



4th Quarter, 2009

(October, November, December)

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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

10/23/09-10/26/09 - LB-3 (D2) was shut down due to power failure and for repairs.

10/27/09 - System 1B was shut down briefly for maintenance.

10/27/09 - LB-1 & LB-3 (D2) were shut down briefly due to a DTE power failure.

10/27/09 – Maple Road Treatment was shut down briefly due to DTE power outage.

10/30/09 - PW-1 (Marshy) extraction was shut down briefly for maintenance.

12/9/09 - 12/10/09 - Evergreen (D2) extraction and Maple were shut down briefly due to DTE power failures in the area.

12/14/09 - 12/18/09 - Evergreen (D2) extraction was shut down for well rehabilitation of LB-1 & LB-3.

12/14/09 - 12/18/09 - System 1B was shut down to adjust the pond level during Evergreen extraction well maintenance.

12/21/09 - 12/23/09 - AE-3 (D2) was shut down for rehabilitation.

12/25/09 -12/27/09 - PW-1 (Marshy) was shut down briefly due to flow fluctuation.

Field Activities

12-01-09 Boring completed along Wagner Road.

Submittals/Responses

10/13/09 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ

10/14/09 PLS submitted Maple Interim Response Operation Report to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ
PLS submitted Quarterly Report to DEQ

11/12/09 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ

11/12/09 PLS submitted Maple Interim Response Operation Report to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

12/14/09 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ

12/14/09 PLS submitted Maple Interim Response Operation Report to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

Anticipated Major Activities for the Next Quarter

- Finalize the Global Remediation Package
- Install a new extraction well along Wagner Road
- Work with MDEQ to complete the delineation of the west side plume

Quarterly Performance Analysis

For the months of October, November, and December 2009, over 670 pounds of 1,4-dioxane were removed and over 149,400,000 gallons of water were extracted from the contaminated aquifers, treated and discharged. The total mass of 1,4-dioxane removed since May 1997 is 81,749 pounds and the total volume of water discharged since May 1997 is over 5 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 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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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

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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
Total to date	4828	836	482	54146	60292

MASS REDUCTION DETAIL BY AQUIFER

October 1 - October 31, 2009

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 Average Daily Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	1,858,681	42	0.1	2.3	151
TW-2 (Dolph)	2,501,633	56	0.1	1.9	91
TW-3	-	0	0.0	0.0	66
TW-6	-	0	0.0	0.0	97
TW-10	4,035,021	90	1.0	29.7	881
TW-14	2,906,098	65	0.1	2.6	109
TW-20	3,351,506	75	1.8	55.0	1967
MW-22	-	0.0	0.0	0.0	2620
<i>Sub-Totals</i>	14,652,939	328	3	92	
Marshy					
PW-1	224,701	5	0.0	1.5	810
<i>Sub-Totals</i>	224,701	5	0	2	
E					
TW-11	1,674,305	38	0.1	4.6	331
TW-12	-	0	0.0	0.0	23
TW-17	2,980,060	67	0.1	2.7	107
TW-18	10,008,414	224	0.9	28.5	342
MW-64	-	0	0.0	0.0	71
<i>Sub-Totals</i>	14,662,779	328	1	36	
Southwest					
Active Wells*	1,736,664	39	0.2	7.6	526
MW-10d	-	0.0	0.0	0.0	1083
MW-75	-	0	0.0	0.0	257
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,736,664	39	0	8	
D2					
LB-1	4,373,496	98	0.6	18.4	504
LB-3	3,386,224	76	0.5	14.3	504
AE-3	668,984	15	0.0	0.6	113
HW-S	1,070,604	24	0.3	8.1	907
TW-5	4,975,239	111	1.2	37.9	914
TW-9	4,040,746	91	1.1	35.1	1040
MW-11d	-	0	0.0	0.0	290
<i>Sub-Totals</i>	18,515,293	415	4	114	
Overall Totals	49,792,376	1,115	8.1	250.9	

*SW Active = TW-8, TW-13

MASS REDUCTION DETAIL BY AQUIFER

November 1 - November 30, 2009

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	1,615,973	37	0.1	1.8	133
TW-2 (Dolph)	2,411,232	56	0.1	1.6	77
TW-3	-	0	0.0	0.0	60
TW-6	-	0	0.0	0.0	97
TW-10	3,988,887	92	0.8	24.8	744
TW-14	3,029,440	70	0.1	2.7	108
TW-20	3,243,545	75	1.3	40.1	1480
MW-22	-	0.0	0.0	0.0	2620
<i>Sub-Totals</i>	14,289,077	331	2	71	
Marshy					
PW-1	214,674	5	0.0	1.3	734
<i>Sub-Totals</i>	214,674	5	0	1	
E					
TW-11	1,533,176	35	0.1	3.5	275
TW-12	-	0	0.0	0.0	19
TW-17	3,022,637	70	0.1	2.4	96
TW-18	9,850,757	228	0.9	26.1	318
MW-64	-	0	0.0	0.0	71
<i>Sub-Totals</i>	14,406,570	333	1	32	
Southwest					
Active Wells	1,724,999	40	0.2	7.3	510
MW-10d	-	0.0	0.0	0.0	1083
MW-75	-	0	0.0	0.0	257
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,724,999	40	0	7	
D2					
LB-1	4,212,396	98	0.5	15.5	442
LB-3	2,891,260	67	0.3	9.1	376
AE-3	649,446	15	0.0	0.6	113
HW-S	1,036,498	24	0.2	6.1	701
TW-5	4,824,382	112	1.1	32.8	815
TW-9	3,891,308	90	1.1	31.8	979
MW-11d	-	0	0.0	0.0	290
<i>Sub-Totals</i>	17,505,290	405	3	96	
Overall Totals	48,140,610	1,114	6.9	207.6	

*SW Active = TW-8, TW-13

MASS REDUCTION DETAIL BY AQUIFER

December 1 - December 31, 2009

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	1,629,480	37	0.1	1.8	131
TW-2 (Dolph)	2,496,412	56	0.1	1.6	75
TW-3	-	0	0.0	0.0	59
TW-6	-	0	0.0	0.0	97
TW-10	3,750,667	84	0.7	22.4	714
TW-14	3,240,051	73	0.1	2.9	106
TW-20	3,213,170	72	1.5	46.0	1720
MW-22	-	0.0	0.0	0.0	2620
<i>Sub-Totals</i>	14,329,780	321	2	75	
Marshy					
PW-1	212,549	5	0.0	1.4	776
<i>Sub-Totals</i>	212,549	5	0	1	
E					
TW-11	1,514,005	34	0.1	2.8	222
TW-12	-	0	0.0	0.0	18
TW-17	3,287,290	74	0.1	2.6	95
TW-18	10,161,215	228	0.8	26.2	309
MW-64	-	0	0.0	0.0	71
<i>Sub-Totals</i>	14,962,510	335	1	32	
Southwest					
Active Wells	1,787,636	40	0.2	7.7	516
MW-10d	-	0.0	0.0	0.0	1083
MW-75	-	0	0.0	0.0	257
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,787,636	40	0	8	
D2					
LB-1	3,622,976	81	0.5	14.1	467
LB-3	2,494,543	56	0.3	9.3	443
AE-3	520,213	12	0.0	0.5	112
HW-S	1,071,702	24	0.2	7.3	817
TW-5	5,024,721	113	1.1	35.0	834
TW-9	3,659,406	82	1.0	30.0	983
MW-11d	-	0	0.0	0.0	290
<i>Sub-Totals</i>	16,393,561	367	3	96	
Overall Totals	47,686,036	1,068	6.8	211.4	

*SW Active = TW-8, TW-13