

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: 2019 First Quarter Compliance Monitoring Report, Industrial User (Wastewater Discharge) Permit #18-21

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. 18-21, issued on May 31, 2018. This report covers the period of January 1, 2019, through March 31, 2019, 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 not collected by either the City of Appleton or Terracon. Historical results are presented in the attached Table 2.

As noted in the 2012 Fourth Quarter Process Compliance Report the system was replumbed in 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 2019 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



Terracon Consultants, Inc. 9856 South 57th Street Franklin, Wisconsin 53132

P [414] 423 0255 F [414] 423 0566 terracon.com

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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 transferred to a clean, new 250-mL plastic bottle with nitric acid preservative provided by the laboratory. This unfiltered, 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 (January, February, and March 2019) 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 200,296 gallons with a mean daily flow of approximately 2,226 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."

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Please call (920-791-9206) or email (<u>sahodgson@terracon.com</u>) 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 2019\First Quarter\First Quarter 2019 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

			OUTF	ALL 001				Mai	nhole	#1	Ma	nhole	#2
Data Associa	Date For Linear Interpolation	Metered Discharge Reading	Gallons Discharged Between Meter Reading	Monthly Discharge		Hexavalent Chromium Lab Analysis (mg/L) [Local Limit	Total Chromium Lab Analysis ¹ (mg/L) [Local Limit 7.0	Flow Totalizer #1 Reading	рН	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading	рН	Hexavalent Chromium Hach Test Kit (mg/L)
Date Actual	interpolation	(gallons)		(gallons)	pН	4.5 mg/L]	mg/L]	(gallons)	рп	Kit (mg/L)	(gallons)	рп	Kit (mg/L)
02/01/16		14,533,138	33,850	45,078			0.215	1,971,254	7.0	0.04	4,316,580	0.4	0.70
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	03/01/16	14,601,368 14,602,713	39,356	February			Davinda Cr	1,982,872			4,359,110		
03/01/16	03/01/16	14,603,747	2,379	70,091			Pounds Cr 0.501	1,983,300			4,361,401		1
03/01/16		14,625,282	21,535	70,031	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		7.0	0.00	0.000	2,017,845	7.0		4,463,804		0.07
20,00,00	04/01/16	14,733,540	,	March			Pounds Cr	_,011,010			1,100,001		
04/02/16		14,751,888	23,203	130,827			0.663	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
	05/01/16	14,827,634		April			Pounds Cr						
05/03/16		14,834,742	64,708	94,094			0.191	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		
	06/01/16	14,889,570		May			Pounds Cr						
06/06/16		14,902,417	46,236	61,936			0.333	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	07/04/40	14,946,108	40,041	luma			Daniela Or	2,101,451			4,617,396		-
07/01/16	07/01/16	14,980,911 14,983,214	37,106	June 91,341			Pounds Cr 0.309	2,113,474			4,646,051		
07/01/16		14,983,214	15,241	91,341	7.4	0.50	0.430	2,113,474	7.0	0.87	4,656,766	7.1	0.20
07/31/16		15,036,518	38,063		7.4	0.50	0.430	2,119,467	7.0	0.07	4,681,191	7.1	0.20
07/31/10	08/01/16	15,036,760	30,003	July			Pounds Cr	2,130,304			4,001,131		
08/01/16	50,01,10	15,037,244	726	55,849			0.200	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		
	09/01/16	15,080,715		August			Pounds Cr						
09/02/16		15,081,239	15,779	43,955			0.213	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		
	10/01/16	15,162,610		September			Pounds Cr						
10/01/16		15,162,976	1,463	81,895	7.5	0.70	0.242	2,190,896	7.4	4 47	4,766,917	7.0	0.24
10/05/16	11/01/16	15,170,280 15,218,316	7,304	October	7.5	0.76	0.707 Pounds Cr	2,194,329	7.1	1.17	4,771,417	7.2	0.24
11/01/16	11/01/16	15,218,916	48,636	55,706			0.328	2,214,974			4,803,706		1
11/01/16		15,231,072	12,156	33,700	7.7	0.58	0.550	2,221,415	7.3	1.02	4,803,700	7.2	0.17
11/30/16		15,257,768	26,696			0.00	0.000	2,231,705	7.0	1.02	4,829,512		0.17
. 1,00,10	12/01/16	15,259,593	20,000	November			Pounds Cr	_,_5.,.50			.,,		
12/01/16		15,262,085	4,317	41,277		İ	0.189	2,233,005			4,832,948		İ
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
	01/01/17	15,320,273		December			Pounds Cr						
01/05/17		15,328,203	50,044	60,680			0.420						
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		
	02/01/17	15,387,845		January			Pounds Cr						
02/01/17		15,388,387	765	67,572	7.	0.50	0.504	2,272,625	7.5	0.00	4,933,971	7.4	0.10
02/09/17	00/04/47	15,399,455 15,452,749	11,068	Echrussi	7.8	0.56	0.542	2,277,351	7.5	0.99	4,941,836	7.1	0.13
02/00/47	03/01/17	15,452,749	76.04.4	February 64,904			Pounds Cr 0.305						-
03/08/17 03/08/17		15,476,369	76,914 0	04,904	7.8	0.59	0.539	2,302,121	7.3	1.14	5,002,178	7.3	0.26
03/06/17		15,476,369	20,756		7.0	0.05	0.000	2,302,121	1.3	1.14	5,016,906	7.5	0.20
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		
	04/01/17	15,558,808	-,	March			Pounds Cr	, ,,,,,,,,,			1		İ
04/02/17		15,562,275	19,984	106,059			0.476	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

			OUTF	ALL 001				Ma	nhole	#1	Ma	nhole	#2
Date Actual	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pН	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis ¹ (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pН	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	рН	Hexavalent Chromium Hach Test Kit (mg/L)
	05/01/17	15,703,639		April			Pounds Cr						
05/04/17		15,728,166	51,212	144,831			0.488			0.00		0.0	0.04
05/04/17	00/04/47	15,728,166	0		7.6	0.28	0.257	2,387,552	7.1	0.36	5,185,807	6.8	0.21
06/08/17	06/01/17	15,796,047 15,812,038	83,872	May 92,408			Pounds Cr 0.198						
06/08/17		15,812,038	03,672	,	7.5	0.35	0.196	2,421,837	7.1	0.36	5,243,312	7.2	0.16
00/00/11	07/01/17	15,888,740	-	June	7.0	0.00	Pounds Cr	2,421,007		0.00	0,240,012		0.10
07/01/17	01,01,11	15,891,390	79,352	92,693			0.251						
07/06/17		15,902,647	11,257		7.5	0.57	0.525	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		
	08/01/17	15,945,504		July			Pounds Cr						
08/01/17		15,945,880	726	56,764			0.248	2,472,438			5,337,492		
08/09/17		15,958,437	12,557	_	7.4	0.68	0.624	2,478,016	7.0	0.66	5,347,291	6.9	0.38
	09/01/17	15,992,489		August			Pounds Cr						
09/07/17		16,001,926	43,489	46,985		0.50	0.244	2,472,438	7.4	0.00	5,337,492	0.0	0.44
09/07/17		16,001,926	20.054		7.4	0.50	0.488	2,497,770	7.1	0.68	5,375,524	6.9	0.14
09/29/17	10/01/17	16,031,780 16,034,956	29,854	September			Pounds Cr	2,510,609			5,395,101		
10/03/17	10/01/17	16,035,404	3,624	42,467			0.173	2.512.318			5,397,338		
10/05/17		16,037,996	2,592	72,701	7.5	0.44	0.410	2,513,176	7.1	1.14	5,399,232	6.7	0.12
10/00/17	11/01/17	16,080,246	2,002	October	7.0	0.44	Pounds Cr	2,010,110			0,000,202	0.7	0.12
11/07/17		16,090,463	52,467	45,290			0.155	2,536,891			5,436,850		
11/09/17		16,092,667	2,204	,	7.6	0.76	0.718	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		
	12/01/17	16,110,147		November			Pounds Cr						
12/03/17		16,112,117	2,428	29,901			0.179	2,550,308			5,451,687		
12/07/17		16,115,265	3,148		7.4	0.82	0.755	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	04/04/40	16,131,936	10,936	D				2,560,147			5,464,203		
01/01/18	01/01/18	16,132,116 16,132,328	392	December 21,969			Pounds Cr 0.138	2,560,571			5,464,203		
01/01/18		16,132,328	1,369	21,969		0.78	0.734	2,560,993		0.41	5,465,331		0.04
01/04/10	02/01/18	16,144,665	1,309	January		0.76	Pounds Cr	2,300,993		0.41	3,403,331		0.04
02/01/18	02/01/10	16,144,863	11,166	12,549			0.077	2,566,068			5,472,876		
02/08/18		16,147,315	2,452	12,010	7.8	0.75	0.906	2,567,326	7.4	1.68	5,474,376	7.2	0.16
02/28/18		16,155,889	8,574					2,570,306			5,481,207		
	03/01/18	16,156,053		February			Pounds Cr						
03/01/18		16,156,211	322	11,388			0.086	2,570,306			5,481,586		
03/08/18		16,163,746	7,535		7.7	0.52	0.526	2,574,570	7.4	0.78	5,485,747	7.2	0.20
03/27/18		16,183,153	19,407					2,585,717			5,495,623		
03/31/18	0.4/0.4/15	16,188,615	5,462	Manak			D 1 0	2,472,869*			5,499,048		
04/04/40	04/01/18	16,189,199	4 440	March			Pounds Cr	2 472 242			E E00 004		
04/01/18 04/05/18		16,190,057 16,195,349	1,442 5,292	33,146	7.7	0.60	0.145 0.585	2,473,316 2,476,332	7.3	0.84	5,500,204 5,502,874	7.4	0.35
04/05/18		16,195,349	8,372		1.1	0.00	0.303	2,476,332	1.3	0.04	5,502,874	7.4	0.33
04/10/18		16,302,239	98,518					2,460,242			5,586,326		
04/30/18		16,328,835	26,596					2,516,938			5,606,361		
2 1/00/10	05/01/18	16,330,212	20,000	April			Pounds Cr	_,:::,::50			2,230,001		
05/01/18		16,331,044	2,209	-			0.687	2,517,809			5,607,864		
05/04/18		16,360,268	29,224					2,526,963			5,630,632		
05/10/18		16,409,694	49,426		7.6	0.30	0.315	2,541,347	7.2	0.51	5,667,843	6.8	0.19
05/22/18		16,428,757	19,063					2,547,991			5,681,939		
05/24/18		16,455,003	26,246					2,557,801			5,698,300		
05/29/18		16,462,967	7,964					2,562,178			5,702,537		
	06/01/18	16,466,594		May			Pounds Cr						
06/01/18		16,467,299	4,332	136,382		<u> </u>	0.358	2,563,476			5,705,975		
06/05/18		16,476,100	8,801	l		1		2,566,515			5,712,597		L

TABLE 1 Influent - Effluent Compliance Summary

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

			OUTFA	ALL 001				Mai	nhole	#1	Ma	nhole	÷ #2
	Date For Linear	Metered Discharge Reading	Gallons Discharged Between Meter	Monthly Discharge		Hexavalent Chromium Lab Analysis (mg/L) [Local Limit	Total Chromium Lab Analysis ¹ (mg/L) [Local Limit 7.0	Flow Totalizer #1 Reading		Hexavalent Chromium Hach Test	Flow Totalizer #2 Reading		Hexavalent Chromium Hach Test
Date Actual	Interpolation	(gallons)	Reading	(gallons)	pН	4.5 mg/L]	mg/L]	(gallons)	рН	Kit (mg/L)	(gallons)	pН	Kit (mg/L)
06/07/18		16,480,044	3,944		7.6	0.38	0.382	2,568,258	7.1	0.53	5,715,101	7.3	0.21
06/30/18		16,537,167	57,123					2,588,614			5,756,117		
	07/01/18	16,537,690		June			Pounds Cr						
07/01/18		16,538,238	1,071	71,096			0.226	2,589,032			5,756,879		
07/05/18		16,542,427	4,189		7.6	0.31	0.311	2,591,176	7.2	0.57	5,759,920	7.1	0.16
07/12/18		16,545,145	2,718					2,594,639			5,763,368		
07/19/18		16,553,309	8,164					2,597,639			5,766,777		
07/31/18		16,571,725	18,416					2,604,452			5,779,752		
	08/01/18	16,571,996		July			Pounds Cr						
08/01/18		16,572,495	770	34,306			0.089	2,589,032			5,756,879		
08/08/18		16,581,462	8,967			0.43	0.438	2,608,818	7.1	0.55	5,785,813	7.0	0.27
08/31/18		16,637,913	56,451					2,629,840			5,828,591		
	09/01/18	16,640,165		August			Pounds Cr						
09/01/18		16,641,711	3,798	68,169			0.125	2,631,151			5,831,336		
09/06/18		16,695,169	53,458		7.5	0.24	0.256	2,646,502	7.1	0.59	5,871,311	6.7	0.08
09/17/18		16,734,724	39,555					2,659,921			5,899,762		
09/18/18		16,738,499	3,775					2,660,806			5,903,277		1
09/30/18		16,775,825	37,326					2,672,955			5,932,062		
	10/01/18	16,776,168		September			Pounds Cr						
10/01/18		16,776,700	875	136,003			0.290	2,673,387			5,932,454		
10/03/18		16,785,853	9,153		7.8	0.30	0.303	2,675,556	7.3	0.60	5,940,463	7.1	0.22
10/25/18		16,899,216	113,363					2,709,668			6,027,153		
	11/01/18	16,908,245	,	October			Pounds Cr						
11/01/18		16,908,712	9,496	132,077			0.333	2,713,560			6,033,788		
11/07/18		16,921,099	12,387	,	7.7	0.38	0.424	2,717,458	7.1	0.36	6,044,211	6.8	0.34
11/12/18		16,936,140	-				-	2,723,181			6,054,634		
11/14/18		16,940,487	4,347					2,725,362			6,057,406		†
11/16/18	1	16,944,318	3,831					2,727,099			6,059,771		+
11/19/18		16,949,417	5,099					2,729,266			6,063,298		†
,	12/01/18	16,964,903	5,000	November			Pounds Cr	2,. 23,200			0,000,200		
12/06/18	.20.,10	16,972,133	22,716	56,658		1	0.200	2,738,784			6,080,566		1
12/06/18		16,972,133	0	,	8.0	0.52	0.521	2,738,784	7.4	0.53	6,080,566	7.2	0.45
	01/01/19	17.020.007	Ĭ	December		1	Pounds Cr	, 22,		5.30	2,223,230	<u> </u>	1
01/04/19		17,021,076	48.943	55.104		İ	0.239	2,757,483			6,116,420		1
01/10/19		17,051,054	29,978	,	7.8	0.26	0.246	2,765,903	7.2	0.41	6.140.244	7.0	0.18
2 27 10	02/01/19	17.085.876		January			Pounds Cr	_,,.			2,,211	1	1
02/01/19	22.710	17,086,762	35,708	65,869			0.135	2,779,438			6,166,376		†
02/07/19	1	17,092,183	5,421	,	8.0	0.36	0.398	2,781,163	7.5	0.37	6,170,668	7.3	0.35
52,5.,10	03/01/19	17,108,085	5,.21	February		2.00	Pounds Cr	_,. 5 ., . 50		5.57	2, 0,000	1	1 2.00
03/01/19	33,3.710	17,108,314	16,131	22.209			0.074	2,786,817			6,183,118		
03/07/19		17,112,149		,	7.9	0.29	0.296	2,788,121	7.4		6,186,219	7.4	
03/26/19		17,201,867	89,718			5.25	0.200	2,810,744	'''		6,261,318	' ' ' '	
00,20,10	04/01/19	17,220,303	55,710	March			Pounds Cr	2,010,744			0,201,010		
04/02/19	0-701/19	17,220,303	19,388	112,218			0.277	2,818,615			6,274,417		+
04/02/19	+	17,221,255	19,366			1	0.211	2,818,615	7.2	0.53	6,274,417	7.2	0.15

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

Industrial User (Waster	water Discharge) Permit 18-21	Outfall 001 Effluent Limits
pН	Hexavalent Chromium	Total Chromium
Between 5.0 and 12.4 s.u.	<4.5 mg/L	<7.0 mg/L

¹ Beginning in September 2018, the Total Chromium lab sample was not filtered. Previously, through August 2018, the sample was filtered (0.45 micron filter). * On 3/31/18, the MH1 flowmeter face was blank. Upon replacing the batteries, the totalizer reading reverted to 2,472,869 gallons, a difference of -112,848 gallons from the previous known total.

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

					Chromium							Llevevelent
		Aluminum	Arsenic	Cadmium	Total ¹	Copper	Cyanide	Lead	Mercury	Nickel	Zinc	Hexavalent Chromium
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Permit #18	-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 MCO	10/07/98 03/18/99	<.011 <.009	<.002 <.003	0.0050 <.00031	0.1700 NA	<.05 .00068****	<.001 <.00032	<.1 <.0024	<.0002 <.00005	<.04 .00351****	0.0250 <.012	NA <.0036
Appleton	03/18/99	<.009	<.003	<.005	<0.05	<.05	0.0010	0.1000	<.00005	0.0400	0.0180	<.0036 NA
Appleton	09/21/99	<.011	<.002	<.005	<.05	<.05	0.0030	<.1	<.00015	<.04	0.0080	NA 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	<0.15	<.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 MCO	10/02/01 03/19/02	0.016 <.034	<.002 <.0027	<.005 <.0075	0.14 0.36	<.05 <.0077	<.001 <.0027	<.1 <.17	<.00013 <.00005	<.04 <.017	0.065 <.012	NA <.0036
Appleton	05/02/02	<.049	<.012	<.014	0.362	<.015	<.0014	<.060	<.00011	<.017	<.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	<0.027	<.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	<0.0001	0.221	<0.0008	<0.005	<0.0006	0.0002	<0.025	<0.010	NA
Appleton Appleton	03/24/04 11/09/04	<0.050 0.0071	<0.0026 <0.0012	<0.010 <0.0001	0.15 0.04	<0.0060	<0.0050 <0.005	<0.16 <0.008	<0.00025 <0.0002	<0.020 0.0013	<0.010 <0.01	NA NA
MCO	08/08/05	0.0071	<0.0012	<0.0001	0.039	0.0008	<0.003	<0.000	<0.0002	<0.0013	0.0024	<0.005
Appleton	11/05/06	0.0052	<0.0012	<0.0001	0.000	< 0.0005	<0.005	<0.0001	<0.0002	0.0017	<0.010	NA
Appleton	02/23/06	0.0021	<0.0012	<0.0001	0.08	<0.0005	<0.0005	<0.0008	<0.0002	0.0022	<0.010	NA
MCO	03/23/06	<0.20	<0.0076	<0.00074	0.32	0.0018	0.0043	<0.0034	<0.000026	0.0033	<0.020	NA
Appleton	06/27/06	<0.200	<0.0076	<0.00074	0.700	0.0016	<0.0094	<0.0034	<0.000072	0.0021	<0.020	<0.350
Appleton	10/05/06	0.037	<0.00011	<0.0001	4.575	0.0068	0.01	<0.001	<0.0002	0.0026	<0.010	NA NA
Appleton MCO	03/22/07 04/02/07	<0.07 0.0383	<0.07 0.00024	<0.01 0.000086	1.9 1.41	3.5 0.0041	<0.004 <0.0094	<0.03 0.00013	<0.0002 <0.00019	<0.04 0.0035	<0.01 0.009	NA NA
Appleton	12/04/07	< 0.07	<0.001	<0.01	3.4	<0.01	0.008	<0.03	<0.00013	<0.04	<0.01	1.5
Appleton	01/16/08	0.21	<0.005	<0.01	<0.03	0.02	0.017	0.06	0.0003	<0.04	0.04	NA
OMNNI	04/08/08	0.0114	0.00043	0.00011	0.864	0.0043	0.014 J	0.000095 J	<0.0001	0.0024	0.0071	0.063
Appleton	08/19/08	<0.08	<0.001	<0.01	0.95	<0.01	0.005	<0.03	0.0002	<0.02	<0.01	NA
Appleton	03/31/09	<0.09	<0.012	<0.01	0.99	<0.01	<0.008	<0.05	<0.0002	<0.02	<0.01	NA 0.04
OMNNI Appleton	04/07/09 09/22/09	<0.0151 <0.08	0.003 J <0.006	0.00040 J <0.01	0.767 2.3	0.0024 J <0.01	<0.0060	<0.0014 <0.05	<0.00010 <0.0002	0.0016 J <0.02	0.0137 J <0.01	0.84 NA
Appleton	03/02/10	<0.06	<0.002	<0.01	1.6	<0.01	<0.008	<0.03	<0.0002	<0.02	<0.01	NA
OMNNI	04/06/10	0.0501 J	<0.0014	0.00043 J	1.16	0.0024 J	<0.0061	<0.00075	<0.0001	0.0023 J	0.0046 J	1.3
Appleton	11/02/10	<0.10	<0.010	<0.01	0.71	<0.01	<0.008	< 0.03	< 0.0002	<0.01	<0.01	NA
Appleton	02/24/11	<0.08	<0.001	<0.01	1.5	<0.01	0.008	<0.04	<0.0002	<0.02	<0.01	NA
OMNNI	04/05/11	0.0725 J	0.0025 J	<0.00026	0.401	0.0028 J	<0.0061	<0.0014	<0.00010	0.00053 J	0.0023 J	0.40
Appleton Appleton	10/26/11 03/21/12	<0.08 <0.11	<0.005 <0.004	<0.01 <0.01	1.2 1.3	<0.01 0.01	0.007 0.007	<0.04 <0.04	<0.0002 <0.0002	<0.02 <0.02	<0.01 <0.01	NA NA
Terracon	04/05/12	<0.11	<0.0047	<0.0039	0.696	0.01 0.014 J	<0.007	<0.04	<0.0002	0.002 0.001 J	<0.0053	0.83
Appleton	10/04/12	0.0865	0.0051	0.00049	1.43	0.0028 J	0.026	0.0022	0.0001	0.00013 0.00019 J	<0.0053	NA
Terracon	04/11/13	0.078	<0.004	<0.00048	0.431	0.0024 J	<0.0038	<0.027		0.00013 J		0.42
Appleton	04/17/13	<0.0714	<0.0042	<0.00048	0.279	0.0029 J	<0.0038	<0.027	<0.00010	0.00062 J	<0.0024	NA
Appleton	11/20/13	<0.0714	<0.0042	<0.00048	1.13	0.0018 J	0.0044 J	<0.027	<0.00010	0.00085 J	0.0034 J	NA
Appleton	04/15/14	0.119 J	<0.0068	<0.001	0.27	0.0036 J	<0.060	<0.0016	<0.00010	<0.0013	<0.0058	NA 0.38
Terracon Appleton	05/13/14 9/24/2014	0.116 J <0.0655	<0.0068	<0.001 <0.001	0.273 0.757	0.0034 J <0.0034	<0.060 <0.010	0.0040 J <0.0016	<0.00010 <0.00010	<0.0013 <0.0013	0.0064 J <0.0058	0.28 NA
Terracon	4/15/2015	0.054 J	<0.0008	<0.0001	0.757	0.0034 0.0041 J	<0.010	<0.0016	<0.00010	<0.0013	0.0036 J	0.92
Appleton	6/3/2015	<0.0655	<0.0068	<0.001	0.504	<0.0034	<0.020	<0.0016	<0.00010	0.0013 J	<0.0058	NA
Appleton	10/21/2015	0.105 J	<0.0068	<0.0010	0.676	<0.0034	<0.010	0.0024 J	<0.00010	<0.0013	0.0078 J	NA
Terracon	5/12/2016	0.0637 J	<0.0072	<0.00060	0.645	<0.0036	<0.0068	<0.0030	<0.00013	0.0018 J	<0.0013	0.70
Appleton	5/17/2016	<0.090	<0.001	<0.010	0.530	<0.010	<0.007	<0.030	<0.0002	<0.020	<0.01	NA
Appleton	11/1/2016	<0.090	<0.010	<0.010	0.560	<0.010	<0.007 0.007	<0.030	<0.0002	<0.020	<0.010	NA NA
Appleton Terracon	4/27/2017 6/8/2017	<0.060 <0.0555	<0.001 <0.0083	<0.010 <0.0013	0.370 0.345	<0.010 <0.0063	<0.007	<0.030 <0.0043	<0.0002 <0.00013	<0.020 <0.0026	<0.010 <0.0093	NA 0.35
Appleton	11/9/2017	<0.060	0.001	0.010	0.343	<0.010	<0.007	<0.030	<0.00013	<0.020	<0.010	NA
Appleton	5/22/2018	NA	<0.015	<0.0006	0.319	0.005	0.010	<0.005	<0.0002	0.005	<0.002	NA
Terracon	6/7/2018	0.0713 J	<0.0083	<0.0013	0.382	<0.0063	<0.014	<0.0043	<0.00013	<0.0026	<0.0093	0.38
Appleton	11/14/2018	Results not	yet availab	e								

¹ Beginning in September 2018, the Total Chromium lab sample was not filtered. Previously, through August 2018, the sample was filtered (0.45 micron filter).





January 15, 2019

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

RE: Project: 58117057 MAUTHE

Pace Project No.: 40181884

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2019. 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,

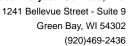
Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436

Project Manager

Day Mileny

Enclosures







CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Green Bay Certification IDs

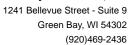
1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064

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



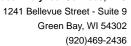


SAMPLE SUMMARY

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40181884001	OUTFALL-001	Water	01/10/19 07:42	01/10/19 14:15



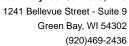


SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40181884001	OUTFALL-001	EPA 6010	TXW	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G





SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Lab Sample ID	Client Sample ID	Decell		Demont Line	A b d	0
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
40181884001	OUTFALL-001					
EPA 6010	Chromium	246	ug/L	10.0	01/14/19 15:11	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.26	mg/L	0.043	01/10/19 15:40	



Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Method: EPA 6010
Description: 6010 MET ICP

Client: Terracon, Inc. - Franklin

Date: January 15, 2019

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.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 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:



Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Method: SM 3500-Cr B (Online)
Description: Chromium, Hexavalent
Client: Terracon, Inc. - Franklin
Date: January 15, 2019

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:

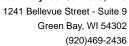
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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.





ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Date: 01/15/2019 02:28 PM

Sample: OUTFALL-001	Lab ID:	40181884001	Collecte	d: 01/10/19	07:42	Received: 01/	10/19 14:15 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Chromium	246	ug/L	10.0	2.5	1	01/11/19 07:18	01/14/19 15:11	7440-47-3	
Chromium, Hexavalent	Analytical	Method: SM 35	500-Cr B (O	nline)					
Chromium, Hexavalent	0.26	mg/L	0.043	0.013	2.5		01/10/19 15:40		



QUALITY CONTROL DATA

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Date: 01/15/2019 02:28 PM

QC Batch: 311221 QC Batch Method: EPA 3010 Analysis Method: EPA 6010
Analysis Description: 6010 MET

Associated Lab Samples: 40181884001

METHOD BLANK: 1815475 Matrix: Water

Associated Lab Samples: 40181884001

Parameter Units Result Limit Analyzed Qualifiers

Chromium ug/L <2.5 10.0 01/14/19 14:13

LABORATORY CONTROL SAMPLE: 1815476

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Chromium ug/L 500 491 98 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1815477 1815478

MS MSD 40181754001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 500 75-125 5 20 Chromium ug/L 45.5 500 573 602 106 111

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.



QUALITY CONTROL DATA

Project:

58117057 MAUTHE

Pace Project No.:

40181884

QC Batch: QC Batch Method: 311198

SM 3500-Cr B (Online)

Analysis Method:

SM 3500-Cr B (Online)

Analysis Description:

Chromium, Hexavalent by 3500

Associated Lab Samples:

40181884001

METHOD BLANK: 1815353

Associated Lab Samples: 40181884001

Parameter

Blank Result Reporting Limit

Units

Matrix: Water

Analyzed

Qualifiers

Chromium, Hexavalent

mg/L

< 0.0051

0.017 01/10/19 15:40

LABORATORY CONTROL SAMPLE:

Parameter

1815354

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Chromium, Hexavalent

Date: 01/15/2019 02:28 PM

Units mg/L

0.3

0.30

100

90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

1815358

1815359

40181884001 Units Result

MS MSD Spike Spike Conc.

MS Result

MS

MSD % Rec % Rec RPD

RPD 2 20 Qual

MSD Max Parameter Conc. Result % Rec Limits 0.75 90-110 Chromium, Hexavalent mg/L 0.26 0.75 1.0 1.0 104 102

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.



QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40181884

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, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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.

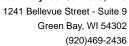
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 01/15/2019 02:28 PM

PASI-G Pace Analytical Services - Green Bay





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

Pace Project No.: 40181884

Date: 01/15/2019 02:28 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40181884001	OUTFALL-001	EPA 3010	311221	EPA 6010	311372
40181884001	OUTFALL-001	SM 3500-Cr B (Online)	311198		

Cother In In In In In In In In In In In In In	Mail To Address: Mail To Address: Invoice To Contact: Invoice To Company: Invoice To Address: CLIENT COMMENTS (Lab Use Only)	S P	WN: 672607-1700 WI: 95	MN: 672/607-1700 WI: 920-469-2436 WN: 672/607-1700 WI: 920-469-2436 Quote #: Mail To Contact:
LAB COMMENTS (Lab Use Only)	LAB COMMENTS (Lab Use Only)	HCL C=H2SO4 Ifate Solution	F=Methanol	Mail To Address:
LAB COMMENTS (Lab Use Only)	LAB COMMENTS (Lab Use Only)			Invoice To Contact:
(Lab Use Only)	(Lab Use Only)	S Request		Invoice To Address:
				LAB COMMENTS
		MATRIX		
			7	
		Tal. Itodasan	0.830	OACK 110/19 OFSS IN PACE Project No
683 Received By OACK, 1110 1,9 (\$5.5)	C432 Received By OACK, 1110 1,9 (\$5.5)	oder; Mosker	SILV	Date Time: W. Receint Tann = D. A.
682 Received By AACK 110119 9855 UNIS 1884	C32 Received By ACC 1/10/19 0455 UN 8/889	Reinquist By: Date/Time:	Received By:	
6920 Received By A 20 ((((())) () () () () () () () () () () () () ()	Received By: Received By: Received By: A 1 S Receipt Temp = R 0 Sample Receipt pH	Befinquished By: Date/Time:	Received By:	Date-Time: Only Adjusted Cooler Custody S
Received By: Received By: Received By: Received By: Date/Time: Date/Time: Date/Time: Date/Time: Date/Time: Cooler Custody Seal	Received By: Received By: Received By: Date/Time: Date/Time: Date/Time: Date/Time: Date/Time: Cooler Custody Seal	Relinquished By: Date/Time:	Received By:	Date/Time: Present / Not Pres
Received By: Received By: Received By: Received By: Received By: Date/Time: Date/Date/Date/Date/Date/Date/Date/Date/	Received By: Received By: Received By: Date/Time: Date/Date/Date/Date/Date/Date/Date/Date/			Version 8.0 06/14/06 OBIGINAL

Pace Analytical Services,본LC 1241 Bellevue Street, Suite 9 Green Bay, WI 5환302

Ьзде

Sample Preservation Receipt Form Project # +7018799

Term Con

Client Name:

Pace Lab#

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Date/ Time: Initial when completed:

All containers needing preservation have been checked and noted below: Preservation have been checked and noted below: 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 < 0.00 <

Lab Std #ID of preservation (if pH adjusted):

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5/5/10 2.5 / 5 / 10 2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5/5/10 2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10 2.5/5/10 2.5 / 5 / 10 Volume (mL) pH after adjusted S≥ Hq €ON VaOH pH 212 e≤ Hq toA nZ+HOsV 12SO4 pH ≤2 * (mmə<) elsiV AOv CM General SPLC **T2**4S **MPFU** Jars MGEN **N**eEn C69A W69A **H69A** Vials N69A T69Q A69a **BP35 BP3N Bb3C Plastic BP3U BP2Z BP2N** UMB Be3n **VGSS** NGDA Glass Np94 YC42 **HIDA** Uray

Headspace in VOA Vials (>6mm) : □Yes □No #N/A *If yes look in headspace column Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

2.5 / 5 / 10

						•
AGIU I liter amber glass	BP10	BP1U 1 liter plastic unpres	DG9A	DG9A 40 mL amber ascorbic	JGFU	JGFU 4 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 ml amber Na Thio	WGEI	WGEII A or clost in march
AG45 125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	VG9U 40 mL clear vial unpres	WPE	WDEII A oz plactic jar uparoc
AG4U 120 mL amber glass unpres	BP3U	250 mL plastic unpres	H69A	VG9H 40 mL clear vial HCI		Tot plastic jai unpres
ACEL 100 ml ambar alass	6					
Acoc Troo Int. amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	VG9M 40 mL clear vial MeOH	SPST	SP5T 120 mL plastic Na Thiosulfate
AG2S 500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	VG9D 40 mL clear vial DI	7 DI C	7DIC Tiplochan
BG3U 250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			į	thirt was
					;	

Page 1

Pace Analytical 1241 Bellevue Street, Green Bay, WI 54302

Document Name: Sample Condition Upon Receipt (SCUR)

Document No.: F-GB-C-031-Rev.07 Document Revised: 25Apr2018

Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

+			Project #:		
Client Name:		_		MUH	:40181884
Courier: CS Logistics Fed Ex Speedee	□ UPS	ĪΓν	Valtco		
Client Pace Other:					
Tracking #:				4018188	4
Custody Seal on Cooler/Box Present: yes 27 r	no Seals	intact	: yes no	To the state of th	
Custody Seal on Samples Present: yes no			: I yes I no		
Packing Material: Bubble Wrap Bubble	-	-		Ø.	
Thermometer Used SR - NA Ty Cooler Temperature Uncorr: DE ICORT:	pe of ice:	Wet	Blue Dry None	Samples on	ice, cooling process has begun
Temp Blank Present: yes R no	Biolo	gical 1	Γissue is Frozen:	vest no [Description
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C.	5.0.0	giodi	rissuc is riozen.	yes, no	Person examining contents: Date: // -{// Initials: // //
Chain of Custody Present:	Yes □No	□n/a	1.		
		□n/a			
*		□n/a	3.		
Sampler Name & Signature on COC:	Yes □No	□n/a	4.		
Samples Arrived within Hold Time:	Yes □No		5.		
- VOA Samples frozen upon receipt	Yes □No		Date/Time:		
Short Hold Time Analysis (<72hr):	Yes □No		6.		
Rush Turn Around Time Requested:	Yes Q No		7.		
Sufficient Volume:			8.		
For Analysis: ∰yes □No MS/MSD: □	Yes 🗖 No	□n/a			
Correct Containers Used:	Yes □No		9.		
-Pace Containers Used:	Yes □No	□n/a			
-Pace IR Containers Used:	Yes □No	Øø/A			
Containers Intact:	Yes □No		10. Client use	1 water	solvable ink on lake
Filtered volume received for Dissolved tests	Yes □No	BN/A	11.		1-10-1971
Sample Labels match COC:	Yes, □No	□n/a	12.		
-Includes date/time/ID/Analysis Matrix:	√	_			
Frip Blank Present: □	Yes □No	Øn/a	13.		
Frip Blank Custody Seals Present □	Yes □No	□ 2 8⊌A			
Pace Trip Blank Lot # (if purchased):					
Client Notification/ Resolution: Person Contacted:		Date/1		cked, see attache	ed form for additional comments
Comments/ Resolution:		Date/ i			
Project Manager Review:	Por	Di	m	Date:	1/10/19





February 14, 2019

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

RE: Project: 58117057 MAUTHE

Pace Project No.: 40182859

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 2019. 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,

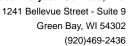
Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436

Project Manager

Day Mileny

Enclosures







CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40182859

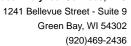
Green Bay Certification IDs

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



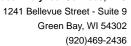


SAMPLE SUMMARY

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40182859001	OUTFALL-001	Water	02/07/19 07:35	02/07/19 10:48



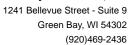


SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40182859001	OUTFALL-001	EPA 6010	TXW	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G





SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40182859001	OUTFALL-001					
EPA 6010	Chromium	398	ug/L	10.0	02/11/19 18:20	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.36	mg/L	0.043	02/07/19 13:30	



1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Method: EPA 6010
Description: 6010 MET ICP

Client: Terracon, Inc. - Franklin

Date: February 14, 2019

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.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 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:



1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Method: SM 3500-Cr B (Online)
Description: Chromium, Hexavalent
Client: Terracon, Inc. - Franklin
Date: February 14, 2019

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:

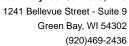
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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.





ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Date: 02/14/2019 12:46 PM

Sample: OUTFALL-001	Lab ID:	40182859001	Collected	d: 02/07/19	07:35	Received: 02/	07/19 10:48 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	A 3010			
Chromium	398	ug/L	10.0	2.5	1	02/11/19 07:26	02/11/19 18:20	7440-47-3	
Chromium, Hexavalent	Analytical	Method: SM 35	500-Cr B (O	nline)					
Chromium, Hexavalent	0.36	mg/L	0.043	0.013	2.5		02/07/19 13:30		



QUALITY CONTROL DATA

Project: 58117057 MAUTHE

Pace Project No.: 40182859

QC Batch: 313205 QC Batch Method: EPA 3010

Date: 02/14/2019 12:46 PM

Analysis Method: EPA 6010 Analysis Description: 6010 MET

Associated Lab Samples: 40182859001

METHOD BLANK: 1824680 Matrix: Water

Associated Lab Samples: 40182859001

> Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers Chromium <2.5 10.0 02/11/19 17:35 ug/L

LABORATORY CONTROL SAMPLE: 1824681

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Chromium ug/L 500 510 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824682 1824683

MS MSD 40182895004 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 500 75-125 20 Chromium ug/L <2.5 500 498 503 100 101

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.



QUALITY CONTROL DATA

Project:

58117057 MAUTHE

Pace Project No.:

40182859

QC Batch:

313096

QC Batch Method:

SM 3500-Cr B (Online)

Analysis Method:

SM 3500-Cr B (Online)

Analysis Description:

Chromium, Hexavalent by 3500

Associated Lab Samples:

40182859001

METHOD BLANK: 1823870

Matrix: Water

Associated Lab Samples:

40182859001

Blank

Reporting

Parameter

Units

Result

Limit Analyzed

Qualifiers

Chromium, Hexavalent mg/L

< 0.0051 0.017 02/07/19 13:30

LABORATORY CONTROL SAMPLE:

Parameter

1823871

Spike Conc.

LCS Result

LCS % Rec

99

% Rec Limits

Qualifiers

Chromium, Hexavalent

Parameter

Chromium, Hexavalent

mg/L

Units

0.3

1823873

0.30

90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

1823872

MSD

MS Spike Spike Conc. Conc.

MS MSD Result

MS % Rec

MSD % Rec % Rec Max Limits RPD

RPD

40182858007 Units Result mg/L < 0.017

0.3 0.3

Result 0.29 0.29

96

97

90-110

20

Qual

Date: 02/14/2019 12:46 PM

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.



QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40182859

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, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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

Date: 02/14/2019 12:46 PM

PASI-G Pace Analytical Services - Green Bay





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

Pace Project No.: 40182859

Date: 02/14/2019 12:46 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40182859001	OUTFALL-001	EPA 3010	313205	EPA 6010	313285
40182859001	OUTFALL-001	SM 3500-Cr B (Online)	313096		

(P	(Please Print Clearly)				UPPER MIDWEST REGION	NO	Page 1 of \int_{LO}
Company Name:	(Chlains			,	MN: 612-607-1700 WI: 920-469-2436	l: 920-469-2436	
Branch/Location:	W. 100.10		Pace Analytical ®	Zica!«			E1 90
Project Contact:	1 T TV 2		www.pa	www.pacelabs.com		Quote #:	
Phone:	1 6			OF CUSTO		Mail To Contact:	
Project Number:	7057	A=None B=HCL	C=H2SO4	Preservation Codes D=HNO3 E=DI Wate	anol G=NaOH	Mail To Company:	my
Project Name:	Marthr	H=Sodium Bisulfate Solution		I=Sodium Thiosulfate /=Other		Mail To Address:	
Project State:	wt	FILTERED? (YES/NO)	NIN	N			
Sampled By (Print):	Scott A. Hodyson	PRESERVATION (CODE)*	Pick Letter	4		Invoice To Contact:	
Sampled By (Sign):	duta 1/00		ţ			Invoice To Company:	
PO#:	/ Regulatory Program:	atory	~u	ħ		Invoice To Address:	
Data Package Options	US/WSD	Matrix Codes W = Water	איים	۱n _{(۱} ۱			>
D EPA Level III	(billable)	B = Biota DW = Drinking Water C = Charcoal GW = Ground Water C = Chi	y 401 \$ ses/	y Loh		Invoice To Phone:	
L EPA Level IV	your sample	WW = Waste Water e WP = Wipe	10 2	(S)		S	LAB COMMENTS Profile #
PACE LAB #	CLENT FELD D	COLLECTION MATRIX DATE TIME	<u></u>	L1		COMMENTS	(Lab Use Only)
100 on	OUTFALL-601 STIP	1/19 0735 WW	0SE1 0SE1	1-350			
Rush Turnarou	Rush Turnaround Time Requested - Prelims	Relinguished By:		Date/Time:	Received By:	Date/Time:	PACE Project No.
Date		रें	d'in	Date/Time:	Replyed By:	Date/Time:	
Transmit Prelim Rus	Transmit Prelim Rush Results by (complete what you want):	1050 MIL	of Money	\$h01 \$11510	MORNING	グイグが	Receipt Temp = DTPC
Emai #1:		Kelinquished By:		Date/Time:	Received By:	Fall Date/Time:	Sample Receipt pH
Telephone:		Relinquished By:		Date/Time:	Received By:	Date/Time:	ON Adjusted
Fax:			ervesigner for equivilent resolves and execution and execution and execution.	A CONTRACTOR AND CONTRACTOR CONTRACTOR AND A CONTRACTOR A		AND AND THE PERSON AND THE PERSON AND AND AND AND AND AND AND AND AND AN	Cooler Custody Seal
Samples special prici	Samples on HOLD are subject to special pricing and release of liability	Relinquished By:		Date/Time:	Received By:	Date/Time:	Present And Present Intact
Receivements	NET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET S			ODIORIO CORRECTION DE CONTRACTION DE	uditornuvaim prenintininist statutuinistatiinin terra vuotarma vihtamassistamassi	chousekarrochismustra zionochismuskiekosymolikaineka senskrakuriekismusikainekismusikainekismusikainekismusika	Version 6.0 06/14/06

ORIGINAL

Sample Preservation Receipt Form

Project#

1

Client Name:

completed:

Initial when K Late/

All containers needing preservation have been checked and noted below. The $\square NA$ $\square NA$ about the servation (if pH adjusted):

General Jars Vials

1aOH pH ≥12 e≤ Hq toA nZ+HOs 12504 pH <2 ' (mmə<) əlsiV AO\ CM SPLC **TSGS MPFU** MGEN **NGFU** C69A MG9A H69A N69A T69Q **DG9A BP35 ВР3И Bb3C** Plastic

DE48

BP2Z BP2N BP1U Bean **YGSS**

NG5A

NP9V

YC42 **HIDA**

UraA Pace Lab#

002

001

003

004 005 900 800 600 010

007

012 013 014 015 016 017 018 019 020

011

Glass

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10

Volume (mL)

pH after adjusted

INO3 pH ≤2

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10

2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10 2.5/5/10 2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10

Headspace in VOA Vials (>6mm) : □Yes □No pN/A *If yes look in headspace column Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: AG1U 1 liter amhar al-

PETO	Acto I liter amber glass	BP10	BP1U 1 liter plastic unpres	DG9A	DG9A 40 mL amber ascorbic	JGFU	JGFU 4 oz amber jar unnres
AG1H	AG1H 1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 ml amber Na Thio	WGELL	MGEII A Oz close ise moneoc
AG4S	AG4S 125 mL amber glass H2SO4		500 mL plastic NaOH, Znact	VG9U	VG9U 40 mL clear vial unpres	WPFL	WPFI 4 or plactic for unpress
AG40	AG4U 120 mL amber glass unpres	8P3U	250 mL plastic unpres	NG9H	VG9H 40 ml clear vial HCI		t or plastic jai mipies
AGSU	AGSU 100 ml amber plass unpres	RD3C	OFO m plactic Madu	8400/	A		
			230 HIL PIGSUL NAUH	אפאא	vesivi 40 mL clear vial MeOH	SP5T	SP5T 120 mL plastic Na Thiosulfate
AG25	AGZS 500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	Q69A	VG9D 40 mL clear vial DI	ZPLC	ZPLC ziploc bag
BG30	BG3U 250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			SN:	0
			Charles of the contract of the				

Page 1

Pace Analytical

1241 Bellevue Street, Green Bay, WI 54302

Document Name:

Sample Condition Upon Receipt (SCUR)

Document Revised: 25Apr2018

Issuing Authority:

Document No.: F-GB-C-031-Rev.07

Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

	Project #:
Client Name: / erraco	WO#: 40182859
Courier: CS Logistics Fed Ex Speedee CUPS	Waltco
Client Pace Other:	
Tracking #:	40182859
Custody Seal on Cooler/Box Present: yes no Seals inta	ct: Tyes Tno
Custody Seal on Samples Present: yes no Seals inta	ct: yes no
Packing Material: Bubble Wrap Bubble Bags No	ne Other
	Blue Dry None Samples on ice, cooling process has begun
Cooler Temperature Uncorr: KDT /Corr:	
	Tissue is Frozen: yes no Person examining contents:
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C.	Date:
Chain of Custody Present: ☐Yes ☐No ☐N	A 1.
Chain of Custody Filled Out: Д́Yes □No □N	A 2.
Chain of Custody Relinquished:	A 3.
Sampler Name & Signature on COC: ☐ Yes ☐ No ☐ N.	A 4.
Samples Arrived within Hold Time:	5.
- VOA Samples frozen upon receipt ☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	26N
Rush Turn Around Time Requested:	7.
Sufficient Volume:	8.
For Analysis: Д́Yes □No MS/MSD: □Yes ⊉No □N	A
Correct Containers Used:	9.
-Pace Containers Used:	A
-Pace IR Containers Used: □Yes □No □A	A
Containers Intact:	10.
Filtered volume received for Dissolved tests Over One Dissolved Tests	A 11.
Sample Labels match COC: ✓ Yes 🕬 🗆 No	A 12.
-Includes date/time/ID/Analysis Matrix:VV	
Trip Blank Present: □Yes □No 💋N	A 13.
Trip Blank Custody Seals Present □Yes □No 🏚N	A
Pace Trip Blank Lot # (if purchased):	
Client Notification/ Resolution:	If checked, see attached form for additional comments
Person Contacted: Date Comments/ Resolution:	e/Time:
A /	~ / - / -
Project Manager Review:) m Date: 4/19





March 11, 2019

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

RE: Project: 58117057 MAUTHE

Pace Project No.: 40183869

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on March 07, 2019. 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,

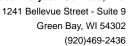
Dan Milewsky dan.milewsky@pacelabs.com

Day Mileny

(920)469-2436 Project Manager

Enclosures







CERTIFICATIONS

Project: 58117057 MAUTHE

Pace Project No.: 40183869

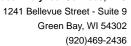
Green Bay Certification IDs

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



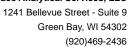


SAMPLE SUMMARY

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40183869001	OUTFALL 001	Water	03/07/19 07:35	03/07/19 11:53



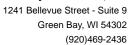


SAMPLE ANALYTE COUNT

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40183869001	OUTFALL 001	EPA 6010	TXW	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G





SUMMARY OF DETECTION

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40183869001	OUTFALL 001					
EPA 6010 SM 3500-Cr B (Online)	Chromium Chromium, Hexavalent	296 0.29	ug/L mg/L	10.0 0.043	03/08/19 15:37 03/07/19 13:45	



Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Method: EPA 6010
Description: 6010 MET ICP

Client: Terracon, Inc. - Franklin

Date: March 11, 2019

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.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 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:



1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Method: SM 3500-Cr B (Online)
Description: Chromium, Hexavalent
Client: Terracon, Inc. - Franklin
Date: March 11, 2019

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:

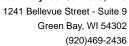
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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.





ANALYTICAL RESULTS

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Date: 03/11/2019 09:11 AM

Sample: OUTFALL 001	Lab ID:	40183869001	Collected	d: 03/07/19	07:35	Received: 03/	07/19 11:53 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EPA	3010			
Chromium	296	ug/L	10.0	2.5	1	03/08/19 07:04	03/08/19 15:37	7440-47-3	
Chromium, Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	0.29	mg/L	0.043	0.013	2.5		03/07/19 13:45		



QUALITY CONTROL DATA

EPA 6010

6010 MET

Analysis Method:

Analysis Description:

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Date: 03/11/2019 09:11 AM

QC Batch: 315046
QC Batch Method: EPA 3010

Associated Lab Samples: 40183869001

METHOD BLANK: 1833237 Matrix: Water

Associated Lab Samples: 40183869001

Parameter Units Result Limit Analyzed Qualifiers

Chromium ug/L <2.5 10.0 03/08/19 15:00

LABORATORY CONTROL SAMPLE: 1833238

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1833239 1833240

MS MSD 40183766001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 0.0037J 500 75-125 0 20 Chromium ug/L 500 498 496 99 98 mg/L

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.



QUALITY CONTROL DATA

58117057 MAUTHE Project:

Pace Project No.: 40183869

QC Batch: 315010

Chromium, Hexavalent

Date: 03/11/2019 09:11 AM

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

Associated Lab Samples: 40183869001 Analysis Method: SM 3500-Cr B (Online)

Analysis Description: Chromium, Hexavalent by 3500

METHOD BLANK: 1832977 Matrix: Water

Associated Lab Samples: 40183869001

> Blank Reporting

Parameter Units Result Limit Qualifiers Analyzed Chromium, Hexavalent < 0.0051 0.017 03/07/19 11:35 mg/L

LABORATORY CONTROL SAMPLE: 1832978 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers

0.3

Chromium, Hexavalent mg/L 0.3 0.30 100 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1832979 1832980

< 0.0051

mg/L

MS MSD 40183859004 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 90-110 2 20

0.3

0.28

0.28

94

92

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.

(920)469-2436



QUALIFIERS

Project: 58117057 MAUTHE

Pace Project No.: 40183869

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, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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

Date: 03/11/2019 09:11 AM

PASI-G Pace Analytical Services - Green Bay





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 MAUTHE

Pace Project No.: 40183869

Date: 03/11/2019 09:11 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40183869001	OUTFALL 001	EPA 3010	315046	EPA 6010	315110
40183869001	OUTFALL 001	SM 3500-Cr B (Online)	315010		

(Please Print Clearly)		UPPER MIDWEST REGION	NO	Page 1 of 5
Company Name: Tefralo v		MN: 612-607-1700 WI: 920-469-2436	1: 920-469-2436	
Branch/Location: M:\wau\teal	/ Face Analytical	Ž		(\(\int \)\(\int \)\(
Project Contact: 5 LOT 140dg 50 W	www.pacelabs.com		Quote #:	A CONTRACTOR CONTRACTO
1	CHAIN OF	CUSTODY	Mail To Contact:	
Project Number: 58157057	A=None B=HCL C=H2SO4 D=HNO3 E=DI Water	18 Vater F≃Methanol G≃NaOH	Mail To Company:	
Project Name: Mauthe	H=Sodium Bisulfate Solution I=Sodium Thiosulfate	J=Other	Mail To Address:	Lamo
Project State: WI	Elizabeth minimate program			
Sampled By (Print): 5 Lott A. Hodgson	PRESERVATION Pick (CODE)* Latter		Invoice To Contact:	
1. Hou	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Same	Invoice To Company:	
PO#:	স ংঘ		Invoice To Address:	
MS/MSD Sample	Matrix Codes Air W = Water		· Principal Company	Access (Access
(billable) NOT needed or	> 13		Invoice To Phone:	
your sample			CLIENT	LAB COMMENTS Profile #
			COMMENTS	(Lab Use Only)
(10) our FALL-001	37/19 0735 WW 1-350 +350			
		and the second s		
Rush Turnaround Time Requested - Prelims		Racaivard R	T. C. C. C. C.	PACE Project No.
(Rush TAT subject to approval/surcharge) Date Needed:			na 3/7/19	SIRT
nit Prelin	Control of the sale 3/1/19	153 Received By: Sulfate	A (1 3/7/14)	; te
Email #1: Email #2:	Relinquished Sy: Date/Time:	Received By:	/ Date/Time:	Receipt Temp = R/L °C
Telephone: Fax:	Relinquished By: Date/Time:	Received By:	Date/Time:	Sample Receipt pH
Samples on HOLD are subject to special pricing and release of liability	Reinquished By: Date/Time:	Received By:	Date/Time;	Present / Not Present
C019a(27Jun2006)				Intact / NcVIntact Version 6.0 06/14/06 ORIGINAL

Green Bay, Wt 5430 race Alialylical Services, LLI 1241 Bellevue Streeto Suite

Sample Preservation Receipt Form

Project #

Terracon

Client Name:

Date/ Time:

Page 14

Initial when completed:

Lab Std #ID of preservation (if pH adjusted):

Lab Lot# of pH paper: [00535 8 |

Jars

Vials

Plastic

Glass

General

Sr< Hq HOsi e≤ Hq toA nZ+HOsl

Volume (mL)

INO3 pH <2

2.5 / 5 / 10

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10

pH after adjusted

CM

SPLC

Taga **MPFU**

WGFU

JGFU

G69A

W69A

H69A

N69A

T690

A69a **BP3S**

BP3N

Bb3C

UE48

BP2Z

BP2N

UI48

Be3N **YGSS**

NSOA

YC4N

YC42

HLDA

Uraa Lab# Pace

002 003 004 005 900

001

800 600 010 011 012

007

014 015 016 018 019 020

017

013

SS Hd +OSZI

(mm8<) slsiV AO\

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10 2.5 / 5 / 10

2.5 / 5 / 10

Headspace in VOA Vials (>6mm) : □Yes □No • • If yes look in headspace column

4 oz amber jar unpres 4 oz plastic jar unpres 4 oz clear jar unpres WGFU WPFU JGFU

40 mL clear vial unpres

VG9U DG9T

> 500 mL plastic NaOH, Znact 250 mL plastic unpres

> > BP3U

AG4U 120 mL amber glass unpres AG5U 100 mL amber glass unpres AG2S 500 mL amber glass H2SO4

BG3U 250 mL clear glass unpres

AG4S 125 mL amber glass H2SO4

AG1H 1 liter amber glass HCL

AG1U 1 liter amber glass

500 mL plastic HNO3

BP2N BP2Z

1 liter plastic unpres

VG9H

40 mL clear vial HCL

40 mL amber ascorbic 40 mL amber Na Thio

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

40 mL clear vial MeOH

40 mL clear vial DI

VG9D VG9M

250 mL plastic H2SO4

250 mL plastic NaOH 250 mL plastic HNO3

врзс BP3N BP3S

ziploc bag ZPLC SP5T

120 mL plastic Na Thiosulfate Ë Page 1 of

Pace Analytical 1241 Bellevue Street, Green Bay, WI 54302

Document Name: Sample Condition Upon Receipt (SCUR)

Document No.: F-GB-C-031-Rev.07 Document Revised: 25Apr2018

Issuing Authority:

Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

~		Project #		
Client Name: Terracon		1 Toject #		0183869
Courier: CS Logistics Fed Ex Speed	dee Tups Ti	Waltoo	WOTH	110000
Client Pace Other:	, OIO ,	· vanoo		
Tracking #:			40183869	
Custody Seal on Cooler/Box Present: yes	no Seals intac	— t: ▼ yes ⊏ no		
Custody Seal on Samples Present: yes to		t: T yes T no		
Packing Material: Bubble Wrap Bub				
Thermometer Used SR - NA	Type of Ice: V	Blue Dry None	丈 Samples on	ice, cooling process has begun
Cooler Temperature Uncorr: LOY /Corr:				
Temp Blank Present: yes on	Biological	Tissue is Frozen:	yes no	Person examining contents:
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C.		,		Initials: 7/
Chain of Custody Present:	2 Yes □No □N/A	1.		
Chain of Custody Filled Out:	□Yes 💁No □N/A	2. NO 19+		3-7-19TK
Chain of Custody Relinquished:	Øyes □No □N/A	3.		
Sampler Name & Signature on COC:	ØLYes □No □N/A	4.		
Samples Arrived within Hold Time:	Ø yes □No	5.		
 VOA Samples frozen upon receipt 	□Yes □No	Date/Time:		
Short Hold Time Analysis (<72hr):	Ø Yes □No	6.		
Rush Turn Around Time Requested:	□Yes © No	7.		
Sufficient Volume:		8.		
For Analysis: Ō⊈es ☐no MS/MSD	: □Yes ŪNo □N/A			
Correct Containers Used:	☑Yes ☐No	9.		
-Pace Containers Used:	No □N/A			
-Pace IR Containers Used:	□Yes □No \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
Containers Intact:	No □No	10.		
Filtered volume received for Dissolved tests	□Yes □No □N/A	11.	_	
Sample Labels match COC:	X es □No □N/A	12. [1: Cn+	1 sed water 1	oluble in K 3-7-19
-Includes date/time/ID/Analysis Matrix:	<u> </u>			K
Гrip Blank Present:	□Yes □No ŪN/A	13.		
Frip Blank Custody Seals Present	□Yes □No 🐚N/A			
Pace Trip Blank Lot # (if purchased):				
Client Notification/ Resolution: Person Contacted:	5.1.5		hecked, see attached	form for additional comments
Comments/ Resolution:	Date/	I ime:		
Project Manager Review:	2 Fr 01	m	Date:	3/7/19