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JACKSON DISTRICT OFFICE

January 18, 2012

Ms. Sybil Kolon
Michigan Department of Environmental Quality
Environmental Response Division
Jackson District Office Building
301 E. Louis Glick Highway
Jackson, Michigan 49210

Re: **Quarterly Progress Report**
4th Quarter, 2011
October 1, 2011 to December 30, 2011

Dear Ms. Kolon:

Please find enclosed the Quarterly Progress Report for the period of October 1, 2011 to December 31, 2011.

Should you have any questions regarding this document, please contact me at 734-913-6130.

Sincerely,

Farsad Fotouhi

Farsad Fotouhi
Vice President
Corporate Environmental Engineering

cc: Ms. Celeste R. Gill, MDAG
Michael Caldwell, Esq.



4th Quarter, 2011

(October, November, December)

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Summary of activity during this quarter

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Maps — no maps due or received

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

10/04/11 & 10/06/11 - TW-21 (D2) and TW-18 IE) were shut down briefly for maintenance.

10/24/11 - Treatment was shut down briefly for maintenance.

11/01/11 - Treatment was shut down briefly for maintenance.

11/02/11 - LB-1 (D2) was shut down for maintenance.

11/08/11 - Treatment was shut down briefly for maintenance.

11/09/11 - 11/11/11 - Evergreen extraction (D2) was shut down for start-up of the pipeline extension.

11/14/11 - TW-19 (E) extraction resumed.

11/15/11 - System 1A was shut down briefly for maintenance.

11/23/11 - TW-19 (E) was shut down for maintenance.

11/28/11 - 11/30/11 - TW-19 (E) was shut down for maintenance.

11/29/11 - 11/30/11 - Treatment was shut down briefly for maintenance.

11/30/11 - TW-9 (D2) was shut down briefly due to a DTE power failure.

12/6/11- TW-14 (C3) and TW-17 (E) were started briefly to obtain a sample.

12/7/11 - System-2A was shut down briefly for maintenance.

12/7/11 - TW-21 (D2), TW-10 (C3), and TW-18 (E) were shut down briefly to adjust the Pond level.

12/8/11 - TW-19 (E) was shut down briefly to adjust the Pond level.

12/12/11 - HW-S (D2) was started briefly to obtain a sample.

Field Activities

10 - 11/2011 – Dexter Road pipeline extension was installed.

11/14/11 – TW-19 extraction and transmission began through the Dexter Road pipeline extension.

Submittals/Responses

10/10/11 DEQ correspondence re: Western Area Groundwater Monitoring Plan

10/11/11 DEQ Proposed Resolution of Dispute

10/17/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

10/24/11 DEQ correspondence re: NPDES Inspection

10/26/11 PLS Petition for Dispute Resolution

10/27/11 PLS submitted 3rd Quarter 2011 Report to DEQ

11/17/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

12/07/11 PLS correspondence re: Bethlehem Cemetery Well Exemption

12/15/11 PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted Monthly Monitoring Report (NPDES) to DEQ

12/22/11 DEQ correspondence re: Eastern Area Monitoring Plan

Anticipated Major Activities for the Next Quarter

- Resolve the dispute and implement a final remedy for the Western System monitoring plan
- Finalize the Eastern Area monitoring plan
- Replace the pitless adaptor for TW-18 (well will be shut down for 3 to 5 days)
- Rehabilitation of a few extraction wells

Quarterly Performance Analysis

For the months of October, November, December 2011, over 432 pounds of 1,4-dioxane were removed and 99,460,000 gallons of water were extracted from the contaminated aquifers, treated and discharged. The total mass of 1,4-dioxane removed since May 1997 is over 86,995 pounds and the total volume of water discharged since May 1997 is over 6.38 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
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
Oct-11	17	6	1	113	137
Nov-11	33	6	1	105	145
Dec-11	45	6	1	98	150
Total to date	5428	980	511	57616	64537

MASS REDUCTION DETAIL BY AQUIFER

October 1 - October 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)	1,177,383	26	0.0	0.6	61
	TW-3	-	0	0.0	0.0	3
	TW-6	-	0	0.0	0.0	52
	TW-10	4,058,881	91	0.6	20.1	595
	TW-14	-	0	0.0	0.0	131
	TW-20	2,269,656	51	0.6	20.0	1056
	MW-22	-	0.0	0.0	0.0	750
	<i>Sub-Totals</i>	7,505,920	168	1	41	
Marshy						
	PW-1	172,326	4	0.0	1.2	814
	<i>Sub-Totals</i>	172,326	4	0	1	
E						
	TW-11	1,646,093	37	0.1	2.6	186
	TW-12	-	0	0.0	0.0	23
	TW-17	-	0	0.0	0.0	91
	TW-18	5,619,167	126	0.5	14.6	311
	MW-64	-	0	0.0	0.0	49
		7,265,260	163	1	17	
Southwest						
	TW-11	1,646,093	37	0.1	2.6	186
	TW-12	-	0.0	0.0	0.0	23
	TW-17	-	0	0.0	0.0	91
	TW-18	5,619,167	125.9	0.5	14.6	311
	<i>Sub-Totals</i> MW-64	-	0	0	0	49
		7,265,260	163	1	17	
D2						
	LB-1	2,681,512	60	0.4	11.9	531
	LB-3	1,787,173	40	0.4	12.7	854
	AE-3	-	0	0.0	0.0	131
	HW-S	-	0	0.0	0.0	894
	TW-5	3,505,193	79	0.7	22.6	771
	TW-9	2,681,766	60	0.6	18.6	832
	TW-21	5,752,740	129	0.2	6.7	144
	<i>Sub-Totals</i> MW-11D	-	0	0	0	100
		16408384.13	367.5713291	2.338178959	72.48354771	
Overall Totals		32,935,926	738	4.4	137.1	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFER

November 1 - November 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	102
TW-2 (Dolph)	1,119,353	26	0.0	0.6	60
TW-3	-	0	0.0	0.0	2
TW-6	-	0	0.0	0.0	46
TW-10	3,554,949	82	0.6	18.4	622
TW-14	-	0	0.0	0.0	131
TW-20	2,204,732	51	0.7	19.8	1074
MW-22	-	0.0	0.0	0.0	1919
<i>Sub-Totals</i>	<i>6,879,034</i>	<i>159</i>	<i>1</i>	<i>39</i>	
Marshy					
PW-1	153,264	4	0.0	1.1	863
<i>Sub-Totals</i>	<i>153,264</i>	<i>4</i>	<i>0</i>	<i>1</i>	
E					
TW-11	1,688,501	39	0.1	2.7	194
TW-12	-	0	0.0	0.0	24
TW-17	-	0	0.0	0.0	91
TW-18	5,090,507	118	0.5	13.9	327
TW-19	1,689,689	39	0.6	16.5	1172
MW-64	-	0	0.0	0.0	43
	<i>8,468,697</i>	<i>196</i>	<i>1</i>	<i>33</i>	
Southwest					
Active Wells	1,480,269	34	0.2	5.5	447
MW-10d	-	0.0	0.0	0.0	567
MW-75	-	0	0.0	0.0	25
MW-45d	-	0.0	0.0	0.0	249
<i>Sub-Totals</i>	<i>1,480,269</i>	<i>34</i>	<i>0</i>	<i>6</i>	
D2					
LB-1	2,503,694	58	0.4	12.6	601
LB-3	1,684,403	39	0.3	8.2	578
HW-S	-	0	0.0	0.0	894
TW-5	3,336,458	77	0.7	22.0	791
TW-9	2,593,371	60	0.6	17.7	817
TW-21	5,143,247	119	0.2	6.0	143
MW-11D	-	0	0.0	0.0	102
	<i>15,261,173</i>	<i>353</i>	<i>2.2</i>	<i>66.3</i>	
<i>Sub-Totals</i>					
Overall Totals	32,242,437	746	4.8	144.9	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFER

December 1 - December 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	112
TW-2 (Dolph)	1,136,008	25	0.0	0.6	58
TW-3	-	0	0.0	0.0	0
TW-6	-	0	0.0	0.0	46
TW-10	3,027,828	68	0.5	14.2	561
TW-14	4,772	0	0.0	0.0	40
TW-20	2,278,471	51	0.6	19.7	1035
MW-22	-	0.0	0.0	0.0	1919
Sub-Totals	6,447,079	144	1	34	
Marshy					
PW-1	119,149	3	0.0	0.9	900
Sub-Totals	119,149	3	0	1	
E					
TW-11	1,655,008	37	0.1	2.5	183
TW-12	-	0	0.0	0.0	26
TW-17	5,195	0	0.0	0.0	201
TW-18	4,419,741	99	0.4	11.9	323
TW-19	4,454,205	100	1.0	30.8	830
MW-64	-	0	0.0	0.0	43
Sub-Totals	10,534,149	236	1	45	
Southwest					
Active Wells	1,505,721	34	0.2	5.7	453
MW-10d	-	0.0	0.0	0.0	567
MW-75	-	0	0.0	0.0	25
MW-45d	-	0.0	0.0	0.0	249
Sub-Totals	1,505,721	34	0	6	
D2					
LB-1	2,667,276	60	0.4	12.0	539
LB-3	1,788,266	40	0.2	6.8	455
HW-S	1,004	0	0.0	0.0	645
TW-5	3,490,569	78	0.7	21.7	745
TW-9	2,681,086	60	0.6	17.8	796
TW-21	4,500,468	101	0.2	4.9	135
MW-11D	-	0	0.0	0.0	102
Sub-Totals	15,128,669	339	2.0	63.2	
Overall Totals	33,734,767	756	4.8	149.5	

*SW Active = TW-8, TW-22