

K&A

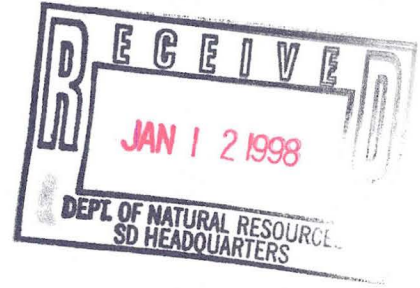
Kapur & Associates

Oconomowoc Electroplating GWTF ♦ P.O. Box 352 ♦ Ashippun, WI 53003-0352

Phone 920-474-4529 ♦ Fax 920-474-4639

January 8, 1998

Mr. Paul Kozol, P.E.
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711



Re: Monthly Monitoring Report for the Oconomowoc Groundwater Treatment Facility

Dear Mr. Kozol:

The enclosed Table 1, Summary Result - Influent & Effluent, was inadvertently omitted from the Monthly Monitoring Report submitted to you. Please include it after page 3.

Thank you for your continued cooperation and assistance with this project.

Sincerely,

Syed Ihteshamuddin

Syed Ihteshamuddin , Project Manager
Kapur & Associates

cc: Arne Thomsen, USACE, St. Paul District
Steve Peterson, USACE, Omaha District
Randy Sitton, USACE
Tom Williams, USEPA
Mike Boehlar, Black and Veatch
Marilyn and Rick Warrington, Warrington Builders, Inc.

Table 1
Oconomowoc Ground Water Treatment Plant
Summary Result - Plant Influent & Effluent

Parameter	December 03		December 10		December 17		December 24		WDNR Permit
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	
pH	NT	7.01	NA	7.00	NT	7.10	7.60	7.10	Monitor
TSS	79.00	Monthly	39.00	ND	73.00	Monthly	75.00	Monthly	Monitor (mg/l)
Arsenic	1.10	ND	ND	ND	1.30	0.67	ND	ND	5
Barium	73.00	41.00	91.00	47.00	69.00	48.00	100.00	40.00	400
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Cadmium Total Recove	NT	ND	NT	ND	NT	ND	NT	ND	Monitor
Chromium Total	ND	ND	ND	ND	ND	ND	2.00	1.80	10
Chromium +6	8.30	8.10	ND	8.60	ND	ND	ND	14.00	Monitor
Copper	5.10	7.40	35.00	9.90	11.00	5.20	20.00	4.30	Monitor
Iron	380.00	280.00	210.00	230.00	490.00	45.00	380.00	300.00	Monitor
Lead	ND	ND	ND	1.70	1.10	ND	ND	ND	1.5
Manganese	76.00	15.00	55.00	4.30	73.00	1.20	80.00	3.30	Monitor
Mercury	ND	ND	ND	0.15	ND	ND	ND	ND	0.2
Nickel	37.00	16.00	49.00	15.00	31.00	11.00	35.00	9.10	20
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	10
Silver	ND	ND	ND	ND	ND	ND	ND	5.60	10
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	0.4
Zinc	ND	11.00	ND	13.00	ND	4.30	ND	9.80	Monitor
Cyanide	ND	ND	ND	ND	ND	ND	0.0042	ND	40
Cyanide Free	NT	ND	NT	0.0036	NT	ND	NT	ND	Monitor
1,1-dichloroethane	18.00	1.50	42.00	1.90	58.00	2.50	16.00	ND	85
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.5
1,1-dichloroethene	7.30	ND	9.10	ND	12.00	ND	ND	ND	0.7
1,2-dichloroethene cis	42.00	0.57	65.00	0.66	92.00	0.71	23.00	ND	7
1,2-dichloroethene tran	7.00	ND	12.00	ND	13.00	ND	5.20	ND	20
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	140
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Tetrachloroethene	9.30	ND	9.10	ND	11.00	ND	8.70	ND	0.5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	68
1,1,1-trichloroethane	170.00	1.40	260.00	1.80	280.00	ND	130.00	ND	40
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.5
TCE	600.00	ND	820.00	0.47	1100.00	0.69	480.00	ND	0.5
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Xylene Total	ND	ND	ND	ND	ND	ND	ND	ND	124
COD	NT	Monthly	NT	6.00	NT	Monthly	NT	MONTH	Monitor (mg/l)
Phosphorus total	NT	Monthly	NT	0.14	NT	Monthly	NT	MONTH	Monitor (mg/l)
Nitrate + Nitrite	NT	Monthly	NT	0.17	NT	Monthly	NT	MONTH	Monitor (mg/l)
Ammonia Nitrogen	NT	Monthly	NT	ND	NT	Monthly	NT	MONTH	Monitor (mg/l)

K & A

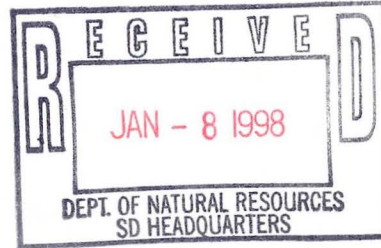
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Oconomowoc Electroplating GWTF ♦ P.O. Box 352 ♦ Ashippun, WI 53003

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December 31, 1997

Mr. Rick Warrington
P.O. Box 790
Keshena, WI 54135



Re: Monthly O&M Report for the Oconomowoc Groundwater Treatment Facility

Dear Mr. Warrington:

Attached is the Monthly O&M Report for December 1997, for the above referenced project. Questions regarding this report should be directed to Syed Itheshamuddin at the treatment plant. The treatment plant phone number is (920) 474-4529.

Thank you for your cooperation and assistance with this project.

Sincerely,

Syed Itheshamuddin

Syed Itheshamuddin , Project Manager
Kapur & Associates

cc: Arne Thomsen, USACE, St. Paul District
Steve Peterson, USACE, Omaha District
Randy Sitton, USACE
Tom Williams, USEPA
Paul Kozol, WDNR
Mike Boehlar, Black and Veatch

**MONTHLY OPERATIONS AND MAINTENANCE REPORT
FOR THE
OCONOMOWOC ELECTROPLATING
GROUNDWATER TREATMENT FACILITY**

**2572 Oak Street
ASHIPPUN, WISCONSIN**

Prepared for:

**Warrington Builders, Inc.
P.O. Box 790
Keshena, WI 54135**

Prepared by:

**Kapur & Associates, Inc.
7711 North Port Washington Road
Milwaukee, Wisconsin 53217**

December 1997

1.0 Introduction

This report is submitted to provide information concerning the equipment maintenance work completed, and operations and maintenance (O&M) problems encountered at the Oconomowoc Electroplating Groundwater Treatment Plant during the month of December 1997. O&M problems that led to plant shut down are discussed in the *Monthly Monitoring Report for the Oconomowoc Electroplating Groundwater Treatment Facility*.

Continuing O & M Issues From Previous Month include:

1. Sodium Hypochlorite Feed System:
 - The Rosemount Level Element at the sodium hypochlorite tank (SCT-250) is corroding and continues to leak.
2. Sodium Hydroxide:
 - Pump surge suppressors for pumps SHP-361 and SHP-262 are leaking.
3. Tertiary Filter (TF-600):
 - Level of sand in the filter is below the recommended level.
4. NPDES Station (NMS-740): Measuring probes still need to be calibrated.
5. All sampling ports provide evidence of corrosion of the process piping (iron pipes).
6. Sulfuric Acid Feed System: Corrosion of electrical conduits.

O & M Work Authorized and Completed During December includes:

1. Pump sludge from the EQT-100.
2. Modification Order No. 22, involving installation of isolation valves for sulfuric acid metering pumps.

New O& M Issues include:

1. Spare Parts for all mechanical equipment.

2.0.0 Process Difficulties

2.0.01 Continuing O&M Issues from Previous Month:

The O&M problems listed are repeated from November O&M report. None of the O&M difficulties contributed to exceedence of effluent permit limits. For other related information regarding plant shut down times, see the *Monthly Monitoring Report for the*

Oconomowoc Electroplating Groundwater Treatment Facility. The following O & M issues should be addressed immediately before the plant operation is affected:

1. Sodium hydroxide chemical feed pumps: Pump surge suppressors and pipe fittings continue to leak. This is leading to a loss of chemical and creating a hazardous environment in the chemical feed room.
2. Sulfuric acid feed system: Area surrounding the sulfuric acid feed system, including the electrical conduits, have severe corrosion problems. This is potentially a hazardous situation and immediate measures should be taken to correct the situation.
3. Sand filter: Sand in the filter is below the manufacturer's recommended level. The low level of sand causes the effluent nozzles to be exposed to the precipitate in the filter influent. The nozzles get coated with the precipitate, thereby reducing the efficiency of the filter. About 1000 pounds of additional sand is needed to make the filter operation more efficient.
4. Sodium hypochlorite feed system: Supplier of the Rosemount Level element has agreed to replace the tank level measuring device when the level in the tank is sufficiently low for making the change. We anticipate this work to be accomplished in March 1998.

2.0.02 O&M Repairs Made During the Month of December:

The following O&M work was completed during the month:

1. Pump sludge from EQT-100.

The influent pump capacity over a period of operation had reduced from 30 gpm to about 18 gpm. From our operation observation, we noticed that the sludge from EQT-100 had coated the pump influent line and was thereby restricting the influent flow. Maintenance work for the influent flow was authorized by Mr. Arne Thomsen of the USACE. On December 4, the contents of EQT-100, consisting essentially of sludge was pumped into the sludge holding tank for further processing. The influent line between EQT-100 and the influent pumps was augured to remove the sludge build-up. Following this cleaning operation, the influent pump capacity increased from 18 gpm to 52 gpm.

2. Modification Order No. 22

Work related to Modification Order No. 22, involving installation of isolation valves for sulfuric acid metering pumps and isolation valves for the static mixer feed line was completed on December 29 and 30. Drain valves at the acid metering pumps and the static mixer and a back pressure valve at the static mixer were installed as a part of this modification order.

2.0.03 New O& M Issues:

A spare parts list for the mechanical equipment at the plant was prepared and presented during the month. Since the plant has been in operation for over a year, availability of the recommended spare parts is essential for uninterrupted operation of the plant. We recommend that the spare parts and a replacement pump for a series of similar pumps be available at the plant.