

Tables

Table 1 - Groundwater and Surface Water Elevation Data - Part 301 Permit No. 12-38-0010-P

Aggregate Industries -- Chelsea Operations
Waterloo Township, Jackson County, Michigan

Location	Coordinates		Well Depth (ft bgs)	Screen Depth (ft bgs)	Top of Casing (ft amsl)	Date	Surface Water Elevation (ft amsl)	Depth to Water (ft bgs)	Static Water Level Elevation (ft amsl)	Comments
	Northing	Easting								
MW-1	N42.32649	W084.13039	25	15-25	987.90	08/29/02	977.84	10.06	977.84	ASTI
						09/20/02	976.94	10.96	976.94	ASTI
						01/26/04	976.09	11.81	976.09	ASTI
						03/03/04	976.21	11.69	976.21	ASTI
						04/19/04	976.18	11.72	976.18	ASTI
						02/13/06	977.07	10.83	977.07	FTC&H begins monitoring
						10/26/06	978.26	9.64	978.26	
						11/02/06				Well abandoned
MW-2	N42.32887	W084.13489	30	20-30	990.10	08/29/02	976.02	14.08	976.02	ASTI
						09/20/02	976.04	14.06	976.04	ASTI
						01/26/04	975.08	15.02	975.08	ASTI
						03/03/04	975.19	14.91	975.19	ASTI
						04/19/04	975.70	14.40	975.70	ASTI
						02/13/06	975.87	14.23	975.87	FTC&H begins monitoring
						10/26/06	974.63	15.47	974.63	
						08/24/07	976.36	13.74	976.36	
						09/13/07	976.51	13.59	976.51	
						10/02/07	976.17	13.93	976.17	
						11/13/07	976.60	13.50	976.60	
						12/06/07	976.80	13.30	976.80	
						01/09/08	977.53	12.57	977.53	
						02/15/08	977.81	12.29	977.81	
						03/14/08	977.87	12.23	977.87	
						04/04/08	977.74	12.36	977.74	
						05/29/08	976.87	13.23	976.87	
						06/17/08	976.97	13.13	976.97	
						07/11/08	976.86	13.24	976.86	
						08/08/08	976.39	13.71	976.39	
						09/04/08	975.95	14.15	975.95	
						10/06/08	976.68	13.42	976.68	Large/many rain events in September 2008
						11/10/08	976.13	13.97	976.13	
						12/03/08	976.08	14.02	976.08	
						01/09/09	976.48	13.62	976.48	
						02/09/09	976.33	13.77	976.33	
						03/13/09	977.13	12.97	977.13	
						04/03/09	977.21	12.89	977.21	
						05/08/09	977.50	12.60	977.50	
						06/26/09	977.65	12.45	977.65	
						07/28/09	977.26	12.84	977.26	
						08/25/09	976.40	13.70	976.40	
						09/25/09	975.73	14.37	975.73	
						10/28/09	975.60	14.50	975.60	
						11/24/09	976.14	13.96	976.14	
						12/16/09	976.29	13.81	976.29	
						01/13/10	976.27	13.83	976.27	
						02/18/10	976.13	13.97	976.13	
						03/11/10	976.19	13.91	976.19	
						04/21/10	976.39	13.71	976.39	
						05/05/10	976.39	13.71	976.39	
						06/25/10	977.20	12.90	977.20	Large/many rain events in June 2010
						07/22/10	976.39	13.71	976.39	
						08/26/10	975.98	14.12	975.98	
09/24/10	975.68	14.42	975.68							
10/21/10	975.58	14.52	975.58							
11/18/10	975.35	14.75	975.35							
12/13/10	975.75	14.35	975.75							
01/11/11	975.84	14.26	975.84							
02/04/11	975.79	14.31	975.79							
03/11/11	976.03	14.07	976.03							
04/29/11	976.30	13.80	976.30							
05/25/11	976.60	13.50	976.60							
06/27/11	977.06	13.04	977.06							
07/22/11	976.43	13.67	976.43							
08/19/11	977.41	12.69	977.41							
09/30/11	977.30	12.80	977.30							
10/28/11	977.13	12.97	977.13							
11/23/11	977.01	13.09	977.01							
12/28/11	977.15	12.95	977.15							
01/27/12	977.51	12.59	977.51							
02/22/12	977.55	12.55	977.55							
03/26/12	977.61	12.49	977.61							
04/27/12	976.78	13.32	976.78							
05/30/12	976.71	13.39	976.71							
06/29/12	975.92	14.18	975.92							
07/26/12	975.55	14.55	975.55							
08/23/12	975.25	14.85	975.25							
09/28/12	974.98	15.12	974.98							
10/26/12	975.12	14.98	975.12							
11/29/12	975.26	14.84	975.26							
12/21/12	975.31	14.79	975.31							
MW-3	N42.31787	W084.14101	30	20-30	996.80	08/29/02	981.08	15.72	981.08	ASTI
						09/20/02	980.62	16.18	980.62	ASTI
						01/26/04	979.35	17.45	979.35	ASTI
						03/03/04	979.31	17.49	979.31	ASTI
						04/19/04	979.88	16.92	979.88	ASTI

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Location	Coordinates		Well Depth (ft bgs)	Screen Depth (ft bgs)	Top of Casing (ft amsl)	Date	Surface Water Elevation (ft amsl)	Depth to Water (ft bgs)	Static Water Level Elevation (ft amsl)	Comments
	Northing	Easting								
MW-3 (cont.)						02/13/06	16.24	980.56	FTC&H begins monitoring	
						10/26/06	15.80	981.00		
						08/24/07	14.54	982.26		
						09/13/07	14.68	982.12		
						10/02/07	14.89	981.91		
						11/13/07	15.28	981.52		
						12/06/07	15.27	981.53		
						01/09/08	14.66	982.14		
						02/15/08	14.24	982.56		
						03/14/08	14.01	982.79		
						04/04/08	13.74	983.06		
						05/29/08	14.30	982.50		
						06/17/08	14.33	982.47		
						07/11/08	14.50	982.30		
						08/08/08	14.99	981.81		
						09/04/08	15.48	981.32		
						10/06/08	15.14	981.66	Large/many rain events in September 2008	
						11/10/08	15.53	981.27		
						12/03/08	15.53	981.27		
						01/09/09	15.04	981.76		
						02/09/09	15.20	981.60		
						03/13/09	14.39	982.41		
						04/03/09	14.36	982.44		
						05/08/09	14.10	982.70		
						06/26/09	13.72	983.08		
						07/28/09	14.40	982.40		
						08/25/09	14.76	982.04		
						09/25/09	15.08	981.72		
						10/28/09	15.00	981.80		
						11/24/09	15.22	981.58		
						12/16/09	15.27	981.53		
						01/13/10	15.38	981.42		
						02/18/10	15.58	981.22		
						03/11/10	15.48	981.32		
						04/21/10	15.36	981.44		
						05/05/10	15.40	981.40		
						06/25/10	14.33	982.47	Large/many rain events in June 2010	
						07/22/10	14.73	982.07		
						08/26/10	15.00	981.80		
						09/24/10	15.47	981.33		
						10/21/10	15.77	981.03		
						11/18/10	16.00	980.80		
						12/13/10	16.02	980.78		
						01/11/11	16.18	980.62		
						02/04/11	16.36	980.44		
						03/11/11	15.70	981.10		
						04/29/11	14.79	982.01		
						05/25/11	14.70	982.10		
06/27/11	14.50	982.30								
07/22/11	15.05	981.75								
08/19/11	13.96	982.84								
09/30/11	14.44	982.36								
10/28/11	14.57	982.23								
11/23/11	14.68	982.12								
12/28/11	14.05	982.75								
01/27/12	13.97	982.83								
02/22/12	14.05	982.75								
03/26/12	13.57	983.23								
04/27/12	14.06	982.74								
05/30/12	14.51	982.29								
06/29/12	14.82	981.98								
07/26/12	15.46	981.34								
08/23/12	15.82	980.98								
09/28/12	16.25	980.55								
10/26/12	16.33	980.47								
11/29/12	16.59	980.21								
12/21/12	16.67	980.13								
MW-4	N42.31845	W084.13161	55	45-55	1022.90	08/29/02	40.71	982.19	ASTI	
						09/20/02	41.00	981.90	ASTI	
						01/26/04	42.30	980.60	ASTI	
						03/03/04	42.26	980.64	ASTI	
						04/19/04	41.64	981.26	ASTI	
						02/13/06	41.04	981.86	FTC&H begins monitoring	
						10/26/06	40.53	982.37		
						08/24/07	38.91	983.99		
						09/13/07	39.26	983.64		
						10/02/07	39.56	983.34		
						11/13/07	40.15	982.75		
						12/06/07	40.09	982.81		
						01/09/08	39.21	983.69		
						02/15/08	38.85	984.05		
						03/14/08	38.44	984.46		
						04/04/08	38.32	984.58		
						05/29/08	38.92	983.98		
06/17/08	38.99	983.91								

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	Northing	Easting								
MW-4 (cont.)						07/11/08	39.21	983.69		
						08/08/08	39.76	983.14		
						09/04/08	40.26	982.64		
						10/06/08	40.11	982.79	Large/many rain events in September 2008	
						11/10/08	40.53	982.37		
						12/03/08	40.55	982.35		
						01/09/09	39.81	983.09		
						02/09/09	39.85	983.05		
						03/13/09	39.05	983.85		
						04/03/09	38.82	984.08		
						05/08/09	38.51	984.39		
						06/26/09	38.06	984.84		
						07/28/09	38.82	984.08		
						08/25/09	39.35	983.55		
						09/25/09	39.78	983.12		
						10/28/09	39.86	983.04		
						11/24/09	40.10	982.80		
						12/16/09	40.15	982.75		
						01/13/10	40.26	982.64		
						02/18/10	40.45	982.45		
						03/11/10	40.23	982.67		
						04/21/10	40.06	982.84		
						05/05/10	40.04	982.86		
						06/25/10	38.66	984.24	Large/many rain events in June 2010	
						07/22/10	39.19	983.71		
						08/26/10	39.61	983.29		
						09/24/10	40.14	982.76		
						10/21/10	40.53	982.37		
						11/18/10	40.83	982.07		
						12/13/10	40.95	981.95		
						01/11/11	41.07	981.83		
						02/04/11	41.27	981.63		
						03/11/11	40.59	982.31		
						04/29/11	39.43	983.47		
						05/25/11	39.13	983.77		
						06/27/11	38.72	984.18		
						07/22/11	39.36	983.54		
						08/19/11	38.36	984.54		
						09/30/11	39.08	983.82		
						10/28/11	39.34	983.56		
						11/23/11	39.48	983.42		
						12/28/11	38.59	984.31		
01/27/12	38.51	984.39								
02/22/12	38.60	984.30								
03/26/12	38.49	984.41								
04/27/12	38.72	984.18								
05/30/12	39.16	983.74								
06/29/12	39.67	983.23								
07/26/12	40.24	982.66								
08/23/12	40.69	982.21								
09/28/12	41.21	981.69								
10/26/12	41.45	981.45								
11/29/12	41.71	981.19								
12/21/12	41.82	981.08								
MW-5	N42.31192	W084.13466	50	40-50	1017.20	08/29/02	35.58	981.62	ASTI	
						09/20/02	35.79	981.41	ASTI	
						01/26/04	37.19	980.01	ASTI	
						03/03/04	37.27	979.93	ASTI	
						04/19/04	36.74	980.46	ASTI	
						02/13/06	36.39	980.81	FTC&H begins monitoring	
						10/26/06	35.73	981.47		
						08/24/07	34.47	982.73		
						09/13/07	34.54	982.66		
						10/02/07	34.78	982.42		
						11/13/07	35.16	982.04		
						12/06/07	35.34	981.86		
						01/09/08	35.30	981.90		
						02/15/08	34.42	982.78		
						03/14/08	33.90	983.30		
						04/04/08	33.85	983.35		
						05/29/08	34.13	983.07		
						06/17/08	34.23	982.97		
						07/11/08	34.44	982.76		
						08/08/08	34.76	982.44		
						09/04/08	35.14	982.06		
						10/06/08	35.28	981.92	Large/many rain events in September 2008	
						11/10/08	35.53	981.67		
						12/03/08	35.54	981.66		
						01/09/09	35.23	981.97		
						02/09/09	35.15	982.05		
						03/13/09	34.75	982.45		
						04/03/09	34.37	982.83		
						05/08/09	34.02	983.18		
						06/26/09	33.62	983.58		
						07/28/09	34.01	983.19		

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	Northing	Easting								
MW-5 (cont.)						08/25/09	34.40	982.80		
						09/25/09	34.78	982.42		
						10/28/09	35.08	982.12		
						11/24/09	35.15	982.05		
						12/16/09	35.28	981.92		
						01/13/10	35.29	981.91		
						02/18/10	35.50	981.70		
						03/11/10	35.51	981.69		
						04/21/10	35.15	982.05		
						05/05/10	35.23	981.97		
						06/25/10	34.38	982.82	Large/many rain events in June 2010	
						07/22/10	34.50	982.70		
						08/26/10	34.71	982.49		
						09/24/10	35.06	982.14		
						10/21/10	35.42	981.78		
						11/18/10	35.73	981.47		
						12/13/10	35.93	981.27		
						01/11/11	36.00	981.20		
						02/04/11	36.16	981.04		
						03/11/11	35.96	981.24		
						04/29/11	35.27	981.93		
						05/25/11	34.68	982.52		
						06/27/11	34.15	983.05		
						07/22/11	34.56	982.64		
						08/22/11	33.98	983.22		
						09/30/11	34.37	982.83		
						10/28/11	34.55	982.65		
						11/23/11	34.73	982.47		
						12/28/11	34.08	983.12		
						01/27/12	34.01	983.19		
						02/22/12	33.83	983.37		
						03/26/12	33.89	983.31		
04/27/12	34.01	983.19								
05/30/12	34.27	982.93								
06/29/12	34.64	982.56								
07/26/12	35.10	982.10								
08/23/12	35.59	981.61								
09/28/12	36.11	981.09								
10/26/12	36.46	980.74								
11/29/12	36.61	980.59								
12/21/12	36.82	980.38								
AI Lake-SE	N42.32668	W084.13218				02/13/06	976.75		GPS accuracy 18 feet	
AI Lake-N	N42.32744	W084.13376				02/13/06	976.24		GPS accuracy 21 feet	
AI Lake-SW Freshwater Lake*-SW	N42.32587	W084.13441				10/26/06	974.83		Elevation surveyed from MW-2	
						08/24/07	976.60		Elevation surveyed from BM-1	
						09/13/07	976.27		AI Lake re-named Freshwater Lake per Part 301 permit	
						10/02/07				
						11/13/07	977.43			
						12/06/07	977.63			
						01/09/08	978.35			
						02/15/08	978.63			
						03/14/08	978.75			
						04/04/08	977.17			
						05/29/08	976.56			
						06/17/08	977.47			
						07/11/08	977.10			
						08/08/08	976.37			
						09/04/08	976.12			
						10/06/08	977.46		Large/many rain events in September 2008	
						11/10/08	976.72			
						12/03/08	976.93			
						01/09/09	975.33			
						02/09/09	977.23			
						03/13/09	977.88			
						04/03/09	977.65			
						05/08/09	977.80			
						06/26/09	978.63			
						07/28/09	978.52			
						08/25/09	976.59			
						09/25/09	975.23			
						10/28/09	975.62			
						11/24/09	977.21			
						12/16/09	977.33			
						01/13/10	977.28			
						02/18/10	977.09			
03/11/10	977.07									
04/21/10	977.17									
05/05/10	977.22									
06/25/10	977.16		Large/many rain events in June 2010							
07/22/10	976.43									
08/26/10	975.70									
09/24/10	975.54									
10/21/10	976.33									
11/18/10	976.13									
12/13/10	976.76									

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	Northing	Easting								
Freshwater Lake (cont.)						01/11/11	976.76			
						02/04/11	976.69			
						03/11/11	976.94			
						04/29/11	976.25			
						05/25/11	976.81			
						06/27/11	977.81			
						07/22/11	976.72			
						08/19/11	978.69			
						09/30/11	978.60			
						10/28/11	978.38			
						11/23/11	978.18			
						12/28/11	977.38			
						01/27/12	978.65			
						02/22/12	978.67			
						03/26/12	977.40			Pump on, but no water returning from sediment ponds
						04/27/12	976.82			
						05/30/12	976.90			
06/29/12	976.26									
07/26/12	975.76									
08/23/12	975.54									
09/28/12	975.15									
10/26/12	975.84									
11/29/12	976.04									
12/21/12	976.15									
Pond Lily Lake	N42.31729	W084.14114				10/26/06	981.44			Elevation Surveyed from MW-3, GPS accuracy 19 ft
						08/24/07	982.63			Elevation Surveyed from BM-2
						09/13/07	982.50			
						10/02/07	982.44			
						11/13/07	982.02			
						12/06/07	982.19			
						01/09/08	982.57			
						02/15/08	982.97			
						03/14/08	983.16			
						04/04/08	983.34			
						05/29/08	982.82			
						06/17/08	982.82			
						07/11/08	982.78			
						08/08/08	982.37			
						09/04/08	981.98			
						10/06/08	982.25			Large/many rain events in September 2008
						11/10/08	982.05			
						12/03/08	982.08			
						01/09/09	982.30			
						02/09/09	982.28			
						03/13/09	982.71			
						04/03/09	982.74			
						05/08/09	982.89			
						06/26/09	983.25			
						07/28/09	982.80			
						08/25/09	982.56			
						09/25/09	982.35			
						10/28/09	982.43			
						11/24/09	982.28			
						12/16/09	982.33			
						01/13/10	982.24			
						02/18/10	982.10			
						03/11/10	982.12			
						04/21/10	982.03			
						05/05/10	982.02			
						06/25/10	982.64			Large/many rain events in June 2010
						07/22/10	982.54			
						08/26/10	982.37			
						09/24/10	982.08			
						10/21/10	981.78			
						11/18/10	981.58			
						12/13/10	981.64			
						01/11/11	981.56			
02/04/11	981.65									
03/11/11	981.73									
04/29/11	982.27									
05/25/11	982.48									
06/27/11	982.55									
07/22/11	982.16									
08/19/11	983.09									
09/30/11	982.96									
10/28/11	982.85									
11/23/11	982.80									
12/28/11	983.16									
01/27/12	983.28									
02/22/12	983.22									
03/26/12	983.27									
04/27/12	983.08									
05/30/12	982.67									
06/29/12	982.43									
07/26/12	981.95									

Table 1 - Groundwater and Surface Water Elevation Data - Part 301 Permit No. 12-38-0010-P

Aggregate Industries -- Chelsea Operations
 Waterloo Township, Jackson County, Michigan

Location	Coordinates		Well Depth (ft bgs)	Screen Depth (ft bgs)	Top of Casing (ft amsl)	Date	Surface Water Elevation (ft amsl)	Depth to Water (ft bgs)	Static Water Level Elevation (ft amsl)	Comments		
	Northing	Easting										
Pond Lily Lake (cont.)						08/23/12	981.66					
						09/28/12	981.32					
						10/26/12	981.31					
						11/29/12	981.06					
						12/21/12	981.10					
Clear Lake	N42.33242	W084.15166				08/29/07	966.35			Elevation Surveyed from BM-3		
						09/13/07	966.20			Note: USGS Topo shows lake elevation at 968 ft amsl		
						10/02/07	966.13					
						11/13/07	966.22					
						12/06/07	966.41					
						01/09/08	966.49					
						02/15/08	966.33					
						03/14/08	966.26					
						04/04/08	966.35					
						N42.33242	W084.15166	05/29/08	966.15			Elevation Surveyed from BM-4
								06/17/08	966.25			
								07/11/08	966.26			
								08/08/08	966.06			
								09/04/08	965.89			
								10/06/08	966.20			Large/many rain events in September 2008
	11/10/08	966.33										
	12/03/08	966.47										
	01/09/09	966.31										
	02/09/09	966.17										
	03/13/09	966.54										
	04/03/09	966.75										
	05/08/09	966.29										
	06/26/09	966.35										
	07/28/09	966.16										
	08/25/09	966.18										
	09/25/09	966.23										
	10/28/09	966.39										
	11/24/09	966.46										
	12/16/09	966.35										
	01/13/10	966.34										
	02/18/10	966.32										
	03/11/10	966.31										
	04/21/10	966.21										
	05/05/10	966.31										
	06/25/10	966.35						Large/many rain events in June 2010				
	07/22/10	966.28										
	08/26/10	966.14										
	09/24/10	966.02										
	10/21/10	965.93										
	11/18/10	965.94										
	12/13/10	966.18										
	01/11/11	966.29										
	02/04/11	966.36										
	03/11/11	966.54										
	04/29/11	966.50										
05/25/11	966.57											
06/27/11	966.22											
07/22/11	966.09											
08/19/11	966.31											
09/30/11	966.32											
10/28/11	966.30											
11/23/11	966.50											
12/28/11	966.35											
01/27/12	966.39											
02/22/12	966.30											
03/26/12	966.32											
04/27/12	966.20											
05/30/12	966.06											
06/29/12	966.08											
07/26/12	965.76											
08/23/12	965.69											
09/28/12	965.53											
10/26/12	965.73											
11/26/12	965.74											
12/21/12	965.93											

Notes:
 Wells are 2-inch PVC with 10-foot PVC screens (0.001-inch slot). Coarse filter pack to 2 feet above screen. Finished upright with steel covers and expanding well caps.
 ASTI elevation survey to USGS Datum (2002) - reference: Hydrogeologic Investigation Report to Aggregate Industries, Waterloo Township, Michigan, dated September 25, 2002.
 *Freshwater Lake is the name of the created water body under Part 301 Permit No. 06-38-0043-P.