MCO
Midwest Contract Operations, Inc.
P.O. BOX 418 MENASHA, WI 54952-0418
TEL: (920) 751-4299 FAX: (920) 751-4284
e-mail: mco@mcmgrp.com

July 14, 2006

Ms. Jessica Garratt, Deputy Director
Appleton Department of Utilities
2006 East Newberry Street
Appleton WI, 54915-2758

RE: N.W. Mauthe Groundwater Treatment System
Appleton, Wisconsin
Annual Local Limit Compliance Parameters

Dear Ms. Garratt:

Midwest Contract Operations, Inc. (MCO) is pleased to submit the Annual Local Limit Compliance Analysis for the N.W. Mauthe Superfund Site, 725 South Outagamie Street, Appleton Wisconsin due on July 15, 2006. This report is being submitted in accordance with the City of Appleton Industrial User Permit No. 06-21, issued for the site on May 26, 2006.

The effluent samples were collected at the effluent discharge point, prior to Outfall 001.
The samples were analyzed by Pace Analytical for metals (unfiltered) with total chromium (filtered) and hexavalent chromium (unfiltered). The analytical results are tabulated on the attached spread sheet. Please note that all parameters tested below the local discharge limits.

If you have any questions or require additional information, feel free to contact me.

Very truly yours,

Midwest Contract Operations, Inc.

Paul Much

Paul Much
Environmental Scientist
920-751-4760

cc: Randy Much
Jennifer Borski

Mauthe Effluent Limitations Analysis

Outfall 001

Parameter	Aluminum,Total (mg/L	Arsenic, Total (mg/L)	Cadmium, Total (mg/L)	Chromium, Total (mg/L)	Chromium Hexavalent (mg/L)	Copper, Total (mg/L)	Cyanide, Total (mg,L)	Lead, Total (mg/L)	Mercury, Total (ug/L)	Nickel, Total (mg/L)	Zinc, Total (mg,L)	pH (s.u.)
Local Limits	*70.0*	*1.0*	*0.3*	*7.0*	*4.5*	*3.5*	*1.0*	*2.0*	*2.0*	*2.0*	*10.0*	*5.0-12.4*
6/27/2006	< 0.2	<.0076	<.00074	0.70	0.35	0.0016	<0.0094	<0.0034	<0.072	0.0021	<0.020	7.6

Pace Analytical®

1241 Bellevue Street, Suite 9
Green Bay, WI 54302
920-469-2436, Fax: 920-469-8827

Analytical Report Number: 873423

Client: MIDWEST CONTRACT OPERATIONS, INC.
Lab Contact: Brian Basten

Project Name: MAUTHE

Project Number:

Lab Sample Number	Field ID	Matrix	Collection Date
873423-001	MAUTHE EFFLUENT	GW	06/27/06 15:00

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc. The sample results relate only to the analytes of interest tested.

Approval Signature

7-6-06
Date

Pace Analytical Services, Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436

Analytical Report Number: 873423

Client : MIDWEST CONTRACT OPERATIONS, INC.
Project Name : MAUTHE
Project Number :
Field ID : MAUTHE EFFLUENT

Matrix Type : GROUNDWATER
Collection Date : 06/27/06
Report Date : 07/06/06
Lab Sample Number : 873423-001

INORGANICS

Test		Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Aluminum	<	200	200	670		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Arsenic	<	7.6	7.6	25		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Cadmium	<	0.74	0.74	2.5		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Chromium		1100	1.3	4.4		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Chromium - Dissolved		700	1.9	6.3		1	ug/L		06/29/06	SW846 3010A	SW846 6010B
Chromium, Hexavalent		350	17	57		1	ug/L		06/28/06	SW846 7196A	SW846 7196A
Copper		1.6	1.5	4.9		1	ug/L	Q	07/05/06	SW846 3010A	SW846 6010B
Lead	<	3.4	3.4	11		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Mercury	<	0.072	0.072	0.24		1	ug/L		06/30/06	SW846 7470A	SW846 7470A
Nickel		2.1	1.6	5.4		1	ug/L	Q	06/30/06	SW846 3010A	SW846 6010B
Zinc	<	20	20	67		1	ug/L		06/30/06	SW846 3010A	SW846 6010B
Cyanide, Total	<	0.0094	0.0094	0.031		1	mg/L	N	06/29/06	EPA 335.4	EPA 335.4

Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
G	All	The result is estimated because the concentration is less than the lowest calibration standard concentration utilized in the initial calibration. The method detection limit is less than the reporting limit specified for this project.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	All	Concentration detected equal to or greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
Z	Organics	This compound was separated in the check standard but it did not meet the resolution criteria as set forth in SW846.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
+	Inorganic	The sample result is greater than four times the spike level: therefore, the percent recovery is not evaluated.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

Pace Analytical Services, Inc.

1241 Bellevue Street
Green Bay, WI 54302

Analysis Summary by Laboratory

Test Group Name	873423-001
ALUMINUM	B
ARSENIC	B
CADMIUM	B
CHROMIUM	B
CHROMIUM - DISSOLVED	B
CHROMIUM, HEXAVALENT	B
COPPER	B
CYANIDE, TOTAL	B
LEAD	B
MERCURY	B
NICKEL	B
ZINC	B

Code	Facility	Address	WI Certification
B	Green Bay Lab (Bellevue St)	1241 Bellevue Street, Suite 9 Green Bay, WI 54302	405132750 / DATCP: 105-444

Sample Condition Upon Receipt

Pace Analytical

Client Name: MCO Project # 873423

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other _____

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

Optional
Proj Due Date:
Proj Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

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

Cooler Temperature R01 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: CS 6/27/06

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☒Yes ☐No ☐N/A	6. Hexchrome ✓
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☒Yes ☐No ☐N/A	CS
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☒No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6-28-06

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical®

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

√MP

Page: of 0992357

Section A Required Client Information:

Company	MCO
Address	Menasha
Email To:	
Phone 920-751-4770 Fax	
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Stuart Boerst
Copy To:	McMahon ↗
Purchase Order No.:	
Project Name:	Maume
Project Number:	

Section C Invoice Information:

Attention:	Randy Much
Company Name:	MCO
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☒ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ Other_____

SITE LOCATION ☐GA ☐IL ☐IN ☐MI ☐MN ☐NC ☐OH ☐SC ☒WI ☐OTHER _____

Section D Required Client Information

SAMPLE ID

One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: Chrome Hex / Chrome total / Metals total / Cyanide total	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D
001	1 Maume effluent	GW	G	[redacted]		6-27	3:00P		5X		X	X	X				XXXX		N	873423
	2																			
	3																			
	4																			
	5																			
	6																			
	7																			
	8																			
	9																			
	10																			
	11																			
	12																			

2-250mL POLY
2-250mL POLY
1-250mL POLY

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITION
James Pecore	6/27/06	3:35P	Lori Stevens	6/27/06	1535	No Ice Y/N; Received on Ice Y/N; Custody Sealed Cooler Y/N; Samples Intact Y/N
Lori Stevens	6/27/06	16:20	C. Schuffelbin	6/27	11120	ROI Y/N; Received on Ice Y/N; Custody Sealed Cooler Y/N; Samples Intact Y/N
						Y/N; Y/N; Y/N; Y/N
						Y/N; Y/N; Y/N; Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: James Pecore

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM / DD / YY): 6/27/06

Temp in °C

SEE REVERSE SIDE FOR INSTRUCTIONS

ORIGINAL