

January 2, 2018



Environmental Programs Coordinator  
Appleton Wastewater Treatment Facility  
2006 East Newberry Street  
Appleton, Wisconsin 54915-2758

Attn: Mr. Brian Kreski (electronic)  
Phone: (920) 832-2353  
Mobile: (920) 419-0649  
Fax: (920) 832-5949

Re: **2017 Fourth Quarter Compliance Monitoring Report, Industrial User (Wastewater Discharge) Permit #15-21**  
N.W. Mauthe Superfund Site  
725 South Outagamie Street  
Appleton, Wisconsin  
Terracon Project No. 58117057  
BRRTS No. 02-45-000127

Dear Mr. Kreski:

Terracon Consultants, Inc. (Terracon) is pleased to submit this quarterly process compliance report for the N.W. Mauthe Superfund site, 725 South Outagamie Street, Appleton, Wisconsin. This report is submitted in conformance with the City of Appleton Industrial User No. 15-21, issued on May 31, 2015. This report covers the period of October 1, 2017, through December 31, 2017, which included monthly effluent compliance monitoring sampling. The monthly results are summarized in the attached Table 1.

The flow monitoring and sampling activities were conducted monthly at the effluent discharge point, prior to Outfall 001. During this reporting period, local limit compliance monitoring samples were collected by the City of Appleton on November 9, 2017. However, Terracon has not yet received a copy of the results. Historical results are presented in the attached Table 2.

As noted in the 2012 Fourth Quarter Process Compliance Report the system was replumbed during October 2012. Consequently, a greater volume of water is retained within the equalization tank and sampling occurs directly from the port on the equalization tank discharge pipe. Due to the improvement in the system plumbing, Terracon has collected the composite effluent sample directly from the tank effluent piping during the 2017 sampling events.

Approximately 250 milliliters (mL) of the collected sample was transferred to a new, clean 250-mL plastic bottle provided by the laboratory. This unfiltered and unpreserved sample was



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## 2017 Fourth Quarter Compliance Monitoring Report

N.W. Mauthe Superfund Site ■ Appleton, Wisconsin

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submitted to Pace Analytical (Pace) laboratory (Green Bay, Wisconsin) for analysis of hexavalent chromium. An additional aliquot of the original sample was filtered through a 0.45 micron ( $\mu\text{m}$ ) filter and then transferred to a clean, new 250-mL plastic bottle with nitric acid preservative provided by the laboratory. This filtered, preserved sample was submitted to Pace for analysis of total dissolved chromium. The laboratory analytic test reports and chain-of-custody record for each of the three monthly sampling rounds are attached. After the laboratory samples were prepared, the pH of the remaining collected discharge sample was measured with an Oakton pHTestrs.

The attached table summarizes the total metered discharge readings, pH measurements, and laboratory test results. Monthly discharge totals were calculated by linear interpolation of the actual meter readings. Total discharge during the reporting period was 97,160 gallons with a mean daily flow of approximately 1,056 gallons per day. Based on the laboratory results, there were no exceedances during this reporting period from Outfall 001.

Scott A. Hodgson, P.G. performed all the sample collection and monitoring during this reporting period. The following certification statement is required by Section 2 0-106, Chapter 20, Utilities:

"I (Scott Hodgson) certify under penalty of law that this document and all attachments were prepared under my direction or supervision in conformance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**2017 Fourth Quarter Compliance Monitoring Report**

N.W. Mauthe Superfund Site ■ Appleton, Wisconsin

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Please call (920-791-9206) or email ([sahodgson@terracon.com](mailto:sahodgson@terracon.com)) if you have any questions or comments regarding the information provided or need additional information.

Sincerely,

**Terracon**

Scott A. Hodgson, P.G.

Senior Project Manager

SAH:sah\N:\Projects\2011\58117057\Working Files\Pre-Treatment Permit\Process Compliance reports\Terracon 2017\Fourth Quarter\Fourth Quarter 2017 Process Compliance.doc

Attachments: Table 1  
Table 2  
Laboratory Analytic Test Reports

Copies to: Jennifer Borski, WDNR-Oshkosh (Electronic)  
File

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001						Manhole #1			Manhole #2			
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
09/25/07		8,290,363											
	10/01/07	8,300,685											
10/01/07		8,301,251	10,888										
10/02/07		8,301,251	0		7.7								
10/15/07		8,324,675	23,424										
10/16/07		8,324,675	0		7.4	1.700			6.93	3.9		7.30	0.60
10/22/07		8,355,957	31,282										
10/23/07		8,355,957	0		7.5	1.500			7.04	3.75		NA	NA
10/29/07		8,370,413	14,456	October									
10/30/07		8,370,413	0	71,891	7.4	1.900			NA	NA		NA	NA
	11/01/07	8,372,575											
11/05/07		8,377,912	7,499										
11/06/07		8,377,912	0	November	8.3	1.900	1.300		7.8	4.30		8.2	0.18
11/16/07		8,386,583	8,671	21,587									
	12/01/07	8,394,162											
12/03/07		8,395,372	8,789										
12/04/07		8,395,372	0		8.6	3.100	2.500		8.4	4.60		8.6	0.16
12/12/07		8,399,522	4,150	December									
12/21/07		8,402,508	2,986	25,977									
	01/01/08	8,420,139											
01/01/08		8,420,868	18,360										
01/02/08		8,420,868	0		8.7	1.300	1.200		8.4	4.50		8.7	0.62
01/02/08		8,421,628	760										
01/10/08		8,459,333	37,705										
01/15/08		8,479,244	19,911	January									
01/25/08		8,497,063	17,819	84,612									
	02/01/08	8,504,750											
02/01/08		8,505,562	8,499										
02/03/08		8,507,408	1,846	February									
02/04/08		8,507,408	0	22,861	8.9	1.700	1.600		8.7	2.60		8.8	0.70
	03/01/08	8,527,611											
03/02/08		8,528,931	21,523	March	9.0	2.9	2.500		8.7	3.60		8.8	2.50
03/31/08		8,653,211	124,280	128,713									
	04/01/08	8,656,324											
04/01/08		8,657,629	4,418		9.0	1.6	1.530		8.7	1.60		8.9	1.45
04/01/08		8,661,298	3,669										
04/04/08		8,682,788	21,490										
04/07/08		8,697,084	14,296										
04/08/08		8,697,084	0		9.1	0.063			8.7	1.40		8.9	0.54
04/14/08		8,790,128	93,044										
04/15/08		8,790,128	0		9.1	0.36			8.7	0.90		8.8	0.17
04/15/08		8,797,710	7,582					Installed			Installed		
04/16/08		8,804,525	6,815					1,074			2,804		
04/16/08		8,806,972	2,447					1,589			3,661		
04/21/08		8,826,834	19,862					5,176			11,176		
04/22/08		8,826,834	0		9.1	0.87		5,649	8.8	0.95	12,292	8.9	0.55
04/28/08		8,860,276	33,442	April				13,291			36,802		
04/29/08		8,860,276	0	212,193	9.1	0.51		14,721	8.8	0.96	40,534	9.1	0.43
	05/01/08	8,868,517											
05/05/08		8,890,994	30,718					22,372			59,203		
05/06/08		8,890,994	0		9.1	0.95	0.679	22,844	8.7	1.14	60,259	8.8	0.62
05/12/08		8,907,573	16,579					28,018			70,853		
05/13/08		8,907,573	0		9.2	0.69		28,487	8.8	1.00	71,555	9.0	0.34
05/19/08		8,920,045	12,472					32,756			79,328		
05/20/08		8,920,045	0		9.1	0.74		33,225	8.8	0.96	80,376	8.9	0.27
05/26/08		8,929,582	9,537	May				36,557			85,277		
05/27/08		8,929,582	0	66,866	9.0	0.60		37,025	8.9	1.04	85,979	8.9	0.16
	06/01/08	8,935,384											

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
06/02/08		8,936,965	7,383					39,411			90,202		
06/03/08		8,936,965	0		9.3	0.90	0.824	39,876	9.0	1.06	90,901	9.0	0.54
06/09/08		8,951,078	14,113					43,187			101,102		
06/10/08		8,951,078	0		9.2	0.85		44,118	9.0	1.53	106,505	9.0	0.38
06/11/08		8,960,258	9,180					45,176			112,396		
06/16/08		8,999,813	39,555					52,865			140,673		
06/16/08		8,999,813	0					52,865			141,398		
06/17/08		8,999,813	0		9.2	1.4		53,808	9.1	3.40	143,560	9.1	0.33
06/18/08		9,007,718	7,905					54,790			146,825		
06/23/08		9,016,923	9,205					57,605			153,557		
06/24/08		9,016,923	0		9.3	0.20		58,074	9.1	2.50	154,613	9.0	0.14
06/30/08		9,026,850	9,927	<b>June</b>				61,392			160,227		
06/30/08		9,026,850	0	<b>91,466</b>				61,392			160,573		
	07/01/08	9,026,850											
07/01/08		9,026,850	0		9.3	1.4	1.290	61,861	9.0	2.45	161,266	9.1	0.58
07/07/08		9,035,952	9,102					64,701			166,481		
07/08/08		9,035,952	0		9.4	1.2		65,168	9.1	1.90	167,518	9.2	1.05
07/10/08		9,041,071	5,119					66,138			170,315		
07/14/08		9,054,932	13,861					68,973			182,057		
07/15/08		9,054,932	0		9.4	0.82		69,444	9.0	1.80	184,517	9.2	0.54
07/21/08		9,083,663	28,731					74,198			206,929		
07/22/08		9,083,663	0		9.4	0.74		75,898	9.2	2.52	211,453	9.2	0.31
07/25/08		9,114,297	30,634					81,242			230,374		
07/28/08		9,121,075	6,778					83,136			235,668		
07/29/08		9,121,075	0		7.4	0.70		83,609	7.2	3.30	237,073	7.2	0.30
07/29/08		9,123,409	2,334	<b>July</b>				83,646			237,455		
	08/01/08	9,127,730		<b>100,880</b>									
08/04/08		9,137,140	13,731					87,426			248,221		
08/05/08		9,137,140	0		7.6	1.30	1.260	87,426	7.2	2.72	250,342	7.2	0.41
08/05/08		9,141,581	4,441					87,938			252,120		
08/09/08		9,151,886	10,305					90,785			260,213		
08/11/08		9,154,723	2,837					91,732			262,298		
08/12/08		9,154,723	0		7.5	1.2		92,206	7.2	2.45	263,337	7.3	0.25
08/13/08		9,157,388	2,665					92,710			264,058		
08/18/08		9,162,704	5,316					94,604			267,897		
08/19/08		9,162,704	0		7.5	0.98		95,077	7.2	2.08	268,595	7.2	0.20
08/19/08		9,163,932	1,228					95,106			268,623		
08/21/08		9,166,109	2,177					96,049			270,020		
08/24/08		9,168,274	2,165					96,993			271,417		
08/26/08		9,168,274	0	<b>August</b>	7.5	1.1		97,465	7.1	2.25	272,112	7.1	0.22
	09/01/08	9,173,323		<b>45,593</b>									
09/01/08		9,173,586	5,312					99,390			274,587		
09/02/08		9,173,586	0		7.6	1.4	1.290	99,863	7.3	2.50	274,936	7.3	0.21
09/02/08		9,174,445	859					99,894			274,962		
09/06/08		9,176,960	2,515					100,837			276,718		
09/08/08		9,176,960	0		7.5	1.3		101,310	7.2	2.25	277,071	7.3	0.16
09/15/08		9,182,218	5,258					103,257			279,911		
09/16/08		9,182,218	0		7.6	1.3		103,731	7.3	2.60	280,611	7.6	0.37
09/18/08		9,185,245	3,027					104,715			281,689		
09/22/08		9,187,538	2,293					105,663			283,095		
09/23/08		9,187,538	0		7.5	1.6		106,137	7.3	3.05	283,475	7.5	0.17
09/28/08		9,191,553	4,015					107,560			285,589		
09/30/08		9,191,553	0	<b>September</b>	7.6	1.8		108,035	7.4	3.70	285,942	7.4	0.18
	10/01/08	9,192,867		<b>19,545</b>									

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
10/05/08		9,195,280	3,727					109,500			287,383		
10/07/08		9,195,280	0		7.7	2.2	2.000	109,975	7.4	4.38	288,093	7.8	0.12
10/07/08		9,196,521	1,241					110,012			288,124		
10/10/08		9,200,017	3,496					110,965			290,943		
10/12/08		9,200,017	0					111,919			291,644		
10/14/08		9,200,017	0		7.8	1.9		112,396	7.5	3.48	292,698	7.8	0.27
10/16/08		9,204,404	4,387					112,906			293,436		
10/18/08		9,206,201	1,797					113,861			294,504		
10/21/08		9,206,201	0		7.8			114,337	7.5	4.02	295,563	7.9	0.28
10/22/08		9,208,980	2,779					114,848			296,250		
10/26/08		9,211,601	2,621					116,279			297,676		
10/28/08		9,211,601	0	<b>October</b>	7.9	2.0		116,756	7.7	3.96	298,743	8.2	0.26
	11/01/08	9,214,938		<b>22,071</b>									
11/01/08		9,215,379	3,778					117,743			300,201		
11/04/08		9,215,379	0		8.0	2.1	1.880	118,698	7.7	4.32	301,273	8.1	0.20
11/04/08		9,217,467	2,088					118,732			301,305		
11/07/08		9,219,330	1,863					119,685			302,376		
11/10/08		9,220,422	1,092					120,162			303,090		
11/20/08		9,229,031	8,609					123,506			309,112		
11/24/08		9,231,935	2,904					124,939			310,833		
11/24/08		9,232,260	325					124,939			311,189		
11/26/08		9,233,464	1,204					125,702			311,660		
11/28/08		9,234,926	1,462	<b>November</b>				126,192			312,744		
	12/01/08	9,234,926		<b>19,988</b>									
12/02/08		9,234,926	0		8.2	2.3	2.190	127,656	7.8	3.57	314,118	8.3	0.18
12/12/08		9,242,670	7,744					130,122			316,912		
12/17/08		9,247,587	4,917	<b>December</b>				131,563			320,808		
	01/01/09	9,266,230		<b>31,304</b>									
01/02/09		9,268,140	20,553					136,435			338,229		
01/06/09		9,268,140	0		7.8	2.5	2.430	137,894	7.7	4.48	341,351	7.8	1.05
01/12/09		9,277,419	9,279	<b>January</b>				139,384			344,897		
	02/01/09	9,287,182		<b>20,952</b>									
02/01/09		9,287,326	9,907					143,256			351,798		
02/03/09		9,287,326	0		7.8	3.3	2.900	143,738	7.9	4.69	352,143	8.2	0.34
02/05/09		9,288,848	1,522	<b>February</b>				143,772			352,912		
	03/01/09	9,334,332		<b>47,151</b>									
03/01/09		9,335,249	46,401					153,077			393,568		
03/03/09		9,335,249	0		7.6	2.4	1.970	153,561	7.9	4.24	394,973	8.2	0.87
03/11/09		9,355,734	20,485					156,519			412,282		
03/30/09		9,463,572	107,838					182,357			500,471		
03/31/09		9,463,572	0	<b>March</b>				183,323			501,935		
	04/01/09	9,467,680		<b>133,348</b>									
04/01/09		9,469,538	5,966					184,290			504,856		
04/03/09		9,478,305	8,767					187,194			511,375		
04/06/09		9,485,542	7,237					189,607			516,807		
04/07/09		9,485,542	0		7.7	0.84	0.730	190,569	7.9	1.14	518,251	8.1	0.52
04/13/09		9,498,358	12,816					194,432			525,799		
04/14/09		9,498,358	0		7.7	0.59		194,908	8.0	1.20	525,799	8.2	0.27
04/20/09		9,507,740	9,382					198,262			532,295		
04/21/09		9,507,740	0		7.8	1.0		198,262	8.0	0.96	533,364	8.3	1.74
04/27/09		9,545,303	37,563					208,646			561,846		
04/28/09		9,545,303	0		8.0	1.2		210,663	7.7	1.89	566,157	7.5	0.28

**TABLE 1  
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	05/01/09	9,568,209		April									
05/01/09		9,574,025	28,722	100,528				217,567			582,471		
05/04/09		9,582,624	8,599					220,929			588,270		
05/05/09		9,582,624	0		7.6	0.76	0.724	221,884	8.0	1.29	589,714	8.0	0.33
05/11/09		9,599,171	16,547					227,170			599,566		
05/12/09		9,599,171	0		8.0	0.89		228,124	7.6	0.84	600,996	7.9	0.24
05/18/09		9,613,720	14,549					232,921			609,305		
05/19/09		9,613,720	0		7.4	0.79		233,874	7.0	0.84	610,378	7.2	0.38
05/19/09		9,615,798	2,078					233,908			610,421		
05/19/09		9,616,122	324					233,908			610,775		
05/25/09		9,624,219	8,097					237,697			615,786		
05/26/09		9,624,219	0		7.3	0.58		238,168	7.1	1.08	616,149	7.0	0.16
	06/01/09	9,650,519		May									
06/01/09		9,652,323	28,104	82,310				245,914			637,378		
06/02/09		9,652,323	0		7.3	0.23	0.648	246,871	6.9	1.05	638,835	7.2	0.26
06/03/09		9,658,104	5,781					248,350			641,072		
06/15/09		9,701,735	43,631					261,249			674,466		
	07/01/09	9,727,520		June									
07/01/09		9,727,975	26,240	77,001				272,082			691,914		
07/05/09		9,732,032	4,057					273,967			694,431		
07/07/09		9,732,032	0		7.4	0.96	0.878	274,443	7.1	2.20	695,508	7.1	0.20
07/20/09		9,742,289	10,257					278,743			700,527		
	08/01/09	9,748,231		July									
08/03/09		9,749,397	7,108	20,712				282,543			704,414		
08/04/09		9,749,397	0		7.5	1.9	1.680	283,019	7.1	2.80	704,768	7.3	0.14
08/08/09		9,752,139	2,742					284,005			706,115		
08/08/09		9,753,763	1,624					284,480			707,282		
08/09/09		9,757,508	3,745					284,962			710,677		
08/10/09		9,761,572	4,064					285,930			714,131		
08/10/09		9,762,328	756					286,411			714,491		
08/12/09		9,765,851	3,523					287,368			717,355		
08/13/09		9,767,253	1,402					287,846			718,430		
08/17/09		9,771,256	4,003					289,758			720,916		
08/30/09		9,785,737	14,481					295,976			730,538		
	09/01/09	9,787,043		August									
09/01/09		9,787,352	1,615	38,811	7.6	1.6	1.320	296,492	7.1	2.85	731,650	7.4	0.53
09/10/09		9,794,060	6,708					299,850			735,572		
09/21/09		9,800,194	6,134					303,204			738,803		
09/22/09		9,800,194	0					303,684			739,163		
	10/01/09	9,806,949		September									
10/01/09		9,807,491	7,297	19,906				306,569			743,395		
10/05/09		9,811,856	4,365					308,500			746,224		
10/06/09		9,811,856	0		6.9	1.8	1.700	308,983	6.8	2.48	746,576	7.1	0.55
10/15/09		9,827,819	15,963					314,838			757,329		
10/18/09		9,830,464	2,645					316,288			758,757		
	11/01/09	9,871,202		October									
11/02/09		9,875,106	44,642	64,253				329,981			793,417		
11/03/09		9,875,106	0		7.4	1.2	1.150	330,961	7.0	2.60	795,595	7.2	0.46
11/04/09		9,880,551	5,445					331,974			797,084		
11/05/09		9,882,809	2,258					332,950			798,526		
11/11/09		9,891,712	8,903					337,309			803,889		
11/12/09		9,893,927	2,215					338,274			805,324		
11/16/09		9,896,880	2,953					339,720			807,132		
11/17/09		9,897,695	815					340,200			807,495		
11/20/09		9,899,892	2,197					341,164			808,946		
11/30/09		9,914,595	14,703					346,476			819,664		

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	12/01/09	9,914,595		<b>November</b>									
12/01/09		9,914,595	0	43,393	7.6	1.7	1.500	347,446	7.3	2.25	820,740	7.8	0.67
12/15/09		9,931,024	16,429					354,237			829,781		
12/18/09		9,933,254	2,230					355,200			831,213		
	01/01/10	9,956,004		<b>December</b>									
01/03/10		9,960,070	26,816	41,409				362,443			853,235		
01/05/10		9,960,070	0		6.9	2.3	2.220	362,924	7.2	5.36	855,045	7.2	0.68
01/14/10		9,969,979	9,909					365,847			860,488		
01/18/10		9,972,503	2,524					366,807			862,304		
01/31/10		9,991,034	18,531					370,664			878,832		
	02/01/10	9,991,034		<b>January</b>									
02/02/10		9,991,034	0	35,030	7.4	1.6	1.460	371,145	7.2	4.05	880,637	7.2	0.46
02/03/10		9,994,392	3,358					371,664			881,364		
02/16/10		10,002,996	8,604					374,543			887,937		
02/28/10		10,009,542	6,546					376,928			892,655		
	03/01/10	10,009,542		<b>February</b>									
03/02/10		10,009,542	0	18,508	7.6	1.6	1.340	376,928	7.4	2.70	893,732	7.4	1.41
03/06/10		10,015,341	5,799					377,919			898,085		
03/13/10		10,048,616	33,275					383,764			927,938		
03/17/10		10,065,891	17,275					388,140			942,069		
03/23/10		10,077,601	11,710					392,478			950,481		
03/31/10		10,088,487	10,886					396,786			958,091		
	04/01/10	10,088,725		<b>March</b>									
04/01/10		10,088,817	330	79,183				396,786			958,456		
04/04/10		10,092,465	3,648					398,207			961,014		
04/06/10		10,092,465	0		7.4	1.3	1.180	399,166	7.2	2.00	962,110	7.2	0.20
04/19/10		10,151,166	58,701					416,846			1,005,028		
	05/01/10	10,189,439		<b>April</b>									
05/03/10		10,196,869	45,703	100,715				432,284			1,038,553		
05/04/10		10,196,869	0		7.3	0.98	0.902	433,730	7.1	1.12	1,040,370	7.2	0.37
05/17/10		10,258,463	61,594					453,256			1,083,344		
06/01/10		10,294,510	36,047					466,168			1,109,480		
	06/01/10	10,294,510		<b>May</b>									
06/01/10		10,294,510	0	105,071	7.6	0.85	0.762	467,117	7.2	1.44	1,110,569	7.3	0.28
06/21/10		10,372,589	78,079					488,138			1,171,628		
06/30/10		10,400,340	27,751					495,720			1,193,925		
06/30/10		10,400,889	549					496,193			1,194,286		
	07/01/10	10,401,954		<b>June</b>									
07/01/10		10,402,536	1,647	107,444				496,664			1,195,375		
07/05/10		10,409,431	6,895					499,493			1,200,058		
07/06/10		10,409,431	0		7.3	1.1	0.988	499,963	7.3	1.92	1,200,783	7.5	0.41
07/12/10		10,426,614	17,183					504,247			1,213,873		
07/21/10		10,506,902	80,288					525,545			1,275,358		
07/22/10		10,515,567	8,665					527,488			1,282,668		
07/23/10		10,532,459	16,892					531,679			1,283,332		
	08/01/10	10,586,662		<b>July</b>									
08/02/10		10,594,781	62,322	184,709				549,129			1,283,332		
08/03/10		10,594,781	0		7.8	0.54	0.515	549,601	7.4	1.20	1,283,332	7.5	0.20
08/04/10		10,599,046	4,265					550,588			1,283,332		
08/04/10		10,599,046	0					550,588			1,283,358		
08/04/10		10,599,046	0					550,588			1,283,358		
08/05/10		10,600,937	1,891					551,531			1,284,413		
08/06/10		10,602,372	1,435					552,002			1,285,481		
08/07/10		10,604,242	1,870					552,943			1,286,560		
08/12/10		10,621,705	17,463					558,442			1,299,650		
08/18/10		10,644,322	22,617					565,095			1,317,296		



**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	09/01/10	10,664,511		<b>August</b>									
09/06/10		10,672,363	28,041	<b>77,849</b>				575,879			1,336,978		
09/07/10		10,672,363	0		7.7	0.64	0.588	575,879	7.2	1.28	1,337,698	7.4	0.19
09/09/10		10,675,017	2,654					576,846			1,338,823		
09/09/10		10,675,348	331					576,846			1,339,184		
09/15/10		10,681,923	6,575					579,656			1,343,454		
09/20/10		10,688,747	6,824					582,004			1,348,431		
09/28/10		10,712,898	24,151					588,142			1,368,075		
09/28/10		10,713,225	327					588,142			1,368,432		
	10/01/10	10,717,803		<b>September</b>									
10/01/10		10,718,374	5,149	<b>53,291</b>				590,497			1,371,651		
10/03/10		10,721,339	2,965					591,909			1,373,451		
10/05/10		10,721,339	0		7.6	0.80	0.763	592,849	7.3	1.32	1,374,902	7.5	0.10
10/15/10		10,733,086	11,747					597,097			1,380,767		
10/17/10		10,734,957	1,871					598,030			1,381,848		
10/31/10		10,760,102	25,145					605,549			1,401,547		
	11/01/10	10,760,102		<b>October</b>									
11/02/10		10,760,102	0	<b>42,299</b>	7.8	0.65	0.639	606,486	7.6	1.44	1,403,369	7.9	0.20
11/11/10		10,773,294	13,192					611,203			1,410,005		
11/14/10		10,775,484	2,190					612,137			1,411,471		
11/17/10		10,778,424	2,940					613,539			1,413,301		
11/28/10		10,790,717	12,293					618,231			1,422,421		
	12/01/10	10,794,632		<b>November</b>									
12/04/10		10,800,013	9,296	<b>34,530</b>				622,006			1,428,648		
12/07/10		10,800,013	0		7.6	1.0	0.989	623,423	7.8	1.80	1,430,482	7.9	0.24
12/15/10		10,811,058	11,045					627,228			1,435,313		
12/20/10		10,814,659	3,601					628,621			1,437,887		
12/23/10		10,816,825	2,166					629,558			1,439,358		
	01/01/11	10,827,569		<b>December</b>									
01/02/11		10,829,348	12,523	<b>32,938</b>				632,850			1,449,967		
01/04/11		10,829,348	0		8.0	1.6	1.500	633,803	7.9	5.31	1,452,901	8.0	0.53
01/17/11		10,845,438	16,090					638,076			1,462,175		
01/28/11		10,852,203	6,765					640,437			1,467,352		
01/30/11		10,853,317	1,114					640,910			1,468,093		
	02/01/11	10,853,317		<b>January</b>									
02/01/11		10,853,317	0	<b>25,748</b>	7.9	2.1	2.100	641,382	7.7	4.90	1,468,834	7.6	0.18
02/02/11		10,854,899	1,582					641,426			1,469,273		
02/14/11		10,859,963	5,064					643,318			1,472,988		
02/21/11		10,876,100	16,137					646,167			1,488,233		
02/21/11		10,876,705	605					646,167			1,488,978		
02/24/11		10,880,277	3,572					647,105			1,491,974		
02/27/11		10,883,601	3,324					648,128			1,494,713		
	03/01/11	10,883,601		<b>February</b>									
03/01/11		10,883,601	0	<b>30,284</b>	7.8	1.8	1.530	648,594	7.7	4.95	1,496,572	7.8	0.52
03/21/11		10,957,602	74,001					664,834			1,558,957		
	04/01/11	11,023,291		<b>March</b>									
04/04/11		11,045,838	88,236	<b>139,690</b>				687,442			1,632,177		
04/05/11		11,045,838	0		8.0	0.40	0.380	688,903	7.8	1.10	1,637,351	7.7	0.21
04/16/11		11,138,592	92,754					710,138			1,708,997		
04/26/11		11,216,566	77,974					731,830			1,771,918		
04/29/11		11,258,391	41,825					743,289			1,804,105		
04/29/11		11,262,451	4,060					744,757			1,807,043		
	05/02/11	11,274,169		<b>April</b>									
05/02/11		11,277,586	15,135	<b>250,878</b>				750,559			1,818,009		
05/03/11		11,277,586	0		7.8	0.37	0.338	751,514	7.6	0.68	1,819,601	7.8	0.20
05/16/11		11,310,055	32,469					763,336			1,841,085		
05/17/11		11,311,520	1,465					763,807			1,842,263		

**TABLE 1  
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	06/01/11	11,344,383		May									
06/02/11		11,347,664	36,144	70,214				778,512			1,868,238		
06/06/11		11,354,057	6,393					781,832			1,872,152		
06/07/11		11,354,057	0		7.7	0.46	0.447	782,305	7.6	0.85	1,872,545	7.7	0.14
06/17/11		11,368,867	14,810					788,961			1,881,915		
06/20/11		11,373,134	4,267					790,860			1,884,626		
	07/01/11	11,419,112		June									
07/04/11		11,434,679	61,545	74,729				811,146			1,932,424		
07/05/11		11,434,679	0		7.9	0.78	0.752	811,621	7.6	1.50	1,933,199	7.5	0.19
07/18/11		11,450,616	15,937					818,915			1,942,544		
07/27/11		11,470,412	19,796					825,753			1,958,375		
07/28/11		11,473,213	2,801					826,666			1,960,688		
	08/01/11	11,483,192		July									
08/01/11		11,484,004	10,791	64,080				830,795			1,968,801		
08/02/11		11,484,004	0		7.9	0.86	0.800	831,711	7.5	1.26	1,970,342	7.5	0.42
08/04/11		11,492,474	8,470					834,025			1,975,014		
08/05/11		11,493,370	896					834,506			1,975,820		
08/15/11		11,509,618	16,248					841,800			1,986,618		
08/31/11		11,524,004	14,386					849,495			1,994,794		
	09/01/11	11,524,179		August									
09/01/11		11,524,431	427	40,987				849,948			1,994,794		
09/03/11								850,953			1,997,262		
09/05/11		11,533,935	9,504					852,322			2,003,014		
09/06/11		11,533,935	0		8.0	1.2	1.180	852,778	7.7	1.65	2,004,161	7.7	0.55
09/08/11		11,538,054	4,119					854,174			2,005,726		
09/19/11		11,547,336	9,282					859,158			2,011,134		
09/20/11		11,548,416	1,080					859,611			2,011,902		
09/28/11		11,562,993	14,577					863,696			2,024,247		
	10/01/11	11,568,104		September									
10/03/11		11,572,412	9,419	43,925				867,344			2,031,123		
10/04/11		11,574,566	2,154					868,253			2,032,650		
10/05/11		11,574,566	0					868,707			2,033,029		
10/06/11		11,574,566	0					869,161			2,033,785		
10/08/11		11,579,097	4,531					870,519			2,036,082		
10/10/11		11,579,097	0		7.5	1.2	1.090	870,972	7.4	2.15	2,036,082	7.5	0.22
10/26/11		11,603,315	24,218					879,056			2,054,141		
10/30/11		11,606,358	3,043					880,416			2,055,759		
	11/01/11	11,607,509		October									
11/01/11		11,608,102	1,744	39,405				881,323			2,055,759		
11/02/11		11,608,233	131					881,362			2,055,792		
11/03/11		11,608,233	0		8.2	1.3	1.220	881,378	8.1	2.46	2,055,818	8.0	0.03
11/05/11		11,611,395	3,162					882,340			2,059,467		
11/06/11		11,614,756	3,361					883,608			2,062,594		
11/07/11		11,616,924	2,168					883,718			2,063,343		
11/08/11		11,618,636	1,712					884,345			2,065,014		
11/12/11		11,651,616	32,980					890,384			2,094,235		
11/15/11		11,662,529	10,913					894,135			2,102,462		
11/23/11		11,677,899	15,370					900,936			2,112,833		
11/29/11		11,687,640	9,741					905,028			2,119,690		
	12/01/11	11,689,609		November									
12/01/11		11,687,640	0	82,100	7.4	1.7	1.700	905,938	7.8	2.65	2,119,690	8.0	0.72
12/06/11		11,706,691	19,051					910,893			2,134,888		
12/15/11		11,724,224	17,533					918,198			2,147,141		
12/26/11		11,737,368	13,144					924,102			2,155,863		
12/31/11		11,742,107	4,739					926,371			2,158,911		

**TABLE 1  
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	<b>01/01/12</b>	<b>11,742,204</b>		<b>December</b>			<b>Pounds Cr</b>						
01/04/12		11,744,667	2,560	52,595			0.745	927,731			2,158,911		
01/05/12		11,744,667	0		6.9	0.98	0.862	928,184	7.5	1.84	2,161,198	7.3	0.27
01/19/12		11,754,619	9,952					932,303			2,166,977		
01/27/12		11,758,987	4,368					934,572			2,169,652		
01/31/12		11,761,124	2,137				<b>Pounds Cr</b>	935,480			2,171,180		
	<b>02/01/12</b>	<b>11,761,228</b>		<b>January</b>			<b>0.137</b>						
02/02/12		11,761,124	0	19,024	7.4	2.1	1.860	936,191	7.7	2.50	2,172,687	7.7	6.1
02/07/12		11,763,586	2,358					938,043		2.80	2,176,546		1.71
02/22/12		11,778,355	14,769					941,736			2,183,827		
02/24/12		11,780,157	16,571					942,642			2,184,964		
02/28/12		11,782,379	18,793				<b>Pounds Cr</b>	943,547			2,186,478		
	<b>03/01/12</b>	<b>11,783,379</b>		<b>February</b>			<b>0.329</b>						
03/01/12		11,782,379	0	21,255	7.1	2.6	2.560	944,002	7.3	3.45	2,186,478	7.6	2.04
03/14/12		11,824,851	41,472					956,400			2,221,364		
03/21/12		11,839,925	15,074					962,783			2,231,770		
03/25/12		11,848,965	9,040					965,591			2,239,149		
	<b>04/01/12</b>	<b>11,865,023</b>		<b>March</b>			<b>Pounds Cr</b>						
04/03/12		11,871,806	22,841	81,644			1.740	973,817			2,256,557		
04/05/12		11,871,806	6,783		7.6	0.83	0.730	975,189	7.9	1.28	2,258,866	7.8	0.48
04/18/12		11,896,899	25,093					984,322			2,273,887		
04/21/12		11,906,449	9,550					986,147			2,282,902		
	<b>05/01/12</b>	<b>11,923,538</b>		<b>April</b>			<b>Pounds Cr</b>						
05/02/12		11,930,935	24,486	58,515			0.356	996,194			2,300,258		
05/03/12		11,933,848	2,913					997,107			2,302,572		
05/09/12		11,989,964	56,116					1,010,822			2,349,979		
05/14/12		12,005,061	15,097					1,016,338			2,361,277		
05/16/12		12,005,061	0		6.5	0.67	0.581	1,018,169	7.4	0.63	2,363,951	7.6	0.15
05/20/12		12,016,709	11,648					1,021,100			2,368,989		
05/22/12		12,018,570	1,861					1,022,007			2,370,141		
05/24/12		12,021,249	2,679					1,023,245			2,372,066		
05/31/12		12,028,808	7,559					1,027,317			2,378,556		
	<b>06/01/12</b>	<b>12,029,342</b>		<b>May</b>			<b>Pounds Cr</b>						
06/02/12		12,030,994	2,186	105,804			0.512	1,027,317			2,378,556		
06/05/12		12,033,617	2,623					1,028,676			2,380,101		
06/07/12		12,033,617	0		6.8	0.55	0.507	1,029,581	7.4	0.99	2,381,259	7.7	0.17
06/19/12		12,046,851	13,234					1,034,134			2,389,253		
06/29/12		12,056,747	9,896					1,038,653			2,395,689		
	<b>07/01/12</b>	<b>12,057,998</b>		<b>June</b>			<b>Pounds Cr</b>						
07/03/12		12,059,332	1,334	28,656			0.121	1,040,009			2,397,210		
07/05/12		12,059,332	0		6.1	0.98	0.906	1,040,913	6.2	1.24	2,397,969	6.6	0.19
07/10/12		12,064,003	4,671					1,042,739			2,402,552		
07/20/12		12,069,263	5,260					1,045,446			2,402,552		
	<b>08/01/12</b>	<b>12,078,083</b>		<b>July</b>			<b>Pounds Cr</b>						
08/01/12		12,078,359	9,096	20,085			0.152	1,049,510			2,408,561		
08/02/12		12,078,359	0		6.2	1.20	1.120	1,049,969	6.2	1.72	2,408,954	6.0	0.56
08/07/12		12,082,510	4,151					1,051,808			2,410,869		
08/16/12		12,098,108	15,598					1,056,800			2,423,447		
	<b>09/01/12</b>	<b>12,111,167</b>		<b>August</b>			<b>Pounds Cr</b>						
09/01/12		12,111,772	13,664	33,084			0.309	1,063,135			2,432,088		
09/09/12		12,116,611	4,839					1,065,875			2,434,745		
09/11/12		12,117,783	1,172			1.70	1.520	1,066,747	6.4	0.72	2,435,127	6.3	0.21
09/18/12		12,121,226	3,443					1,068,577			2,437,061		
09/26/12		12,125,024	3,798					1,070,837			2,438,957		

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	<b>10/01/12</b>	<b>12,126,164</b>		<b>September</b>			<b>Pounds Cr</b>						
10/04/12		12,127,304	2,280	<b>14,997</b>			<b>0.190</b>	1,072,193			2,440,091		
10/04/12		12,127,304	1,140			1.50	1.370	1,072,193	6.4	1.44	2,440,091	6.2	0.32
10/05/12		12,129,085	1,781					1,073,276			2,440,999		
10/09/12		12,129,791	706					1,073,696			2,441,370		
10/19/12		12,163,907	34,116					1,081,043			2,471,345		
10/30/12		12,189,653	25,746					1,092,239			1,289,448		
	<b>11/01/12</b>	<b>12,191,094</b>		<b>October</b>			<b>Pounds Cr</b>						
11/06/12		12,196,769	7,116	<b>64,930</b>			<b>0.741</b>	1,096,343			2,493,654		
11/09/12		12,198,437	1,668		NA	1.1	1.040	1,097,450	NA	1.34	2,494,750	NA	0.21
11/22/12		12,212,741	14,304					1,103,179			2,504,679		
11/30/12		12,218,011	5,270					1,106,155			2,507,598		
	<b>12/01/12</b>	<b>12,218,663</b>		<b>November</b>			<b>Pounds Cr</b>						
12/03/12		12,219,752	1,089	<b>27,569</b>			<b>0.239</b>	1,107,006			2,508,689		
12/10/12		12,223,289	3,537		8.0	1.00	1.100	1,109,121	7.7	1.60	2,510,506	8.0	0.27
12/26/12		12,234,632	11,343					1,114,683			2,517,462		
12/31/12		12,239,248	4,616					1,117,237			2,520,012		
	<b>01/01/13</b>	<b>12,239,543</b>		<b>December</b>			<b>Pounds Cr</b>						
01/01/13		12,239,958	710	<b>20,880</b>			<b>0.191</b>	1,117,663			2,520,377		
01/10/13		12,246,590	6,632			1.90	1.720	1,120,640	7.7	1.68	2,524,770	8.0	1.32
01/24/13		12,278,928	32,338					1,130,141			2,550,847		
01/28/13		12,282,035	3,107					1,131,414			2,553,042		
01/31/13		12,287,892	5,857					1,132,425			2,558,715		
	<b>02/01/13</b>	<b>12,288,247</b>		<b>January</b>			<b>Pounds Cr</b>						
02/01/13		12,289,018	1,126	<b>48,644</b>			<b>0.697</b>	1,132,680			2,559,456		
02/07/13		12,293,874	4,856		7.9	0.82	0.663	1,134,376	7.6	1.35	2,563,137	8.0	0.22
02/20/13		12,308,445	14,571					1,038,672			2,575,057		
02/27/13		12,313,181	19,307					1,140,359			2,578,725		
	<b>03/01/13</b>	<b>12,314,165</b>		<b>February</b>			<b>Pounds Cr</b>						
03/03/13		12,315,958	2,777	<b>25,918</b>			<b>0.143</b>	1,141,206			2,580,927		
03/07/13		12,318,024	2,066		7.9	0.83	0.753	1,142,054	7.7	1.44	2,582,395	7.8	0.27
03/18/13		12,361,201	43,177					1,151,536			2,619,703		
03/20/13		12,365,136	3,935					1,153,250			2,622,317		
03/27/13		12,378,442	13,306					1,159,233			2,630,884		
03/31/13		12,400,821	22,379					1,164,838			2,649,804		
	<b>04/01/13</b>	<b>12,403,728</b>		<b>March</b>			<b>Pounds Cr</b>						
04/01/13		12,407,465	3,737	<b>89,563</b>			<b>0.562</b>	1,165,570			2,655,346		
04/11/13		12,461,497	54,032		7.4	0.42	0.431	1,180,148	7.0	0.60	2,700,747	7.4	0.14
04/17/13		12,522,138	60,641					1,196,092			2,749,790		
	<b>05/01/13</b>	<b>12,570,545</b>		<b>April</b>			<b>Pounds Cr</b>						
05/01/13		---	---	<b>166,817</b>			<b>0.599</b>						
05/01/13		12,571,333	49,195		8.1	0.56	0.553	1,215,096	7.3	0.38	2,785,968	7.8	0.09
05/19/13		12,623,298	51,965					1,235,753			2,823,953		
	<b>06/01/13</b>	<b>12,647,282</b>		<b>May</b>			<b>Pounds Cr</b>						
				<b>76,737</b>			<b>0.353</b>						
06/06/13		12,657,605	34,307		7.6	0.96	0.826	1,251,551	7.4	0.47	2,849,502	7.8	0.73
06/12/13		12,669,485	11,880					1,256,351			2,857,966		
06/17/13		12,680,642	11,157					1,259,722			2,867,078		
	<b>07/01/13</b>	<b>12,727,950</b>		<b>June</b>			<b>Pounds Cr</b>						
				<b>80,668</b>			<b>0.555</b>						
07/18/13		12,767,116	86,474		7.4	0.73	0.694	1,286,165	6.7	0.73	2,938,280	7.5	0.07
07/31/13		12,780,876	13,760					1,293,015			2,947,351		

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	08/01/13	12,781,814		July			Pounds Cr						
				53,864			0.311						
08/04/13		12,784,628	3,752					1,293,015			2,947,351		
08/07/13		12,786,184	1,556					1,295,588			2,951,110		
08/08/13		12,786,555	371		7.5	0.83	0.775	1,296,442	6.8	0.68	2,951,801	7.2	0.16
08/19/13		12,795,058	8,503					1,298,966			2,954,811		
08/21/13		12,795,638	580					1,300,287			2,956,243		
08/26/13		12,797,295	1,657					1,301,154			2,957,147		
08/28/13		12,800,434	3,139					1,302,541			2,958,987		
	09/01/13	12,803,511		August			Pounds Cr						
				21,697			0.140						
09/01/13		12,803,511	6,216					1,303,580			2,961,265		
09/05/13		12,808,096	4,585					1,305,282			2,964,435		
09/09/13		12,811,883	8,372					1,306,947			2,966,675		
09/11/13		12,815,166	7,070					1,309,139			2,968,968		
09/14/13		12,818,151	6,268					1,310,005			2,970,501		
09/18/13		12,822,283	7,117		7.3	1.3	1.170	1,311,729	7.1	0.99	2,973,533	7.3	0.19
09/30/13		12,833,637	11,354					1,317,815			2,980,475		
	10/01/13	12,834,025		September			Pounds Cr						
				30,514			0.297						
10/01/13		12,834,025	388					1,318,244			2,980,475		
10/08/13		12,843,796	9,771					1,321,693			2,988,064		
10/16/13		12,852,554	8,758					1,325,559			2,994,143		
10/18/13		12,855,027	2,473		7.7	1.20	1.120	1,326,419	7.5	1.04	2,996,041	7.8	0.14
	11/01/13	12,867,815		October			Pounds Cr						
				33,790			0.315						
11/01/13		12,867,815	12,788					1,332,902			3,004,777		
11/05/13		12,876,841	9,026					1,335,488			3,012,422		
11/13/13		12,903,367	26,526		7.8	1.00	0.920	1,345,039	8.1	0.66	3,033,152	7.9	0.11
11/20/13		12,924,566	21,199					1,350,740			3,051,316		
	12/01/13	12,940,971		November			Pounds Cr						
				73,156			0.560						
12/02/13		12,944,252	19,686					1,360,688			3,063,995		
12/10/13		12,954,971	10,719		7.6	1.4	1.320	1,365,411	7.4	2.70	3,071,689	7.1	0.07
12/12/13		12,957,411	2,440					1,366,744			3,073,244		
12/23/13		12,965,941	8,530					1,371,029			3,078,956		
12/31/13		12,970,459	4,518					1,373,592			3,081,611		
	01/01/14	12,970,599		December			Pounds Cr						
				29,628			0.326						
01/01/14		12,970,772	313					1,373,592			3,081,991		
01/15/14		12,976,884	6,112		7.5	1.2	1.050	1,376,582	7.1	2.20	3,086,176	7.6	0.11
01/31/14		12,983,061	6,177					1,379,605			3,090,406		
	02/01/14	12,983,265		January			Pounds Cr						
				12,666			0.111						
02/02/14		12,983,747	686					1,380,032			3,090,789		
02/13/14		12,987,155	3,408		8.0	1.8	1.610	1,381,726	8.1	2.88	3,093,093	8.3	0.19
02/28/14		12,993,603	6,448										
	03/01/14	12,993,783		February			Pounds Cr						
				10,518			0.141						
03/01/14		12,993,909	306										
03/13/14		13,005,882	11,973		7.6	0.38	0.434	1,385,639	7.7	5.80	3,112,477	8.0	0.30
03/31/14		13,059,539	53,657										
	04/01/14	13,059,979		March			Pounds Cr						
				66,196			0.239						
04/01/14		13,061,650	2,111					1,399,014			3,165,447		
04/12/14		13,091,485	29,835					1,411,117			3,187,701		
04/13/14		13,099,571	8,086					1,412,822			3,195,631		
04/15/14		13,135,912	36,341					1,424,711			3,224,028		
04/18/14		13,165,955	30,043					1,434,115			3,247,300		
04/22/14		13,210,016	44,061		7.6	0.44	0.377	1,440,204	7.4	0.72	3,258,396	7.5	0.31
	05/01/14	13,211,258		April			Pounds Cr						
				151,279			0.475						
05/01/14		13,211,345	1,329					1,451,524			3,282,450		
05/13/14		13,267,656	56,311		7.5	0.28	0.273	1,471,868	7.3	0.73	3,326,392	7.4	0.20
05/14/14		13,280,912	13,256					1,475,015			3,337,773		
05/15/14		13,286,754	5,842					1,476,780			3,342,511		
05/20/14		13,304,068	17,314					1,483,692			3,355,729		

**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	<b>06/01/14</b>	<b>13,332,599</b>		<b>May</b>			<b>Pounds Cr</b>						
06/02/14		13,336,115	32,047	<b>121,341</b>			<b>0.276</b>	1,495,755			3,382,176		
06/12/14		13,372,027	35,912		7.9	0.40	0.381	1,508,756	7.6	0.60	3,410,073	7.8	0.20
06/14/14		13,374,936	2,909					1,510,080			3,412,070		
06/17/14		13,379,348	4,412					1,512,220			3,415,268		
06/19/14		13,394,274	14,926					1,514,826			3,429,626		
06/20/14		13,401,646	7,372					1,517,014			3,436,003		
06/30/14		13,444,046	42,400					1,531,745			3,470,067		
	<b>07/01/14</b>	<b>13,445,046</b>		<b>June</b>			<b>Pounds Cr</b>	1,532,601			3,472,302		
07/01/14		13,446,138	2,092	<b>112,447</b>			<b>0.357</b>						
07/02/14		13,449,088	2,950					1,533,460			3,475,127		
07/09/14		13,463,816	14,728		7.7	0.68	0.689	1,539,906	7.4	1.0	3,486,800	7.4	1.0
07/14/14		13,472,104	8,288					1,543,805			3,492,830		
07/28/14		13,480,642	8,538	<b>July</b>			<b>Pounds Cr</b>	1,551,065			3,501,179		
	<b>08/01/14</b>	<b>13,481,746</b>		<b>36,700</b>			<b>0.211</b>						
08/01/14		13,481,837	1,195					1,552,341			3,502,760		
08/13/14		13,495,032	13,195		7.9	0.681	0.72	1,557,877	7.5	1.16	3,511,069	7.7	0.92
08/17/14		13,502,593	7,561					1,560,483			3,517,406		
08/19/14		13,509,446	6,853					1,562,278			3,523,163		
08/20/14		13,517,300	7,854					1,563,989			3,530,111		
08/22/14		13,525,676	8,376					1,567,014			3,536,533		
08/25/14		13,534,424	8,748					1,571,333			3,542,173		
08/29/14		13,539,488	5,064					1,573,914			3,545,371		
08/30/14		13,542,314	2,826	<b>August</b>			<b>Pounds Cr</b>	1,575,198			3,547,361		
	<b>09/01/14</b>	<b>13,543,999</b>		<b>62,253</b>			<b>0.37</b>						
09/02/14		13,546,601	4,287					1,577,338			3,550,419		
09/05/14		13,550,482	3,881					1,579,481			3,553,370		
09/08/14		13,562,709	12,227					1,582,918			3,564,025		
09/17/14		13,579,703	16,994		7.9	0.60	0.546	1,589,348	7.6	1.16	3,577,644	7.3	0.36
09/24/14		13,593,114	13,411	<b>September</b>			<b>Pounds Cr</b>	1,595,011			3,577,644		
	<b>10/01/14</b>	<b>13,602,541</b>		<b>58,542</b>			<b>0.27</b>						
10/01/14		13,603,009	9,895					1,600,155			3,577,644		
10/16/14		13,633,400	30,391		7.3	0.67	0.596	1,610,440	7.8	1.28	3,619,044	7.4	0.36
10/28/14		13,658,462	25,062	<b>October</b>			<b>Pounds Cr</b>	1,621,724			3,636,660		
	<b>11/01/14</b>	<b>13,662,568</b>		<b>60,027</b>			<b>0.298</b>						
11/01/14		13,663,621	5,159					1,624,238			3,640,194		
11/12/14		13,672,756	9,135		8.1	1.1	0.980	1,629,780	7.6	1.62	3,648,121	8.1	1.08
11/30/14		13,695,977	23,221					1,640,533			3,663,353		
	<b>12/01/14</b>	<b>13,696,416</b>		<b>November</b>			<b>Pounds Cr</b>						
12/01/14		13,697,118	1,141	<b>37,515</b>			<b>0.306</b>	1,640,533			3,663,353		
12/04/14		13,701,386	4,268					1,643,108			3,666,947		
12/08/14		13,705,980	4,594					1,645,245			3,670,118		
12/12/14		13,709,486	3,506		8.1	1.5	1.320	1,646,957	7.7	2.72	3,672,490	8.5	0.35
12/31/14		13,768,265	58,779					1,666,522			3,720,581		
	<b>01/01/15</b>	<b>13,769,665</b>		<b>December</b>			<b>Pounds Cr</b>						
01/01/15		13,770,654	2,389	<b>73,249</b>			<b>0.805</b>	1,667,388			3,722,195		
01/12/15		13,785,790	15,136		8.2	0.65	0.597	1,674,271	7.8	1.36	3,733,018	7.3	0.20
01/31/15		13,798,407	12,617					1,679,866			3,742,191		
	<b>02/01/15</b>	<b>13,798,602</b>		<b>January</b>			<b>Pounds Cr</b>						
02/01/15		13,798,727	320	<b>28,937</b>			<b>0.144</b>	1,679,866			3,742,588		
02/04/15		13,800,127	1,400		8.1	0.74	0.721	1,680,719	7.9	1.48	3,743,379	7.1	0.17
02/16/15		13,804,943	4,816					1,682,892			3,746,962		
02/20/15		13,805,957	1,014					1,683,320			3,747,752		
02/24/15		13,806,974	1,017					1,683,745			3,748,542		
02/28/15		13,808,369	1,395					1,684,600			3,749,334		
	<b>03/01/15</b>	<b>13,808,507</b>		<b>February</b>			<b>Pounds Cr</b>						
03/01/15		13,808,690	321	<b>9,905</b>			<b>0.059</b>	1,684,600			3,749,728		
03/18/15		13,815,075	6,385		8.2	0.80	0.713	1,687,150	7.2	1.00	3,757,618	8.0	0.34

**TABLE 1  
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001						Manhole #1			Manhole #2			
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
03/23/15		13,815,928	853					1,688,046			3,759,604		
03/25/15		13,816,332	404					1,688,901			3,759,889		
03/26/15		13,816,697	365					1,689,329			3,760,382		
	04/01/15	13,822,714		March			Pounds Cr						
04/07/15		13,823,071	6,374	14,207			0.084	1,694,467			3,765,931		
04/15/15		13,856,854	33,783		7.4	0.92	0.858	1,704,938	7.7	1.92	3,792,943	7.0	0.25
04/30/15		13,885,187	28,333					1,718,370			3,812,262		
	05/01/15	13,885,585		April			Pounds Cr						
05/04/15		13,889,467	4,280	62,871			0.449	1,720,520			3,815,063		
05/13/15		13,898,048	8,581		8.0	0.60	0.554	1,724,812	7.8	0.92	3,820,667	8.1	0.37
05/18/15		13,905,897	7,849					1,727,444			3,827,133		
05/19/15		13,909,365	3,468					1,728,740			3,830,304		
05/23/15		13,914,964	5,599					1,731,329			3,834,357		
05/25/15		13,920,921	5,957					1,733,052			3,839,818		
05/28/15		13,937,530	16,609					1,736,965			3,854,997		
	06/01/15	13,958,452		May			Pounds Cr						
06/02/15		13,967,174	29,644	72,867			0.336	1,746,201			3,878,793		
06/03/15		13,970,819	3,645					1,747,948			3,881,197		
06/10/15		13,986,712	15,893		7.4	0.60	0.547	1,755,299	7.1	0.66	3,892,044	7.2	0.27
06/16/15		14,018,102	31,390					1,765,062			3,917,649		
06/19/15		14,042,191	24,089					1,772,128			3,937,351		
06/28/15		14,066,780	24,589					1,781,741			3,956,167		
06/30/15		14,069,200	2,420					1,783,061			3,957,962		
	07/01/15	14,069,642		June			Pounds Cr						
07/01/15		14,069,914	714	111,190			0.506	1,783,061			3,957,962		
07/08/15		14,077,301	7,387		7.7	0.37	0.351	1,787,623	7.2	0.68	3,963,593	7.5	0.23
07/14/15		14,085,720	8,419					1,790,678			3,970,192		
07/29/15		14,114,029	28,309					1,804,056			3,993,110		
	08/01/15	14,115,454		July			Pounds Cr						
08/05/15		14,117,883	3,854	45,812			0.134	1,807,395			3,995,776		
08/12/15		14,131,529	13,646			0.41	0.371	1,812,749	7.2	0.51	4,006,460	7.1	0.19
08/17/15		14,137,372	5,843					1,816,582			4,010,201		
08/18/15		14,138,406	1,034					1,817,349			4,011,060		
08/27/15		14,145,800	7,394					1,822,802			4,016,771		
	09/01/15	14,151,425		August			Pounds Cr						
09/04/15		14,155,393	9,593	35,971			0.111	1,828,088			4,025,183		
09/09/15		14,175,870	20,477		7.6	0.23	0.208	1,833,613	7.2	0.72	4,041,266	7.0	0.14
09/18/15		14,191,902	16,032					1,843,839			4,055,798		
09/28/15		14,211,188	19,286					1,852,031			4,069,063		
09/29/15		14,211,559	371					1,852,459			4,069,894		
	10/01/15	14,212,577		September			Pounds Cr						
10/01/15		14,212,781	1,222	61,152			0.106	1,853,738			4,071,365		
10/07/15		14,220,473	7,692			0.72	0.661	1,856,721	7.2	1.26	4,071,365	7.3	0.16
10/13/15		14,226,617	6,144					1,859,329			4,079,148		
10/21/15		14,233,700	7,083					1,863,168			4,082,924		
10/27/15		14,241,197	7,497					1,865,726			4,088,517		
	11/01/15	14,260,606		October			Pounds Cr						
11/02/15		14,266,255	25,058	48,029			0.264	1,872,203			4,108,562		
11/12/15		14,288,543	22,288		7.7	0.73	0.700	1,882,551	7.3	1.20	4,122,107	7.6	0.26
11/30/15		14,334,387	45,844					1,898,090			4,155,815		
	12/01/15	14,336,677		November			Pounds Cr						
12/01/15		14,339,197	4,810	76,072			0.443	1,899,821			4,159,227		
12/10/15		14,364,604	25,407		7.9	0.69	0.627	1,910,218	7.4	0.66	4,176,267	7.3	0.30
12/21/15		14,458,622	94,018					1,937,179			4,246,823		
	01/01/16	14,487,544		December			Pounds Cr						
01/01/16		14,488,585	29,963	150,867			0.788	1,949,306			4,267,333		
01/07/16		14,499,288	10,703		7.9	0.62	0.572	1,954,033	7.4	0.87	4,274,451	7.6	0.40
	02/01/16	14,532,622		January			Pounds Cr						

**TABLE 1  
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001						Manhole #1			Manhole #2			
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
02/01/16		14,533,138	33,850	<b>45,078</b>			<b>0.215</b>	1,971,254			4,316,580		
02/10/16		14,562,012	28,874		8.1	0.87	0.858	1,973,902	7.6	0.61	4,324,057	8.1	0.70
02/29/16		14,601,368	39,356					1,982,872			4,359,110		
	<b>03/01/16</b>	<b>14,602,713</b>		<b>February</b>			<b>Pounds Cr</b>						
03/01/16		14,603,747	2,379	<b>70,091</b>			<b>0.501</b>	1,983,300			4,361,401		
03/10/16		14,625,282	21,535		7.9	0.63	0.609	1,988,471	7.3	1.44	4,380,928	7.4	0.37
03/31/16		14,728,685	103,403					2,017,845			4,463,804		
	<b>04/01/16</b>	<b>14,733,540</b>		<b>March</b>			<b>Pounds Cr</b>						
04/02/16		14,751,888	23,203	<b>130,827</b>			<b>0.663</b>	2,023,638			4,482,114		
04/06/16		14,770,034	18,146		7.8	0.38	0.244	2,029,748	7.2	0.53	4,495,836	7.2	0.24
	<b>05/01/16</b>	<b>14,827,634</b>		<b>April</b>			<b>Pounds Cr</b>						
05/03/16		14,834,742	64,708	<b>94,094</b>			<b>0.191</b>	2,057,059			4,539,976		
05/12/16		14,846,704	19,070		7.6	0.70	0.645	2,062,615	7.2	0.47	4,547,811	7.1	0.69
05/17/16		14,856,181	9,477					2,067,406			4,553,472		
	<b>06/01/16</b>	<b>14,889,570</b>		<b>May</b>			<b>Pounds Cr</b>						
06/06/16		14,902,417	46,236	<b>61,936</b>			<b>0.333</b>	2,086,371			4,585,701		
06/08/16		14,906,067	3,650		7.5	0.43	0.406	2,088,096	7.1	0.69	4,587,959	7.1	0.25
06/19/16		14,946,108	40,041					2,101,451			4,617,396		
	<b>07/01/16</b>	<b>14,980,911</b>		<b>June</b>			<b>Pounds Cr</b>						
07/01/16		14,983,214	37,106	<b>91,341</b>			<b>0.309</b>	2,113,474			4,646,051		
07/07/16		14,998,455	15,241		7.4	0.50	0.430	2,119,487	7.0	0.87	4,656,766	7.1	0.20
07/31/16		15,036,518	38,063					2,138,364			4,681,191		
	<b>08/01/16</b>	<b>15,036,760</b>		<b>July</b>			<b>Pounds Cr</b>						
08/01/16		15,037,244	726	<b>55,849</b>			<b>0.200</b>	2,138,788			4,682,282		
08/11/16		15,047,013	9,769		7.4	0.61	0.583	2,144,319	7.1	0.98	4,687,103	7.1	0.12
08/24/16		15,065,460	18,447					2,152,060			4,700,186		
	<b>09/01/16</b>	<b>15,080,715</b>		<b>August</b>			<b>Pounds Cr</b>						
09/02/16		15,081,239	15,779	<b>43,955</b>			<b>0.213</b>	2,159,787			4,709,523		
09/08/16		15,093,858	12,619		7.2	0.41	0.355	2,164,508	7.1	0.60	4,718,876	6.9	0.17
09/15/16		15,117,114	23,256					2,173,196			4,734,824		
09/30/16		15,161,513	44,399					2,190,037			4,766,164		
	<b>10/01/16</b>	<b>15,162,610</b>		<b>September</b>			<b>Pounds Cr</b>						
10/01/16		15,162,976	1,463	<b>81,895</b>			<b>0.242</b>	2,190,896			4,766,917		
10/05/16		15,170,280	7,304		7.5	0.76	0.707	2,194,329	7.1	1.17	4,771,417	7.2	0.24
	<b>11/01/16</b>	<b>15,218,316</b>		<b>October</b>			<b>Pounds Cr</b>						
11/01/16		15,218,916	48,636	<b>55,706</b>			<b>0.328</b>	2,214,974			4,803,706		
11/09/16		15,231,072	12,156		7.7	0.58	0.550	2,221,415	7.3	1.02	4,810,434	7.2	0.17
11/30/16		15,257,768	26,696					2,231,705			4,829,512		
	<b>12/01/16</b>	<b>15,259,593</b>		<b>November</b>			<b>Pounds Cr</b>						
12/01/16		15,262,085	4,317	<b>41,277</b>			<b>0.189</b>	2,233,005			4,832,948		
12/08/16		15,278,159	16,074		7.7	0.90	0.832	2,240,348	7.4	1.41	4,843,138	7.3	0.26
	<b>01/01/17</b>	<b>15,320,273</b>		<b>December</b>			<b>Pounds Cr</b>						
01/05/17		15,328,203	50,044	<b>60,680</b>			<b>0.420</b>						
01/05/17		15,328,203	0			1.00	0.895	2,259,750	7.5	1.44	4,878,940	7.4	0.47
01/31/17		15,387,622	59,419					2,272,198			4,933,594		
	<b>02/01/17</b>	<b>15,387,845</b>		<b>January</b>			<b>Pounds Cr</b>						
02/01/17		15,388,387	765	<b>67,572</b>			<b>0.504</b>	2,272,625			4,933,971		
02/09/17		15,399,455	11,068		7.8	0.56	0.542	2,277,351	7.5	0.99	4,941,836	7.1	0.13
	<b>03/01/17</b>	<b>15,452,749</b>		<b>February</b>			<b>Pounds Cr</b>						
03/08/17		15,476,369	76,914	<b>64,904</b>			<b>0.305</b>						
03/08/17		15,476,369	0		7.8	0.59	0.539	2,302,121	7.3	1.14	5,002,178	7.3	0.26
03/14/17		15,497,125	20,756					2,309,539			5,016,906		
03/25/17		15,528,765	31,640					2,321,231			5,039,669		
03/29/17		15,542,291	13,526					2,325,638			5,049,699		
	<b>04/01/17</b>	<b>15,558,808</b>		<b>March</b>			<b>Pounds Cr</b>						
04/02/17		15,562,275	19,984	<b>106,059</b>			<b>0.476</b>	2,333,037			5,064,049		
04/06/17		15,582,526	20,251		7.7	0.43	0.405	2,340,089	7.3	0.57	5,064,049	7.3	0.27
04/27/17		15,676,954	94,428					2,372,953			5,146,405		



**TABLE 1**  
**Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site  
Appleton, Wisconsin  
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	<i>05/01/17</i>	<i>15,703,639</i>		<b>April</b>			<b>Pounds Cr</b>						
05/04/17		15,728,166	51,212	<b>144,831</b>			<b>0.488</b>						
05/04/17		15,728,166	0		7.6	0.28		2,387,552	7.1	0.36	5,185,807	6.8	0.21
	<i>06/01/17</i>	<i>15,796,047</i>		<b>May</b>			<b>Pounds Cr</b>						
06/08/17		15,812,038	83,872	<b>92,408</b>			<b>0.198</b>						
06/08/17		15,812,038	0		7.5	0.35		2,421,837	7.1	0.36	5,243,312	7.2	0.16
	<i>07/01/17</i>	<i>15,888,740</i>		<b>June</b>			<b>Pounds Cr</b>						
07/01/17		15,891,390	79,352	<b>92,693</b>			<b>0.251</b>						
07/06/17		15,902,647	11,257		7.5	0.57		2,453,044	7.1	0.69	5,309,639	7.0	0.50
07/31/17		15,945,154	42,507					2,472,011			5,337,122		
	<i>08/01/17</i>	<i>15,945,504</i>		<b>July</b>			<b>Pounds Cr</b>						
08/01/17		15,945,880	726	<b>56,764</b>			<b>0.248</b>	2,472,438			5,337,492		
08/09/17		15,958,437	12,557		7.4	0.68		2,478,016	7.0	0.66	5,347,291	6.9	0.38
	<i>09/01/17</i>	<i>15,992,489</i>		<b>August</b>			<b>Pounds Cr</b>						
09/07/17		16,001,926	43,489	<b>46,985</b>			<b>0.244</b>	2,472,438			5,337,492		
09/07/17		16,001,926	0		7.4	0.50		2,497,770	7.1	0.68	5,375,524	6.9	0.14
09/29/17		16,031,780	29,854					2,510,609			5,395,101		
	<i>10/01/17</i>	<i>16,034,956</i>		<b>September</b>			<b>Pounds Cr</b>						
10/03/17		16,035,404	3,624	<b>42,467</b>			<b>0.173</b>	2,512,318			5,397,338		
10/05/17		16,037,996	2,592		7.5	0.44		2,513,176	7.1	1.14	5,399,232	6.7	0.12
	<i>11/01/17</i>	<i>16,080,246</i>		<b>October</b>			<b>Pounds Cr</b>						
11/07/17		16,090,463	52,467	<b>45,290</b>			<b>0.155</b>	2,536,891			5,436,850		
11/09/17		16,092,667	2,204		7.6	0.76		2,538,180	7.2	0.99	5,437,985	7.2	0.22
11/15/17		16,098,379	5,712					2,541,643			5,441,055		
11/30/17		16,109,689	11,310					2,549,030			5,450,173		
	<i>12/01/17</i>	<i>16,110,147</i>		<b>November</b>			<b>Pounds Cr</b>						
12/03/17		16,112,117	2,428	<b>29,901</b>			<b>0.179</b>	2,550,308			5,451,687		
12/07/17		16,115,265	3,148		7.4	0.82		2,551,590	7.4	1.29	5,453,973	7.4	0.20
12/14/17		16,121,000	5,735					2,551,590			5,453,973		
12/31/17		16,131,936	10,936					2,560,147			5,464,203		
	<i>01/01/18</i>	<i>16,132,328</i>		<b>December</b>			<b>Pounds Cr</b>						
01/01/18		16,132,328	392	<b>21,969</b>			<b>0.138</b>	2,560,571			5,464,203		

Italicized red type metered discharge reading was calculated by linear interpolation to 12 midnight.

Industrial User (Wastewater Discharge) Permit 12-21 Outfall 001 Effluent Limits		
pH	Hexavalent Chromium	Total Chromium
Between 5.0 and 12.4 s.u.	<4.5 mg/L	<7.0 mg/L

**TABLE 2**  
**City of Appleton Compliance Limits, Outfall 001**  
 N.W. Mauthe Superfund Site - Appleton, WI

		Aluminum (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Chromium Total (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Hexavalent Chromium (mg/L)
Permit #12-21 Limits		70	1.0	0.3	7.0	3.5	1.0	2.0	0.002	2.0	10.0	4.5
Sampler	Sample Date											
CH2M Hill	02/20/97	<.02	<.003	<.00050	0.04	<.01	<.00001	<.005	<.0002	<.005	0.0051	<.01
CH2M Hill	03/24/98	0.0152	<.002	<.00004	0.0637	<.0095	<.0017	<.0006	<.000015	<.0095	0.0046	0.1000
Appleton	04/29/98	<.011	<.002	<.005	0.2200	<.05	0.0020	<.1	<.0002	<.04	<.005	NA
Appleton	10/07/98	<.011	<.002	0.0050	0.1700	<.05	<.001	<.1	<.0002	<.04	0.0250	NA
MCO	03/18/99	<.009	<.003	<.00031	NA	.00068****	<.00032	<.0024	<.00005	.00351****	<.012	<.0036
Appleton	03/18/99	<.011	<.002	<.005	<.05	<.05	0.0010	0.1000	<.00005	0.0400	0.0180	NA
Appleton	09/21/99	<.011	<.002	<.005	<.05	<.05	0.0030	<.1	<.00015	<.04	0.0080	NA
Appleton	02/15/00	<.015	<.0020	<.005	0.0900	<.05	<.001	<.1	<.00013	<.04	0.0280	NA
MCO	03/13/00	<.009	<.003	<.00031	0.1400	<.0006	<.0044	<.0024	<.00005	0.0012	<.012	NA
Appleton	02/21/01	<.015	<.002	<.005	0.11	<.05	0.001	<.1	<.00013	<.04	0.042	NA
MCO	03/01/01	<.034	<.0027	.012 ****	0.25	.0088 ****	<.0033	<.17	<.00005	.036 ****	0.015	<.0036
Appleton	10/02/01	0.016	<.002	<.005	0.14	<.05	<.001	<.1	<.00013	<.04	0.065	NA
MCO	03/19/02	<.034	<.0027	<.0075	0.36	<.0077	<.0027	<.17	<.00005	<.017	<.012	<.0036
Appleton	05/02/02	<.049	<.012	<.014	0.362	<.015	<.0014	<.060	<.00011	<.011	<.009	NA
Appleton	11/12/02	0.027	<.0082	<.00053	0.23	<.009	<.0007	<.00084	<.000028	0.0044	0.0081	NA
Appleton	02/11/03	<.027	<.0082	<.00053	0.086	<.0009	<.0014	<.0013	<.000028	0.0036	<.0025	NA
Appleton	03/24/03	<.045	<.0027	<.0088	0.13	0.075	<.0050	<.16	<.000050	<.019	<.0044	<.0036
Appleton	10/23/03	0.0045	0.0013	<.00001	0.221	<.0008	<.005	<.0006	0.0002	<.025	<.010	NA
Appleton	03/24/04	<.050	<.0026	<.010	0.15	<.0060	<.0050	<.16	<.000025	<.020	<.010	NA
Appleton	11/09/04	0.0071	<.0012	<.00001	0.04	0.0008	<.005	<.008	<.00002	0.0013	<.01	NA
MCO	08/08/05	0.023	<.0035	<.00003	0.039	0.0019	<.0037	<.0011	<.000026	<.0044	0.0024	<.005
Appleton	11/05/06	0.0052	<.0012	<.00001	0.088	<.0005	<.005	<.0008	<.00002	0.0017	<.010	NA
Appleton	02/23/06	0.0021	<.0012	<.00001	0.08	<.0005	<.0005	<.0008	<.00002	0.0022	<.010	NA
MCO	03/23/06	<.20	<.0076	<.00074	0.32	0.0018	0.0043	<.0034	<.000026	0.0033	<.020	NA
Appleton	06/27/06	<.200	<.0076	<.00074	0.700	0.0016	<.0094	<.0034	<.000072	0.0021	<.020	<.350
Appleton	10/05/06	0.0307	<.00011	<.00001	4.575	0.0068	0.01	<.001	<.0002	0.0026	<.010	NA
Appleton	03/22/07	<.07	<.07	<.01	1.9	3.5	<.004	<.03	<.0002	<.04	<.01	NA
MCO	04/02/07	0.0383	0.00024	0.000086	1.41	0.0041	<.0094	0.00013	<.000019	0.0035	0.009	NA
Appleton	12/04/07	<.07	<.001	<.01	3.4	<.01	0.008	<.03	<.0002	<.04	<.01	1.5
Appleton	01/16/08	0.21	<.005	<.01	<.03	0.02	0.017	0.06	0.0003	<.04	0.04	NA
OMNNI	04/08/08	0.0114	0.00043	0.00011	0.864	0.0043	0.014 J	0.000095 J	<.0001	0.0024	0.0071	0.063
Appleton	08/19/08	<.08	<.001	<.01	0.95	<.01	0.005	<.03	0.0002	<.02	<.01	NA
Appleton	03/31/09	<.09	<.012	<.01	0.99	<.01	<.008	<.05	<.00002	<.02	<.01	NA
OMNNI	04/07/09	<.0151	0.003 J	0.00040 J	0.767	0.0024 J	<.0060	<.0014	<.000010	0.0016 J	0.0137 J	0.84
Appleton	09/22/09	<.08	<.006	<.01	2.3	<.01	<.008	<.05	<.00002	<.02	<.01	NA
Appleton	03/02/10	<.06	<.002	<.01	1.6	<.01	<.008	<.03	<.00002	<.01	<.01	NA
OMNNI	04/06/10	0.0501 J	<.0014	0.00043 J	1.16	0.0024 J	<.0061	<.00075	<.00001	0.0023 J	0.0046 J	1.3
Appleton	11/02/10	<.10	<.010	<.01	0.71	<.01	<.008	<.03	<.00002	<.01	<.01	NA
Appleton	02/24/11	<.08	<.001	<.01	1.5	<.01	0.008	<.04	<.00002	<.02	<.01	NA
OMNNI	04/05/11	0.0725 J	0.0025 J	<.00026	0.401	0.0028 J	<.0061	<.0014	<.000010	0.00053 J	0.0023 J	0.40
Appleton	10/26/11	<.08	<.005	<.01	1.2	<.01	0.007	<.04	<.00002	<.02	<.01	NA
Appleton	03/21/12	<.11	<.004	<.01	1.3	0.01	0.007	<.04	<.00002	<.02	<.01	NA
Terracon	04/05/12	<.0695	<.0047	<.00039	0.696	0.014 J	<.0061	<.0014	<.000010	0.001 J	<.0053	0.83
Appleton	10/04/12	0.0865	0.0051	0.00049	1.43	0.0028 J	0.026	0.0022	0.0001	0.00019 J	<.0053	NA
Terracon	04/11/13	0.078	<.004	<.00048	0.431	0.0024 J	<.0038	<.027	<.000010	0.00013 J	<.0024	0.42
Appleton	04/17/13	<.0714	<.0042	<.00048	0.279	0.0029 J	<.0038	<.027	<.000010	0.00062 J	<.0024	NA
Appleton	11/20/13	<.0714	<.0042	<.00048	1.13	0.0018 J	0.0044 J	<.027	<.000010	0.00085 J	0.0034 J	NA
Appleton	04/15/14	0.119 J	<.0068	<.001	0.27	0.0036 J	<.060	<.0016	<.000010	<.0013	<.0058	NA
Terracon	05/13/14	0.116 J	<.0068	<.001	0.273	0.0034 J	<.060	0.0040 J	<.000010	<.0013	0.0064 J	0.28
Appleton	9/24/2014	<.0655	<.0068	<.001	0.757	<.0034	<.010	<.0016	<.000010	<.0013	<.0058	NA
Terracon	4/15/2015	0.054 J	<.0072	<.00060	0.858	0.0041 J	<.010	<.0030	<.000010	<.0014	0.0026 J	0.92
Appleton	6/3/2015	<.0655	<.0068	<.001	0.504	<.0034	<.020	<.0016	<.000010	<.0013 J	<.0058	NA
Appleton	10/21/2015	0.105 J	<.0068	<.0010	0.676	<.0034	<.010	0.0024 J	<.000010	<.0013	0.0078 J	NA
Terracon	5/12/2016	0.0637 J	<.0072	<.00060	0.645	<.0036	<.0068	<.0030	<.000013	0.0018 J	<.0013	0.70
Appleton	5/17/2016	<.090	<.001	<.010	0.530	<.010	<.007	<.030	<.00002	<.020	<.01	NA
Appleton	11/1/2016	<.090	<.010	<.010	0.560	<.010	<.007	<.030	<.00002	<.020	<.010	NA
Appleton	4/27/2017	<.060	<.001	<.010	0.370	<.010	0.007	<.030	<.00002	<.020	<.010	NA
Terracon	6/8/2017	<.0555	<.0083	<.0013	0.345	<.0063	<.0068	<.0043	<.000013	<.0026	<.0093	0.35
Appleton	11/9/2017	not available										NA

October 09, 2017

Scott Hodgson  
Terracon, Inc. - Franklin  
9856 South 57th Street  
Franklin, WI 53132

RE: Project: 58117057 MAUTHE  
Pace Project No.: 40158001

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
40158001001	OUTFALL-001	Water	10/05/17 07:50	10/05/17 12:54

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### SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE  
Pace Project No.: 40158001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40158001001	OUTFALL-001	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G

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### SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40158001

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40158001001</b>	<b>OUTFALL-001</b>					
EPA 6010	Chromium, Dissolved	410	ug/L	10.0	10/06/17 13:49	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.44	mg/L	0.043	10/06/17 07:30	

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** Terracon, Inc. - Franklin

**Date:** October 09, 2017

**General Information:**

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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**Method:** SM 3500-Cr B (Online)

**Description:** Chromium, Hexavalent

**Client:** Terracon, Inc. - Franklin

**Date:** October 09, 2017

**General Information:**

1 sample was analyzed for SM 3500-Cr B (Online). All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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**Sample: OUTFALL-001**      **Lab ID: 40158001001**      Collected: 10/05/17 07:50      Received: 10/05/17 12:54      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010								
Chromium, Dissolved	<b>410</b>	ug/L	10.0	2.5	1		10/06/17 13:49	7440-47-3	
<b>Chromium, Hexavalent</b>	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	<b>0.44</b>	mg/L	0.043	0.013	2.5		10/06/17 07:30		

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 58117057 MAUTHE  
Pace Project No.: 40158001

QC Batch: 269766 Analysis Method: EPA 6010  
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved  
Associated Lab Samples: 40158001001

METHOD BLANK: 1585467 Matrix: Water  
Associated Lab Samples: 40158001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<2.5	10.0	10/06/17 12:44	

LABORATORY CONTROL SAMPLE: 1585468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	486	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1585469 1585470

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40157988002	Result	Spike Conc.	Spike Conc.								
Chromium, Dissolved	ug/L	<2.5	500	500	500	479	483	96	97	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: 58117057 MAUTHE

Pace Project No.: 40158001

QC Batch: 269691

Analysis Method: SM 3500-Cr B (Online)

QC Batch Method: SM 3500-Cr B (Online)

Analysis Description: Chromium, Hexavalent by 3500

Associated Lab Samples: 40158001001

METHOD BLANK: 1585119

Matrix: Water

Associated Lab Samples: 40158001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.0051	0.017	10/06/17 07:30	

LABORATORY CONTROL SAMPLE: 1585120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	.3	0.30	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1585121 1585122

Parameter	Units	1585121		1585122		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40158001001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Chromium, Hexavalent	mg/L	0.44	.75	.75	1.2	1.2	105	103	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

Pace Project No.: 40158001

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
40158001001	OUTFALL-001	EPA 6010	269766		
40158001001	OUTFALL-001	SM 3500-Cr B (Online)	269691		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN OF CUSTODY

**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)

PRESERVATION  
(CODE)\*

Regulatory Program:

**Data Package Options**  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 W = Water  
 DW = Drinking Water  
 GW = Ground Water  
 SW = Surface Water  
 WW = Waste Water  
 WP = Wipe

**COLLECTION DATE TIME MATRIX**

(Please Print Clearly)

Company Name: Terracon  
 Branch/Location: Milwaukee  
 Project Contact: Scott Hodgson  
 Phone: 414-209-7640  
 Project Number: 58117057  
 Project Name: Manthe  
 Project State: WI  
 Sampled By (Print): Scott A. Hodgson  
 Sampled By (Sign): [Signature]  
 PO #:

CLIENT FIELD ID  
OUTFAL2-001

Y/N	Pick Letter	Analyses Requested
Y	N	
D	A	Total Chromium
		Hex Chromium

CLIENT	LAB COMMENTS	Profile #
2-250mlp	AD	

**Requisitioned By:** Scott A. Hodgson **Date/Time:** 10/5/17 0830  
**Relinquished By:** Kim Ketyke Pace **Date/Time:** 10/5/17 1254  
**Requisitioned By:** Scott A. Hodgson **Date/Time:** 10/5/17 0830  
**Relinquished By:** Kim Ketyke Pace **Date/Time:** 10/5/17 1254

**Quote #:**  
**Mail To Contact:**  
**Mail To Company:**  
**Mail To Address:**  
**Invoice To Contact:**  
**Invoice To Company:**  
**Invoice To Address:**  
**Invoice To Phone:**

CLIENT	LAB COMMENTS	Profile #
2-250mlp	AD	

**Requisitioned By:** Scott A. Hodgson **Date/Time:** 10/5/17 0830  
**Relinquished By:** Kim Ketyke Pace **Date/Time:** 10/5/17 1254  
**Requisitioned By:** Scott A. Hodgson **Date/Time:** 10/5/17 0830  
**Relinquished By:** Kim Ketyke Pace **Date/Time:** 10/5/17 1254

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302



Client Name: Belgioso Terracon <sup>10/5/17</sup> Project #:

WO#: **40158001**



Courier:  Fed Ex  UPS  Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: \_\_\_\_\_ /Corr: RCI Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Person examining contents:  
Date: 10/5/17  
Initials: [Signature]

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>no MS/MSD</u> <u>kt 10/5/17</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>kt 10/5/17</u>
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: <u>kt</u> Lab Std #ID of preservative: _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AL for DM

Date: 10-5-17



November 27, 2017

Scott Hodgson  
Terracon, Inc. - Franklin  
9856 South 57th Street  
Franklin, WI 53132

RE: Project: 58117057 MAUTHE  
Pace Project No.: 40160462

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on November 09, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40160462001	OUTFALL-001	Water	11/09/17 08:05	11/09/17 13:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE

Pace Project No.: 40160462

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40160462001	OUTFALL-001	EPA 6010	JLD	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40160462

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40160462001</b>	<b>OUTFALL-001</b>					
EPA 6010	Chromium, Dissolved	718	ug/L	10.0	11/16/17 18:57	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.76	mg/L	0.086	11/09/17 14:50	

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** Terracon, Inc. - Franklin

**Date:** November 27, 2017

**General Information:**

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

**Method:** SM 3500-Cr B (Online)

**Description:** Chromium, Hexavalent

**Client:** Terracon, Inc. - Franklin

**Date:** November 27, 2017

**General Information:**

1 sample was analyzed for SM 3500-Cr B (Online). All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

**Sample: OUTFALL-001**      **Lab ID: 40160462001**      Collected: 11/09/17 08:05      Received: 11/09/17 13:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010								
Chromium, Dissolved	<b>718</b>	ug/L	10.0	2.5	1		11/16/17 18:57	7440-47-3	
<b>Chromium, Hexavalent</b>	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	<b>0.76</b>	mg/L	0.086	0.026	5		11/09/17 14:50		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 58117057 MAUTHE

Pace Project No.: 40160462

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QC Batch: 273790	Analysis Method: EPA 6010
QC Batch Method: EPA 6010	Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40160462001	

---

METHOD BLANK: 1610791 Matrix: Water

Associated Lab Samples: 40160462001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<2.5	10.0	11/16/17 18:09	

---

LABORATORY CONTROL SAMPLE: 1610792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	472	94	80-120	

---

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1610793 1610794

Parameter	Units	1610793		1610794		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40160448019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chromium, Dissolved	ug/L	<2.5	500	500	470	472	94	94	75-125	0	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 58117057 MAUTHE  
Pace Project No.: 40160462

QC Batch: 273659 Analysis Method: SM 3500-Cr B (Online)  
QC Batch Method: SM 3500-Cr B (Online) Analysis Description: Chromium, Hexavalent by 3500  
Associated Lab Samples: 40160462001

METHOD BLANK: 1609922 Matrix: Water  
Associated Lab Samples: 40160462001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.0051	0.017	11/09/17 12:35	

LABORATORY CONTROL SAMPLE: 1609923

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	.3	0.31	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1609924 1609925

Parameter	Units	1609924		1609925		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40160431001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chromium, Hexavalent	mg/L	<0.13	7.5	7.5	7.5	7.5	99	100	90-110	1	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

Pace Project No.: 40160462

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
40160462001	OUTFALL-001	EPA 6010	273790		
40160462001	OUTFALL-001	SM 3500-Cr B (Online)	273659		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN OF CUSTODY

**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H= Sodium Bisulfate Solution I= Sodium Thiosulfate J=Other

Y/N	Pick Letter	ANALYSES REQUESTED
Y	N	
D	A	Total Chromium
		Hex Chromium
		1-250ml p HD

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE		MATRIX
		DATE	TIME	
001	OUT FALL-001	11/9/17	8:05A	WW

*(Please Print Clearly)*

Company Name: **Terracon**

Branch/Location: **W.waukee**

Project Contact: **Scott Hodgson**

Phone: **714-209-7240**

Project Number: **58117057**

Project Name: **Maunthe**

Project State: **WI**

Sampled By (Print): **Scott A. Hodgson**

Sampled By (Sign): *Scott A. Hodgson*

PO #:

**Data Package Options** (billable)

EPA Level III

EPA Level IV

On your sample (billable)

NOT needed on your sample

**MS/MSD**

**Matrix Codes**

A = Air  
 B = Biota  
 C = Charcoal  
 O = Oil  
 S = Soil  
 Sl = Sludge  
 W = Water  
 DW = Drinking Water  
 GW = Ground Water  
 SW = Surface Water  
 WW = Waste Water  
 WP = Wipe

**Regulatory Program:**

Y/N	Pick Letter	ANALYSES REQUESTED
Y	N	
D	A	Total Chromium
		Hex Chromium
		1-250ml p HD

**Rush Turnaround Time Requested - Prelims**  
 (Rush TAT subject to approval/surcharge)  
 Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:

Email #2:

Telephone:

Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By: **Scott A. Hodgson** Date/Time: **11/9/17 09:00**

Relinquished By: **Rachelle Pace** Date/Time: **11/9/17 13:45**

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: **Rachelle Pace** Date/Time: **11/9/17 09:15**

Received By: **Rachelle Pace** Date/Time: **11/9/17 13:45**

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

PACE Project No. **40160462**

Receipt Temp = **R01** °C

Sampling Receipt pH **OK/Adjusted**

Cooler Custody Seal **Present / Not Present**  
 Intact / Not Intact



Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project #: WO#: 40160462

Client Name: Terracon



Courier: Fed Ex UPS Client Pace Other:

Tracking #:

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used N/A Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 11-9-17
Initials: KR

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Table with 15 rows of inspection items and checkboxes. Items include Chain of Custody Present, Short Hold Time Analysis, Rush Turn Around Time Requested, Sufficient Volume, Containers Intact, Sample Labels match COC, and Trip Blank Present.

Client Notification/ Resolution:
Person Contacted: Date/Time:
Comments/ Resolution: If checked, see attached form for additional comments

Project Manager Review: AR TK DM Date: 11-9-17

December 13, 2017

Scott Hodgson  
Terracon, Inc. - Franklin  
9856 South 57th Street  
Franklin, WI 53132

RE: Project: 58117057 MAUTHE  
Pace Project No.: 40162053

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on December 07, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40162053

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 58117057 MAUTHE  
Pace Project No.: 40162053

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40162053001	OUTFALL-001	Water	12/07/17 07:45	12/07/17 12:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE  
Pace Project No.: 40162053

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40162053001	OUTFALL-001	EPA 6010	JLD	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40162053

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40162053001</b>	<b>OUTFALL-001</b>					
EPA 6010	Chromium, Dissolved	755	ug/L	10.0	12/11/17 19:02	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.82	mg/L	0.086	12/07/17 14:30	

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40162053

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** Terracon, Inc. - Franklin

**Date:** December 13, 2017

**General Information:**

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40162053

---

**Method:** SM 3500-Cr B (Online)

**Description:** Chromium, Hexavalent

**Client:** Terracon, Inc. - Franklin

**Date:** December 13, 2017

**General Information:**

1 sample was analyzed for SM 3500-Cr B (Online). All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40162053

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**Sample: OUTFALL-001**      **Lab ID: 40162053001**      Collected: 12/07/17 07:45      Received: 12/07/17 12:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>	Analytical Method: EPA 6010								
Chromium, Dissolved	<b>755</b>	ug/L	10.0	2.5	1		12/11/17 19:02	7440-47-3	
<b>Chromium, Hexavalent</b>	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	<b>0.82</b>	mg/L	0.086	0.026	5		12/07/17 14:30		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 58117057 MAUTHE  
Pace Project No.: 40162053

QC Batch: 276775      Analysis Method: EPA 6010  
QC Batch Method: EPA 6010      Analysis Description: ICP Metals, Trace, Dissolved  
Associated Lab Samples: 40162053001

METHOD BLANK: 1627522      Matrix: Water  
Associated Lab Samples: 40162053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<2.5	10.0	12/12/17 12:58	

LABORATORY CONTROL SAMPLE: 1627523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	530	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1627524      1627525

Parameter	Units	1627524		1627525		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40162156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chromium, Dissolved	ug/L	<2.5	500	500	530	530	106	106	75-125	0	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 58117057 MAUTHE  
Pace Project No.: 40162053

QC Batch: 276538	Analysis Method: SM 3500-Cr B (Online)
QC Batch Method: SM 3500-Cr B (Online)	Analysis Description: Chromium, Hexavalent by 3500
Associated Lab Samples: 40162053001	

METHOD BLANK: 1626344 Matrix: Water  
Associated Lab Samples: 40162053001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.0051	0.017	12/07/17 14:30	

LABORATORY CONTROL SAMPLE: 1626345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	.3	0.31	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1626346 1626347

Parameter	Units	1626346		1626347		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40162053001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chromium, Hexavalent	mg/L	0.82	1.5	1.5	2.4	2.4	108	107	90-110	1	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40162053

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

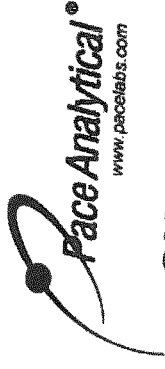
Pace Project No.: 40162053

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
40162053001	OUTFALL-001	EPA 6010	276775		
40162053001	OUTFALL-001	SM 3500-Cr B (Online)	276538		

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# CHAIN OF CUSTODY

**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)

PRESERVATION  
(CODE)\*

Regulatory  
Program:

**Data Package Options**  
 (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 W = Water  
 DW = Drinking Water  
 GW = Ground Water  
 SW = Surface Water  
 WW = Waste Water  
 WP = Wipe

**COLLECTION DATE**  
 TIME

**MATRIX**

**CLIENT FIELD ID**

**PACE LAB #**

**DATE**

**TIME**

**Matrix**

**CLIENT FIELD ID**

**PACE LAB #**

**DATE**

(Please Print Clearly)

Company Name: Teragon  
 Branch/Location: M: Iwaukee  
 Project Contact: Scott Hodgson  
 Phone: 414-269-7640  
 Project Number: 53117057  
 Project Name: Maui  
 Project State: WI  
 Sampled By (Print): Scott A. Hodgson  
 Sampled By (Sign): Scott A. Hodgson  
 PO #:

Y/N	Pick Letter	Analyses Requested
Y	N	
D	A	Total Chromium
		HxC Chromium
X		
X		

Rush Turnaround Time Requested - Prelims  
 (Rush TAT subject to approval/surcharge)  
 Date Needed:

Transmit Prelim Rush Results by (complete what you want):  
 Email #1:  
 Email #2:  
 Telephone:  
 Fax:

Samples on HOLD are subject to special pricing and release of liability

**Quote #:**

**Mail To Contact:**

**Mail To Company:**

**Mail To Address:**

**Invoice To Contact:**

**Invoice To Company:**

**Invoice To Address:**

**Invoice To Phone:**

**CLIENT COMMENTS**

**LAB COMMENTS (Lab Use Only)**

**Profile #**

**Received By:** Scott A. Hodgson **Date/Time:** 12/17/08 0830  
**Received By:** Karen W. Lee **Date/Time:** 12/17/08 1235  
**Received By:** Scott A. Hodgson **Date/Time:** 12/17/08 1235  
**Received By:** Scott A. Hodgson **Date/Time:** 12/17/08 0830  
**Received By:** Scott A. Hodgson **Date/Time:** 12/17/08 1235

**PACE Project No.** 40162053  
**Receipt Temp =** RO1 °C

**Sample Receipt pH** OR/ Adjusted  
**Cooler Custody Seal Present /Not Present** Intact /Not Intact

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302



Client Name: Terracon

Project #: **WO#: 40162053**

Courier:  Fed Ex  UPS  Client  Pace Other: \_\_\_\_\_  
Tracking #: \_\_\_\_\_



40162053

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used N/A Type of Ice:  Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RoI / Corr: \_\_\_\_\_ Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Person examining contents:  
Date: 12/7/17  
Initials: SSM

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>NO MS/MSD vol. SSM 12/7/17</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9. <u>Later soluble ink</u>
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>SSM 12/7/17</u>
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
- Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>SSM</u> Lab Std #ID of preservative Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_  
If checked, see attached form for additional comments

Project Manager Review: RKR for DM

Date: 12/7/17