		1023		14.18 14.26	32.77
CS-WB06-LGR-03B	260		1022		26.37 26.08	55.66
CS-WB06-LGR-04	320		1021		52.44 52.12	81.81
CS-WB07-UGR-01	14		1011	14.12	14.08 14.15	15.07
CS-WB07-LGR-01	90		1010		14.12 14.19	42.01
CS-WB07-LGR-02	175		1009		14.16 14.21	32.43
CS-WB07-LGR-03A	208		1008		14.20 14.24	14.04 38
CS-WB07-LGR-03B	257		1007		14.22 14.26	52.06
CS-WB07-LGR-04	318		1006		24.62 24.45	79.11
CS-WB08-UGR-01	38		1039	14.11	14.19 14.15	14.15
CS-WB08-LGR-01	115		1038		14.10 14.19	14.19
CS-WB08-LGR-02	193		1037		14.14 14.23	14.23
CS-WB08-LGR-03A	228		1036		14.18 14.26	29.74
CS-WB08-LGR-03B	273		1036		26.47 25.14	49.18
CS-WB08-LGR-04	341		1035		56.08 54.68	81.22

broken
shock

Bioreactor Monitoring

Personnel: Y. Rice; J. Bouch; 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: 4.5.12 Time: 0845									
B3-T1-1	12.9	5.07	7.07	22.81	0.752	117.3	0.67		
B3-T1-2	12.4	4.66	7.13	22.35	0.614	100.9	1.55		
B3-T1-3	12.85	4.54	7.02	21.90	0.722	-56.4	0.06	✓	
B3-T2-1	9.67	6.53	6.90	21.08	1.483	51.2	0.13		
B3-T2-2	10.01	6.84	6.85	22.15	1.302	-65.2	0.16		
B3-T3-1	9.96	9.20							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	9.24							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	8.93	6.67	22.88	0.851	105.4	0.06		
B3-T6-2	12.34	8.67	6.54	23.30	1.201	106.6	0.38	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	4.2.12 1015	4.3.12 1800	4.4.12 1125	4.5.12 0830	4.6.12 1500
T-1	19.5	4547215	181	4597875	26.6
T-2				4629848	25.3
T-3					
T-4					
T-5					
T-6	32.1	156274	34.0	216909	19.4
B-3 (Total)				246052	20.2
CS-MW16-LGR	0	625618	0	632425	11.24
CS-MW16-CC	11.71	358530	11.71	68063	11.22
B3-EXW01	7.85	9602540	7.83	9624775	6.79
B3-EXW02	11.83	6378510	11.65	6400952	10.34
Bag Filler Pressure Reading (PB-1) (PB-2) = Note: If bag filler pressure drop is > of = 10 psi change filter.					
PB-1 - PB-2 =					

Notes:	PB-1 - PB-2 =	
	Monday	Tuesday
MW16LGR	224.90	228.11
MW16CC	315.47	315.10
B3EXW01	234.30	236.60
B3EXW02	253.20	254.40
SCADA		

* reading 2000 but meter is not recording
 * replaced meter - meter was 53 when we started it * @ 1400
 * closed valve @ the end of T6 -
 * flow from 301 - 20.0
 * flow from 19.0 to 25 gpm.

Personnel Elliott + Borch					
Quarterly Monitoring Weekly Profile					
MPMWs	Sampling Port Depth (ft BTOC)	Sample Date	Sample Time	Inside Pressure	Zone Pressure
CS-WB05-LGR-01	99	4/4/12	1122	14.09	20.00
CS-WB05-LGR-02	182		1121	14.16	14.13
CS-WB05-LGR03A	216		1120	14.17	23.03
CS-WB05-LGR03B	262		1119	17.50	42.94
CS-WB05-LGR04A	277		1118	24.02	48.51
CS-WB05-LGR04B	329		1117	46.65	71.11
CS-WB05-BS-01	362		1116	60.6100	85.48
CS-WB05-CC-01	432		1115	91.39	86.24
CS-WB05-CC-02	460		1115	103.56	98.55
CS-WB06-UGR-01	20		1051	14.09	17.85
CS-WB06-LGR-01	93		1050	14.12	16.45
CS-WB06-LGR-02	174		1049	14.17	39.24
CS-WB06-LGR03A	207		1049	14.17	33.13
CS-WB06-LGR03B	260		1048	25.99	56.03
CS-WB06-LGR-04	320		1047	52.03	73.64
CS-WB07-UGR-01	14		1105	14.09	14.97
CS-WB07-LGR-01	90		1104	14.11	41.50
CS-WB07-LGR-02	175		1103	14.16	32.64
CS-WB07-LGR03A	208		1102	14.18	26.10
CS-WB07-LGR03B	257		1101	14.21	47.27
CS-WB07-LGR-04	318		1100	24.37	70.52
CS-WB08-UGR-01	38		1037	14.09	19.47
CS-WB08-LGR-01	115		1036	14.11	19.40
CS-WB08-LGR-02	193		1035	14.15	23.39
CS-WB08-LGR03A	228		1034	14.19	23.20
CS-WB08-LGR03B	273		1034	25.04	42.66
CS-WB08-LGR-04	341		1033	54.58	73.26

14.06

14.06

14.08

14.06

Bioreactor Monitoring

Personnel: J Bouch

Trench Sumps Water Levels ('BTOC)									
Sump ID	Sump Depth (ft BTOC)	Sump Water Level (ft BTOC)	pH	Temp. (disp. C)	SpCond (mS/cm)	ORP	DO (mg/L)	Trench Currently Being Used (✓)	Notes
Date: 4-11-12 Time: 0916									
B3-T1-1	12.9	5.03	6.94	22.84	0.758	89.9	0.300	✓	0920
B3-T1-2	12.4	4.57	6.96	22.26	0.605	110.4	1.97	✓	0945 (DNA + H ⁺)
B3-T1-3	12.85	4.38	7.20	22.35	0.641	77.4	0.06	✓	1025
B3-T2-1	9.67	6.48	6.88	21.60	1.597	43.1	0.24		
B3-T2-2	10.01	6.74	6.94	22.86	1.252	5.4	0.05		
B3-T3-1	9.96	9.25							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	9.20							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	8.83	6.60	23.00	0.694	29.8	0.18	✓	1045
B3-T6-2	12.34	8.57	6.44	23.07	1.152	3.5	0.17	✓	1110 (DNA + H ⁺)
B3-UIC			7.02	22.32	0.609	21.0	4.25		0910

B-3 Transfer System Monitoring				
Meter	Flow Meter Readings			
Date/Time	Monday	Tuesday	Wednesday	Thursday
T-1	4.9.12 1530	7.10.17 1015	4.11.12 900	4.12.17 1630
T-2	24.5	4788298	25.2	4850689
T-3				4889377
T-4				24.6
T-5				4922369
T-6	20.2	340425	18.5	437965
B-3 (Total)				20.2
CS-MW16-LGR	10.86	81433	10.76	107913
CS-MW16-CC	11.17	152614	11.22	180173
B3-EXW01	6.63	9675025	6.65	969282
B3-EXW02	10.15	6487769	10.01	6512413
Bag Filter Pressure Reading (Pressure Drop (PB-1), (PB-2) = Note if bag filter pressure drop is > dr = 10 psi change filter.				
PB-1 - PB-2 =				
MW16LGR 241.89				
MW16CC 312.97				
B3EXW01 238.60				
B3EXW02 252.60				
SCADA				
Notes:				
PB-1 - PB-2 = 245.30				
PB-1 - PB-2 = 313.85				
PB-1 - PB-2 = 241.90				
PB-1 - PB-2 = 255.70				
PB-1 - PB-2 = 249.95				
PB-1 - PB-2 = 313.14				
PB-1 - PB-2 = 240.00				
PB-1 - PB-2 = 254.00				
Quick trends looks good				
All wells pumping				

Personnel		Elliot + Bouch				
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	4/12/12	1051	14.12	14.10 14.18	20.13
CS-WB05-LGR-02	182		1050		14.15 14.22	14.21
CS-WB05-LGR-03A	216		1049		14.17 14.23	18.44
CS-WB05-LGR-03B	262		1049		18.56 17.50	38.41
CS-WB05-LGR-04A	277		1048		25.11 24.02	42.55
CS-WB05-LGR-04B	329		1047		47.74 46.66	65.22
CS-WB05-BS-01	362		1046		62.10 60.99	80.86
CS-WB05-CC-01	432		1045		92.50 91.80	84.04
CS-WB05-CC-02	460		1045		104.66 103.56	96.34
CS-WB06-UGR-01	20		1117	14.12	14.07 14.16	17.56
CS-WB06-LGR-01	93		1116		14.12 14.18	16.52
CS-WB06-LGR-02	174		1115		14.16 14.22	38.90
CS-WB06-LGR-03A	207		1114		14.18 14.25	33.33
CS-WB06-LGR-03B	260		1113		26.37 26.03	56.22
CS-WB06-LGR-04	320		1112		52.44 52.08	67.93
CS-WB07-UGR-01	14		1104	14.12	14.08 14.15	14.89
CS-WB07-LGR-01	90		1103		14.12 14.18	41.04
CS-WB07-LGR-02	175		1102		14.16 14.23	33.51
CS-WB07-LGR-03A	208		1101		14.20 14.24	23.67
CS-WB07-LGR-03B	257		1100		14.22 14.26	44.84
CS-WB07-LGR-04	318		1059		24.62 24.42	64.57
CS-WB08-UGR-01	38		1130	14.11	14.19 14.13	19.31
CS-WB08-LGR-01	115		1129		14.10 14.18	19.47
CS-WB08-LGR-02	193		1128		14.14 14.21	23.73
CS-WB08-LGR-03A	228		1127		14.18 14.24	17.79
CS-WB08-LGR-03B	273		1126		26.47 25.07	37.26
CS-WB08-LGR-04	341	✓	1125		56.08 54.62	68.02

Bioreactor Monitoring

Personnel: J. Bunch, J. MacQueen, 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 (N)	Notes
Date: 4.19.12 Time: 0800									
B3-T1-1	12.9	5.39	7.09	22.96	1.236	96.5	0.21		
B3-T1-2	12.4	4.96	7.12	22.54	1.044	90.6	1.05	✓	
B3-T1-3	12.85	5.13	7.14	22.30	1.086	12.6	0.17		
B3-T2-1	9.87	6.87	7.02	22.16	2.740	69.3	0.18		
B3-T2-2	10.01	7.15	6.94	23.24	2.086	-62.8	0.18		
B3-T3-1	9.96	9.24							
B3-T3-2	7.4	dry							
B3-T4-1	6.32	dry							
B3-T5-1	9.33	9.26							
B3-T5-2	7.98	dry							
B3-T6-1	11.45	8.42	6.85	23.28	1.113	3.8	0.48		
B3-T6-2	12.34	8.46	6.73	22.79	1.851	-116.5	0.28	✓	
B3-UIC									

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	4.19.12 1000	4.17.12 0915	4.19.12	0755	4.20.12 0835
T-1	24.0	503738.7	25.8	510729.9	24.9
T-2				5134880	5171222
T-3					
T-4					
T-5					
T-6	20.1	576236	19.9	628902	19.2
B-3 (Total)			19.4	628902	19.2
CS-MW16-LGR	10.25	183503	7.92	194900	7.80
CS-MW16-CC	261049	11.09	278080	12.20	25733
B3-EXW01	1647	973877	4.50	9748009	6.55
B3-EXW02	9.81	4584527	7.93	4598464	9.8
Rate (gpm) / Cumulative Total (gal)					
Bag Filter Pressure Reading (Pressure Drop (PB-1) - (PB-2)) * Note: If bag filter pressure drop is > 6r = 10 psi change filter.					
PB-1 - PB-2 =					
PB-1 - PB-2 =					
PB-1 - PB-2 =					

Notes:

MW16LGR 251.62
 * MW16CC 314.40
 B3EXW01 248.50
 B3EXW02 202.80
 SCADA

248.04
 327.38
 252.10
 266.90

Quick trends looks good
 all wells running
 consistently

252.05
 329.89
 255.80
 271.50

* 16CC is leaking
 Sam fixed nipple & shut
 down from 1030-1130

Week 120

Exwz 9.31
6682484

Exw1 6.19
9803451

16cc 12.1
783562

166R 7.3
248092
260842

LG R 259.66
CC 334.17
EX 1 263.60
EX 2 280.30

Personnel: J. Bouch, S. Elliott, J. MacQuinn
 Weekly Piezometer Water Levels (BTOC) and Monthly Field Parameters

Piezometer ID	TD (ft BTOC)	Date Sampled	Weekly/Monthly Wrtvls		Monthly Field Parameters							Notes
			Sample Time	Water Level (ft BTOC)	pH	Temp (deg. C)	SpCond (mS/cm)	ORP (mV)	DO (mg/L)			
B3-MW26-UGR	20.32	4.16.12	1300	12.06	6.56	19.53	0.623	-5.9	0.82			
B3-MW27-UGR	17.00	4.16.12	1115	7.70	6.77	19.69	0.522	118.7	2.30			
B3-MW28-UGR	18.33	4.16.12	—	18.31	No	Sample						
B3-MW29-UGR	20.40	4.16.12	1050	19.16	6.68	19.80	0.584	105.5	4.31			
B3-MW30-UGR	23.90	4.16.12	1010	21.56	6.68	20.72	0.619	143.3	4.16			
B3-MW31-UGR	39.06	4.16.12	1025	33.15	6.61	21.47	0.681	51.8	0.63			
B3-MW32-UGR	58.45	4.16.12	1340	29.17	6.78	21.01	0.485	81.4	5.77			
B3-MW33-UGR	29.55	4.16.12	1355	21.46	6.58	20.02	0.603	95.5	2.50			
B3-MW34-UGR	25.40	4.16.12	1315	17.31	6.64	21.35	0.569	5.7	0.50			

Monitoring Well ID	Date Sampled	Sample Time	Water Level (ft BTOC)	pH	Temp. (deg. C)	SpCond (mS/cm)	ORP (mV)	DO (mg/L)	Notes
B3-MW01	4.12.12	0910	208.0	6.51	21.20	0.896	37.2	0.27	
CS-D	4.10.12	1510	209.42	7.03	22.97	0.548	106.3	4.00	
CS-MW16-LGR	4.10.12	1110		7.00	22.98	0.562	116.0	2.90	Collected DNA and H ⁺
CS-MW16-CC	4.10.12	1100		7.14	23.50	0.686	90.3	1.42	
CS-B3-EKW01	4.10.12	1040	240.0	6.90	23.20	0.593	125.3	2.71	
CS-B3-EKW02	4.10.12	1025	254.00	7.04	22.62	0.585	140.00	5.08	
CS-MW1-LGR	4.10.12	1420	174.07	6.97	22.81	0.539	102.6	2.59	collected DNA and H ⁺

Personnel <i>J. Bouch ; J. MacQueen</i>						
Quarterly Monitoring						
	MPMWs	Sampling Port Depth (ft. BTOC)	Sample Date	Sample Time	Inside Pressure	Zone Pressure
A	CS-WB05-LGR-01	99	4.19.12	1000	14.10	20.11
A	CS-WB05-LGR-02	182	4.19.12	0940	14.14	14.17
A	CS-WB05-LGR03A	216	4.18.12	1535	14.23	15.11
A	CS-WB05-LGR03B	262	4.18.12	1430	17.64	35.91
A	CS-WB05-LGR04A	277	4.18.12	1100	24.23	39.19
B	CS-WB05-LGR04B	329	4.18.12	1000	46.96	61.94
B	CS-WB05-BS-01	362	4.17.12	1500	61.34	78.37
B	CS-WB05-CC-01	432	4.17.12	1100	62.40	81.35
B	CS-WB05-CC-02	460	4.17.12	1000	105.79	93.73
A	CS-WB06-UGR-01	20	4.25.12	0910	14.03	17.12
A	CS-WB06-LGR-01	93	4.24.12	1400	14.09	16.45
A	CS-WB06-LGR-02	174	4.24.12	1215	14.16	35.12
A	CS-WB06-LGR03A	207	4.24.12	1100	14.25	31.12
B	CS-WB06-LGR03B	260	4.24.12	940	27.86	54.87
A	CS-WB06-LGR-04	320	4.23.12 4.20.12	1550	54.00	59.39
A	CS-WB07-UGR-01	14	4.23.12	1115	14.13	14.40
A	CS-WB07-LGR-01	90	4.23.12	1045	14.21	40.20
A	CS-WB07-LGR-02	175	4.23.12	1000	14.35	33.25
B	CS-WB07-LGR03A	208	4.20.12	1040	14.10	21.26
B	CS-WB07-LGR03B	257	4.20.12	1000	14.10	43.83
B	CS-WB07-LGR-04	318	4.20.12	920	26.26	59.40
1305	CS-WB08-UGR-01	38	4.26.12	1103	14.03	18.73
0455	CS-WB08-LGR-01	115	4.26.12	1005	14.05	19.46
0910	CS-WB08-LGR-02	193	4.26.12	0907	14.10	24.04
	CS-WB08-LGR03A	228	4.26.12	0901/By	14.11	13.04
B	CS-WB08-LGR03B	273	4.25.12	1145	26.85	26.61
B	CS-WB08-LGR-04	341	4.25.12	1100	56.47	57.63

DRY - No Sample

ATM: 14.20

ATM: 14.20

ATM: 14.16

ATM: 14.19

DRY - No Sample

ATM: 14.13

ATM 13.98

resample: 5/1/12 14.02/18.18

" 14.10/19.46

" 14.12/23.48

- DRY

ATM: 14.05

Bioreactor Monitoring

Personnel: J. D. Baker

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 (x)	Notes
Date: 5-2-17 Time: 0915									
B3-T1-1	12.9	6.34	6.87	23.80	0.470	-74.0	0.65	✓	
B3-T1-2	12.4	5.90	6.95	23.45	0.503	-59.0	0.11		
B3-T1-3	12.85	6.20	6.74	23.60	0.493	-47.9	0.06		
B3-T2-1	9.67	7.82	6.90	23.23	1.064	-158.3	0.23		
B3-T2-2	10.01	8.03	6.74	23.87	0.750	-98.8	0.28		
B3-T3-1	9.96	9.28							
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								
B3-T6-2	12.34								
B3-UIC									

* Could not get data working in T-5 + T-6
 * Could not get data due to B-3 construction in T-6 will try later.

B-3 Transfer System Monitoring

Meter	Flow Meters Readings				
	Monday	Tuesday	Wednesday	Thursday	Friday
Date/Time:	4:30-12:00	5:12-0850	5:27-0911	5:3-12	5:4-12
T-1	5514.77	247	5547.62	21.4	5611.00
T-2			5581.23	21.1	563.8883
T-3					
T-4					
T-5					
T-6	16.5	943.863	14.0	967.931	14.7
B-3 (Total)				15.5	1015.725
CS-MW16-LGR	646	329.366	642	338.349	6.97
CS-MW16-CC	17.80	513.474	12.74	531.295	13.07
B3-EXW01	5.101	981.037	5.57	987.083	5.45
B3-EXW02	8.21	477.045	8.05	477.820	7.95
Bag Filter Pressure Reading (Pressure Drop (PB-1) - PB-2) * Note: if bag filter pressure drop is > or = 10 psi change filter.					
PB-1 - PB-2 =					

Notes:	Pressure Drop (PB-1) - PB-2 =	Pressure Drop (PB-1) - PB-2 =	Pressure Drop (PB-1) - PB-2 =
MW16LGR 277.29			
MW16CC 350.45			
B3EXW01 280.10			
B3EXW02 298.20			
SCADA OK			
Turned off B-3 so Merla not on work on power @ B-3			
EMU01 restarted @ 0847			
Swik trends = good			

Week 262

Personnel		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)
Elliott + Bouch						
CS-WB05-LGR-01	99	5/3/12	0938	14.06	14.10 14.14	20.01
CS-WB05-LGR-02	182		0937		14.15 14.17	14.15
CS-WB05-LGR-03A	216		0936		14.17 14.20	12.80
CS-WB05-LGR-03B	262		0936		18.56 15.46	30.01
CS-WB05-LGR-04A	277		0935		25.11 22.01	25.69
CS-WB05-LGR-04B	329		0934		47.74 44.62	48.25
CS-WB05-BS-01	362		0933		62.10 58.96	65.20
CS-WB05-CC-01	432		0932		92.50 89.37	70.59
CS-WB05-CC-02	460		0931		104.66 101.54	83.01
CS-WB06-UGR-01	20		1008	14.09	14.07 14.08	16.87
CS-WB06-LGR-01	93		1007		14.12 14.11	16.46
CS-WB06-LGR-02	174		1006		14.16 14.17	24.71
CS-WB06-LGR-03A	207		1005		14.18 14.20	26.92
CS-WB06-LGR-03B	260		1004		26.37 25.83	49.81
CS-WB06-LGR-04	320		1003		52.44 51.90	50.25
CS-WB07-UGR-01	14		0954	14.10	14.08 14.09	14.32
CS-WB07-LGR-01	90		0953		14.12 14.13	39.29
CS-WB07-LGR-02	175		0952		14.16 14.17	31.88
CS-WB07-LGR-03A	208		0951		14.20 14.18	15.01
CS-WB07-LGR-03B	257		0950		14.22 14.22	36.12
CS-WB07-LGR-04	318		0949		24.62 24.30	47.53
CS-WB08-UGR-01	38		1023	14.09	14.19 14.09	18.55
CS-WB08-LGR-01	115		1022		14.10 14.13	19.32
CS-WB08-LGR-02	193		1020		14.14 14.18	23.78
CS-WB08-LGR-03A	228		1020		14.18 14.21	13.20
CS-WB08-LGR-03B	273		1019		26.47 24.27	20.12
CS-WB08-LGR-04	341	✓	1018		56.08 53.84	51.41

