



3rd Quarter, 2011

(July, August, September)

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MDEQ - RRD
JACKSON DISTRICT OFFICE

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Summary of Activity

CEB = Central Environmental Building
C3 = C3 aquifer
D2 = D2 aquifer
E = E aquifer
SW = Southwest Property Area
Maple = Maple Road

Treatment Activities

07/04/11 - Treatment was shut down briefly due to DTE power failure.

07/15/11 - Treatment was shut down briefly for maintenance.

07/27/11 - System 2A was shut down for maintenance.

07/27/11 - TW-9 (D2) was shut down to adjust the Pond level.

07/28/11 – 07/29/11 Extraction (C3, D2, E, Marshy) and treatment were shut down intermittently due to DTE power failures in the area.

07/29/11 - TW-5 (D2) and TW-11 (E) were shut down to adjust the Pond level.

07/30/11-08/08/11 - SW Extraction was shut down for maintenance.

08/09/11-08/15/11 - Operation was shut down due to bromate analysis error by external lab.

08/12/11 - Extraction was used to adjust the Pond level.

08/12/11-08/24/11 - HZ-S (D2) was used periodically to adjust the Pond level.

08/20/11-08/22/11 – Extraction, treatment and Outfall were shut down due to power outages caused by storms in the area.

08/23/11-08/26/11 - Dolph (C3) was shut down for maintenance.

08/26/11-08/31/11 - TW-10 (C3) was shut down for maintenance.

08/26/11 – 09/06/11 - PW-1 (Marshy) was shut down periodically for maintenance.

09/03/11 - LB-3 (D2) and Treatment were shut down briefly due to a DTE power failure.

09/05/11 - 09/07/11 - TW-20 (C3) was shut down for maintenance.

09/21/11 - TW-5, TW-9, TW-21, LB-1 (D2), TW-10 & TW-20 (C3), SW, TW-11 & TW-18 (E) extraction and treatment were shut down due to a DTE power failure.

Field Activities

07/2011 Completed connection of 6 homes to City services in Expanded PZ

Submittals/Responses

07/20/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ

07/26/11 PLS submitted Monthly Monitoring Report (NPDES) to DEQ
PLS submitted 2nd Quarter 2011 Report to DEQ

07/28/11 DEQ correspondence – response to April 29, 2011 Little Lake Area System
Groundwater Monitoring Plan

08/16/11 DEQ correspondence to PLS re: Western Area Groundwater Monitoring Plan

08/18/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

09/09/11 PLS submitted Expanded Prohibition Zone Well ID Report to DEQ

09/16/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

09/23/11 PLS correspondence to DEQ re: Final Well Identification Report

Anticipated Major Activities for the Next Quarter

- Install Dexter-Allison pipeline extension
- Resolve the dispute matter and implement the Western System Monitoring Plan

Quarterly Performance Analysis

For the months of July, August, September 2011, over 330 pounds of 1,4-dioxane were removed and 89,920,439 gallons of water were extracted from the contaminated aquifers, treated and discharged. The total mass of 1,4-dioxane removed since May 1997 is over 85,300 pounds and the total volume of water discharged since May 1997 is over 6.2 billion gallons.

In general, the performance of the operation was as expected, purging and treating contaminated groundwater to the existing allowable capacities.

Mass Reduction

MASS REDUCTION DETAIL BY AQUIFIER

July 1 - July 31, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	-	0	0.0	0.0	97
TW-2 (Dolph)	1,019,401	23	0.0	1.4	170
TW-3	-	0	0.0	0.0	3
TW-6	-	0	0.0	0.0	66
TW-10	2,717,054	61	0.4	12.6	556
TW-14	-	0	0.0	0.0	131
TW-20	2,220,258	50	0.6	17.8	961
MW-22	-	0.0	0.0	0.0	589
<i>Sub-Totals</i>	5,956,713	133	1	32	
Marshy					
PW-1	149,433	3	0.0	1.1	848
<i>Sub-Totals</i>	149,433	3	0	1	
E					
TW-11	1,384,890	31	0.1	1.6	137
TW-12	-	0	0.0	0.0	23
TW-17	-	0	0.0	0.0	91
TW-18	5,469,918	123	0.4	13.1	288
MW-64	-	0	0.0	0.0	46
	6,834,808	153	0	15	
Southwest					
Active Wells	1,212,670	27	0.1	3.9	386
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	135
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,212,670	27	0	4	
D2					
LB-1	2,854,479	59	0.3	8.2	371
LB-3	1,745,526	39	0.2	6.5	447
HW-S	-	0	0.0	0.0	131
TW-5	-	0	0.0	0.0	894
TW-9	3,543,783	79	0.6	19.4	661
TW-21	3,097,270	69	0.6	17.5	675
MW-11D	5,588,416	125	0.3	8.6	190
<i>Sub-Totals</i>	-	0	0	0	123
	16629474	372.5240591	1.941740937	60.19396903	
Overall Totals	30,783,098	690	3.6	111.8	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFER

August 1 - August 31, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	-	0	0.0	0.0	97
TW-2 (Dolph)	641,720	14	0.0	0.4	74
TW-3	-	0	0.0	0.0	3
TW-6	-	0	0.0	0.0	66
TW-10	1,836,036	37	0.2	7.7	563
TW-14	-	0	0.0	0.0	131
TW-20	1,722,216	39	0.5	16.0	1116
MW-22	-	0.0	0.0	0.0	470
<i>Sub-Totals</i>	3,999,972	90	1	24	
Marshy					
PW-1	132,494	3	0.0	1.1	994
<i>Sub-Totals</i>	132,494	3	0	1	
E					
TW-11	995,178	22	0.1	1.7	210
TW-12	-	0	0.0	0.0	23
TW-17	-	0	0.0	0.0	91
TW-18	4,967,146	111	0.4	12.5	302
MW-64	-	0	0.0	0.0	46
	5,962,324	134	0	14	
Southwest					
Active Wells	466,071	10	0.1	1.8	474
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	135
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	466,071	10	0	2	
D2					
LB-1	2,080,269	46	0.4	11.0	638
LB-3	1,373,752	31	0.2	6.1	535
AE-3	-	0	0.0	0.0	131
HW-S	216,936	5	0.1	1.6	894
TW-5	2,710,156	61	0.5	16.9	746
TW-9	2,262,447	51	0.5	14.2	752
TW-21	5,054,584	113	0.2	5.9	144
MW-11D	-	0	0.0	0.0	123
<i>Sub-Totals</i>	13,678,144	308	2	66	
Overall Totals	24,239,005	543	3.1	97.0	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFER

September 1 - September 30, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	-	0	0.0	0.0	97
TW-2 (Dolph)	1,180,905	27	0.0	0.6	61
TW-3	-	0	0.0	0.0	3
TW-6	-	0	0.0	0.0	65
TW-10	3,832,126	89	0.6	18.0	562
TW-14	-	0	0.0	0.0	131
TW-20	2,018,501	47	0.6	17.7	1055
MW-22	-	0.0	0.0	0.0	470
<i>Sub-Totals</i>	<i>7,031,532</i>	<i>163</i>	<i>1</i>	<i>36</i>	
Marshy					
PW-1	173,229	4	0.0	1.2	839
<i>Sub-Totals</i>	<i>173,229</i>	<i>4</i>	<i>0</i>	<i>1</i>	
E					
TW-11	1,615,837	37	0.1	2.6	195
TW-12	-	0	0.0	0.0	23
TW-17	-	0	0.0	0.0	91
TW-18	5,268,220	122	0.4	13.2	301
MW-64	-	0	0.0	0.0	47
<i>Sub-Totals</i>	<i>6,884,057</i>	<i>169</i>	<i>1</i>	<i>16</i>	
Southwest					
Active Wells	1,584,590	37	0.2	5.5	412
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	135
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	<i>1,584,590</i>	<i>37</i>	<i>0</i>	<i>5</i>	
D2					
LB-1	2,581,311	60	0.4	11.2	521
LB-3	1,718,656	40	0.2	6.9	484
AE-3	-	0	0.0	0.0	131
HW-S	-	0	0.0	0.0	894
TW-5	3,457,651	80	0.7	21.2	736
TW-9	2,554,896	59	0.6	16.6	777
TW-21	5,360,124	124	0.2	6.1	141
MW-11D	-	0	0.0	0.0	113
<i>Sub-Totals</i>	<i>15,672,638</i>	<i>363</i>	<i>2</i>	<i>62</i>	
Overall Totals	31,346,046	726	4.0	120.9	

*SW Active = TW-8, TW-22

MASS REDUCTION SUMMARY
Mass Removed Per Month (lb)

A	B	C	D	E	F
Month	Mass Removed from Unit E Only	Mass Removed from Southwest Only	Mass Removed from Marshy Only	Mass Removed from Units C3 and D2 Only	Total Mass Removed from Units E, D2, C3, Southwest and Marshy
Aug-00	0	0	8	366	374
Sep-00	0	0	9	332	341
Oct-00	0	5	9	583	597
Nov-00	0	3	12	1160	1175
Dec-00	0	0	10	1040	1050
Jan-01	0	0	7	816	823
Feb-01	0	0	7	1056	1063
Mar-01	0	0	11	1379	1390
Apr-01	0	0	9	1140	1149
May-01	0	1	8	990	999
Jun-01	0	2	8	933	943
Jul-01	0	2	10	1121	1133
Aug-01	0	2	13	1018	1033
Sep-01	0	1	9	909	919
Oct-01	0	5	8	896	909
Nov-01	0	4	5	827	836
Dec-01	0	6	4	768	778
Jan-02	0	6	5	753	764
Feb-02	0	4	6	691	701
Mar-02	0	7	7	663	677
Apr-02	0	6	7	682	695
May-02	100	9	7	898	1014
Jun-02	94	9	6	889	998
Jul-02	56	10	7	640	713
Aug-02	53	8	6	745	812
Sep-02	51	8	6	860	925
Oct-02	33	6	4	603	646
Nov-02	57	8	5	880	950
Dec-02	48	9	5	842	904
Jan-03	45	8	6	839	898
Feb-03	37	6	6	767	816
Mar-03	44	8	7	763	822
Apr-03	39	8	3	716	766
May-03	36	13	5	725	779
Jun-03	34	15	5	683	737
Jul-03	29	15	5	678	727
Aug-03	31	15	6	676	728
Sep-03	27	16	5	644	692
Oct-03	34	17	5	701	757
Nov-03	26	12	5	663	706
Dec-03	29	14	6	635	684
Jan-04	28	15	6	667	716
Feb-04	8	11	5	485	509
Mar-04	23	14	7	573	617
Apr-04	27	15	6	537	585
May-04	16	10	5	439	470
Jun-04	21	11	5	499	536
Jul-04	36	12	5	506	559

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Mass Removed Per Month (lb)

A	B	C	D	E	F
Month	Mass Removed from Unit E Only	Mass Removed from Southwest Only	Mass Removed from Marshy Only	Mass Removed from Units C3 and D2 Only	Total Mass Removed from Units E, D2, C3, Southwest and Marshy
Aug-04	54	12	5	480	551
Sep-04	34	9	5	382	430
Oct-04	30	10	5	358	403
Nov-04	30	9	5	395	439
Dec-04	33	11	5	442	491
Jan-05	29	11	4	404	448
Feb-05	26	9	4	390	429
Mar-05	27	9	4	409	450
Apr-05	33	4	3	396	436
May-05	27	8	2	364	401
Jun-05	31	9	3	361	404
Jul-05	31	8	1	279	319
Aug-05	12	6	2	275	295
Sep-05	13	8	2	327	350
Oct-05	16	6	3	297	322
Nov-05	13	7	4	291	315
Dec-05	12	8	4	325	349
Jan-06	115	7	3	308	433
Feb-06	144	7	3	290	444
Mar-06	148	8	3	331	490
Apr-06	125	7	3	291	426
May-06	137	9	3	402	551
Jun-06	119	5	2	329	456
Jul-06	107	8	3	310	427
Aug-06	104	8	2	307	421
Sep-06	97	9	3	300	409
Oct-06	93	9	3	327	432
Nov-06	80	7	2	268	357
Dec-06	68	6	2	238	314
Jan-07	91	8	2	305	406
Feb-07	84	8	2	284	378
Mar-07	91	8	3	306	408
Apr-07	84	8	2	280	374
May-07	82	8	2	288	380
Jun-07	81	8	2	279	370
Jul-07	66	8	2	256	332
Aug-07	73	8	2	270	353
Sep-07	77	8	2	247	334
Oct-07	73	8	2	244	327
Nov-07	68	8	2	263	341
Dec-07	69	8	2	260	339
Jan-08	65	7	2	237	311
Feb-08	53	6	2	203	264
Mar-08	56	7	2	220	285
Apr-08	54	7	2	200	263
May-08	55	7	2	206	270
Jun-08	52	6	2	195	256
Jul-08	39	1	2	139	181

MASS REDUCTION SUMMARY
Mass Removed Per Month (lb)

A	B	C	D	E	F
Month	Mass Removed from Unit E Only	Mass Removed from Southwest Only	Mass Removed from Marshy Only	Mass Removed from Units C3 and D2 Only	Total Mass Removed from Units E, D2, C3, Southwest and Marshy
Aug-08	50	7	2	198	256
Sep-08	43	5	2	177	227
Oct-08	45	5	2	187	239
Nov-08	45	7	2	197	251
Dec-08	45	5	2	187	239
Jan-09	39	8	2	124	173
Feb-09	34	8	2	122	164
Mar-09	35	8	2	122	166
Apr-09	32	6	1	119	158
May-09	45	7	2	201	254
Jun-09	39	5	1	157	202
Jul-09	38	5	1	152	196
Aug-09	39	7	2	202	250
Sep-09	36	6	2	223	267
Oct-09	36	8	2	206	251
Nov-09	32	7	1	167	208
Dec-09	32	8	1	171	212
Jan-10	34	8	1	175	219
Feb-10	30	7	1	161	198
Mar-10	33	7	1	173	214
Apr-10	33	7	1	175	216
May-10	33	7	1	176	217
Jun-10	29	6	1	130	165
Jul-10	20	7	1	171	200
Aug-10	23	7	1	188	220
Sep-10	21	6	1	148	177
Oct-10	24	7	2	185	218
Nov-10	18	6	2	151	176
Dec-10	26	6	2	164	198
Jan-11	25	6	2	163	195
Feb-11	25	7	2	165	198
Mar-11	27	8	2	174	209
Apr-11	22	6	1	143	171
May-11	20	5	1	138	164
Jun-11	17	5	1	104	127
Jul-11	15	4	1	92	112
Aug-11	14	2	1	80	97
Sep-11	16	6	1	98	121
Total to date	5333	964	508	57300	64105