US EPA RECORDS CENTER REGION 5
494495

A Toxicity Evaluation Report

Timken Company's Canton, Gambrinus, and Faircrest Road Plants

Canton, Stark County, Ohio

Ohio EPA Permit No. 3ID00021*CD

National Pollutant Discharge Elimination System (NPDES) No. OH0004219

Eric Nygaard
Environmental Scientist
Ohio Environmental Protection Agency
Division of Water Quality Monitoring & Assessment
Toxics Evaluation Group

A. Process and Discharge Description

The Timken Company operates three steel processing facilities located closely together in Canton: the Canton Plant, the Cambrinus Plant and the Faircrest Road Plant. The Canton Plant is equipped with eight electric arc furnaces, a hot tube mill and facilities for hot rolling and hardening and grinding of bearing components. The Gambrinus Plant has a cold draw mill, facilities for machining tubes into bearing components and hot rolling and finishing of steel products (U.S. EPA 1981). The Faircrest Road Plant has continuous casting and hot forming steel production lines (Ohio EPA 1983).

These processes are classified under Standard Industrial Classification (SIC) Codes 3312 - Steel Works and 3562 - Ball and Roller Bearings. The discharges from these facilities are regulated by effluent guidelines for the Iron and Steel (40 CFR 420) and Metal Finishing (40 CFR 433) Point Source Categories.

All three facilities send raw wastewater to a main treatment plant located south of Hurford Run near the Gambrinus Plant. At the treatment plant (Figure 1) the wastewater passes through the processes of chemical addition, clarification, cooling and pH adjustment (sulfuric acid). The treated water then proceeds to a reservoir. From this reservoir water is either recycled back to the plants (92%) or sent through vertical pressure - deep bed filters and discharged (8%) via outfall 3ID00021015 to an unnamed tributary of Hurford Run (also called Domer Ditch) at river mile (RM) 0.1. The influence of Domer Ditch is located at RM 1.97 (U.S. EPA 1981) on Hurford Run. The effluent volume from outfall 015 is approximately 4.5 MGD (Ohio EPA 1985a).

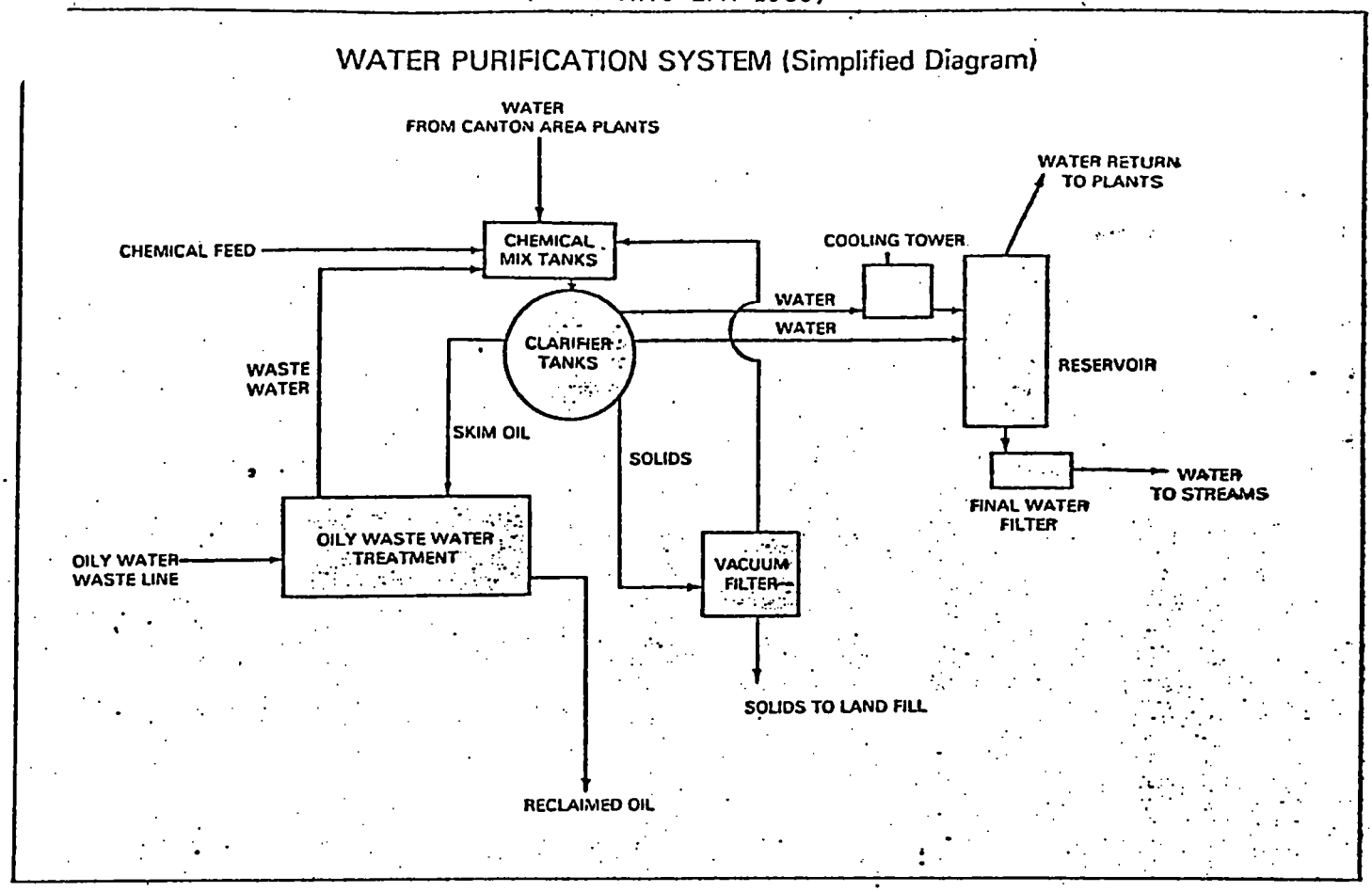
B. Facility and Treatment Plant Changes

The Faircrest Road Facilities came on line during late 1984 and early 1985. Timken did not change treatment facilities at that time.

C. Documented Problems

The Ohio EPA Emergency Response Office Data System (Ohio EPA 1985b) lists six spill incidents attributable to Timken from January 1978 through November 1985: (Table 1)

Figure 1
(from Ohio EPA 1983)



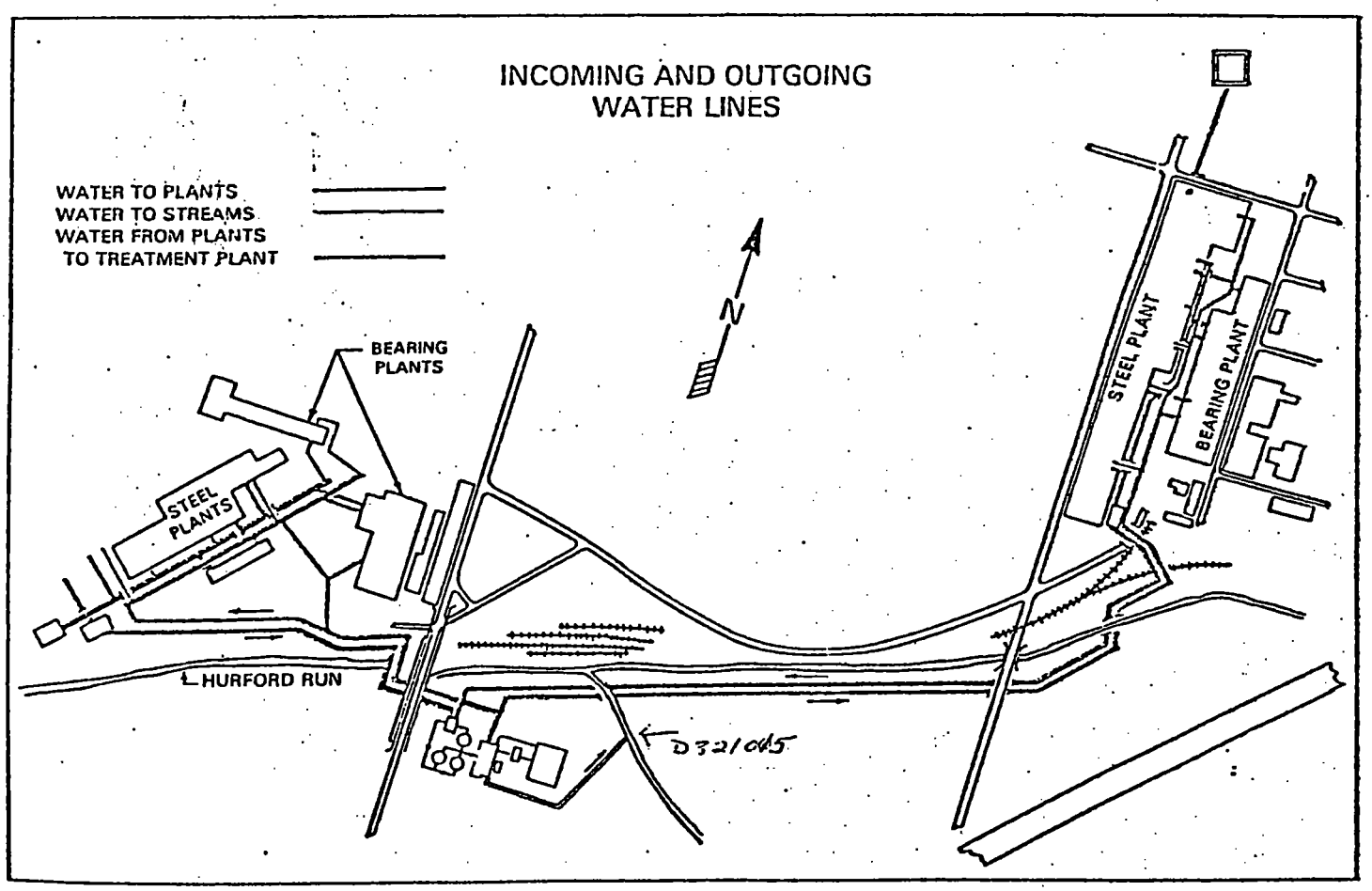


Table 1: Spill incidents attributable to Timken (January 1978 through November 1985)[a]

Date	Reported by	Amount	Material	Waterway Affected
05-09-82	Citizen	Unknown (S)	PCB Oil	None (land)
07-22-82	Citizen	Unknown (S)	Cutting Oil	Tuscarawas River
08-07-82	FD	Unknown (S)	Cutting Oil	None (land)
07-29-84	Citizen	Unknown (L)	Transformer Oil	None (land)
12-23-84	U.S. EPA	3000 gal.	5% sulfuric acid[b]	None (land)
10-04-85	Company	30 gal.	Mineral Oil	Hurford Run

a. In cases where the exact amount of the spill is unknown, the data base uses the following designations to show an estimate of the spill size: (S) Small; (M) Medium; (L) Large.

b. 405 cubic feet of soil were removed and taken to a landfill as a result of this spill.

References for Part I

Ohio Environmental Protection Agency. 1983. Ohio Environmental Protection Agency, Statement of Basis (Briefing Memo) for Timken Company NPDES Permit 3ID00021*CD, July 25, 1983.

Ohio Environmental Protection Agency. 1985a. Ohio Environmental Protection Agency, Liquid Effluents Analysis Processing System (LEAPS) Data Base, January through November, 1985.

Ohio Environmental Protection Agency. 1985b. Ohio Environmental Protection Agency, Emergency Response On-line System, Pollution Incidents for January 1978 through November 1985.

U.S. Code of Federal Regulations. 40 CFR 420. U.S. Code of Federal Regulations, Title 40 - Protection of Environment, Chapter I - Environmental Protection Agency, Part 420 - Iron and Steel Manufacturing Point Source Category, July 1, 1984.

U.S. Code of Federal Regulations. 40 CFR 433. U.S. Code of Federal Regulations, Title 40 - Protection of Environment, Chapter I - Environmental Protection Agency, Part 433 - Metal Finishing Point Source Category, July 1, 1984.

U.S. Environmental Protection Agency. 1981. U.S. Environmental Protection Agency, Region V, Nimishillen Creek Fate Assessment Study, September 16, 1981.

inter office communication

file

to: Marty Hilovsky, IWW, NEDO date: July 1, 1987

from: David Stroud, DWQMA, NEDO DLS.

subject: Timken 018 Sample Results

Attached are copies of the lab results for the two samples we collected on May 29, 1987. At the time of the sampling, the Harrison Avenue storm sewer was clear with no visible oil sheen and the 018 outfall had a noticable oil sheen. Also, the dye we added at Harrison Avenue took 35 minutes to reach the 018 outfall.

Let me know if you have any questions or comments.

DLS/lal

TIMKEN - STEEL DIVISION

TIMKEN 018

5-29-87 1:30 PM

046 sample

2:00 046 sample - sewer on Harrison Ave.

- dye added at SS. - took 35 minutes to reach 018

- Harrison Ave SS clear
- 018 OK covered

OhioEPA DIVISION OF WASTEWATER POLLUTION CONTROL — Report – Chemistry Laboratory

Date Received: 07-01-02
Date Reported: 87-06-08
Station: TIMKEN CO. - 018 OUTFALL
Sample Type: Monthly ☐ Compliance ☑ Litigation ☐ WQPA Survey ☐ Complaint ☐ BWQ Survey ☐
Sample Collected By: TROWD
Report Analysis To: CO ☐ NEDO ☑ NWDO ☐ SEDO ☐ SWDO ☐ CDO ☐ WQPA ☐

Laboratory Number: 6235
Approved By: TK SC, ☐☐☐☐☐☐,
Sample Type: Grab ☒ Composite ☐
Date & Time of Sample: Begin Y Y M M D D 8 7 0 5 2 9 — H H M M 1 3 5 0; End
Frequency & Duration of Composite Sample

PARAMETER	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
FIELD MEASUREMENTS					
☐ Chlorine, Free Avl., mg/l	P50064,	,			
☐ Chlorine, Total Resd., mg/l	P50060,	,			
☐ Conductivity, umhos/cm	P94,	,			
☐ Dissolved Oxygen, mg/l	P299,	,			
☐ Flow, CFS	P61,	,			
☐ pH, SU	P400,	,			
☐ Temperature, Water, °C	P10,	,			
☐ Gage Height, ft.	P65,	,			
☐		,			
☐		,			
METALS					
☐ Aluminum, Total Al, ug/l	P1105,	,			
☐ Arsenic, Total As.ug/l	P1002,	,			
☐ Barium, Total Ba, ug/l	P1007,	,			
☐ Cadmium, Total Cd, ug/l	P1027,	,			
☐ Calcium, Total Ca, mg/l	P916,	,			
☐ Chromium, Hex Cr, ug/l	P1032,	,			
☐ Chromium, Total Cr, ug/l	P1034,	,			
☐ Copper, Total Cu, ug/l	P1042,	,			
☐ Iron, Diss, Fe, ug/l	P1046,	,			
☐ Iron, Total Fe, ug/l	P1045,	,			
☐ Lead, Total Pb, ug/l	P1051,	,			
☐ Magnesium, Total Mg, mg/l	P927,	,			
☐ Manganese, Total Mn, ug/l	P1055,	,			
☐ Mercury, Total Hg, ug/l	P71900,	,			
☐ Nickel, Total Ni, ug/l	P1067,	,			
☐ Potassium, Total K, mg/l	P937,	,			
☐ Selenium, Total Se, ug/l	P1147,	,			
☐ Silver, Total Ag, ug/l	P1077,	,			
☐ Sodium, Total Na, mg/l	P929,	,			
☐ Strontium, Total Sr, ug/l	P 1082,	,			
☐ Zinc, Total Zn, ug/l	P1092,	,			
☐		,			

NON-METALS	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
☐ Acidity, Total $CaCO_3$ mg/l	P70508,	,			
☐ Alkalinity, Total $CaCO_3$ mg/l	P410,	,			
☐ BOD, 5-day, mg/l	P310,	,			
☐ cBOD, 5 Day, mg/l	P80082,	,			
☐ BOD, 20 Day, mg/l	P324,	,			
☐ cBOD, 20 Day, mg/l	P80087,	,			
☐ MBAS, mg/l	P38260,	,			
☐ Carbon, Total Org., mg/l	P680,	,			
☐ COD, mg/l	P335,	,			
☐ Chloride, Cl, mg/l	P940,	,			
☐ Conductivity at 25°C, umhos/cm	P95,	,			
☐ Cyanide, Total, mg/l	P720,	,			
☐ Fluoride, F, mg/l	P951,	,			
☐ Hardness, Total as $CaCo_3$ mg/l	P900,	,			
☐ Nitrate-Nitrite, as N, mg/l	P620,	,			
☐ Nitrite, as N, mg/l	P615,	,			
☐ Nitrogen, Ammonia as N, mg/l	P610,	,			
☐ Nitrogen, Total Kjeldahl, mg/l	P625,	,			
☒ Oil and Grease, mg/l	P556,	22.9 ,	6/2	BN	
☐ pH, SU	P403,	,			
☐ Phenolics, ug/l	P32730,	,			
☐ Phosphorus, Diss. P, mg/l	P666,	,			
☐ Phosphorus, Total P, mg/l	P665,	,			
☐ Residue, Total, mg/l	P550,	,			
☐ Residue, Total Flt, mg/l	P70300,	,			
☐ Residue, Total Nflt, mg/l	P530,	,			
☐ Silica, Dissolved, mg/l	P955,	,			
☐ Sulfate, SO_4, mg/l	P945,	,			
☐		,			
☐		,			
MICROBIOLOGY					
☐ Fecal Coliform, MF, #/100 ml	P31616,	,			
☐ Fecal Strep, MF # / 100 ml	P31679,	,			
☐		,			

Comments:

PRESERVATIVES
☐ NaOH ☐ $K_2Cr_2O_7$ ☐ N/P
☐ H_2SO_4 ☐ $CuSO_4$-H_3PO_4
☐ HNO_3 ☑ Other OG

DISTRIBUTION: WHITE-LAB, GREEN-PERMITS, CANARY-STORET, PINK-DISTRICT, GOLDENROD-DISTRICT

OEPA 4700

OhioEPA DIVISION OF WASTEWATER POLLUTION CONTROL

Report – Chemistry Labora

Date Received 85 08 08

Date Reported

Laboratory Number C4021

Approved By: GI SC, ☐☐☐☐☐

Station Timken Co. (Daber Ave.) Raw Influent *

Sample Type: Grab ☒ Composite ☐

Sample Type: Monthly ☐ Compliance ☒ Litigation ☐ WQPA Survey ☐ Complaint ☐ B-WQ Survey ☐

Sample Collected By R. Wyszewski

Date & Time of Sample: Begin Y Y M M D D 8 5 0 8 0 7 H H 1 0

End

Report Analysis To R. Wyszewski

CO ☐ NEDO ☒ NWDO ☐ SEDO ☐ SWDO ☐ CDO ☐ WQPA ☐

Frequency & Duration of Composite Sample

(10)

PARAMETER	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
FIELD MEASUREMENTS					
☐ Chlorine, Free Avl., mg/l	P50064,				
☐ Chlorine, Total Resd., mg/l	P50060,				
☐ Conductivity, umhos/cm	P94,				
☐ Dissolved Oxygen, mg/l	P299,				
☐ Flow, CFS	P61,				
☐ pH, SU	P400,				
☐ Temperature, Water, °C	P10,				
☐ Gage Height, ft.	P65,				
☐					
☐					
METALS					
☐ Aluminum, Total Al, ug/l	P1105,				
☐ Arsenic, Total As.ug/l	P1002,				
☐ Barium, Total Ba, ug/l	P1007,				
☒ Cadmium, Total Cd, ug/l	P1027,	<0.2	8/12	PS	
☒ Calcium, Total Ca, mg/l	P916,	[illegible]	[illegible]	TR	
☐ Chromium, Hex Cr, ug/l	P1032,				
☒ Chromium, Total Cr, ug/l	P1034,	150	[illegible]	TR	
☒ Copper, Total Cu, ug/l	P1042,	[illegible]	[illegible]	TR	
☐ Iron, Diss, Fe, ug/l	P1046,				
☒ Iron, Total Fe, ug/l	P1045,	5520	[illegible]	TR	
☒ Lead, Total Pb, ug/l	P1051,	129	8/14	PS	
☒ Magnesium, Total Mg, mg/l	P927,	[illegible]	[illegible]	TR	
☐ Manganese, Total Mn, ug/l	P1055,				
☐ Mercury, Total Hg, ug/l	P71900,				
☒ Nickel, Total Ni, ug/l	P1067,	130	[illegible]	MF	
☐ Potassium, Total K, mg/l	P937,				
☐ Selenium, Total Se, ug/l	P1147,				
☐ Silver, Total Ag, ug/l	P1077,				
☐ Sodium, Total Na, mg/l	P929,				
☐ Strontium	P1082,				
☒ Zinc, Total, ug/l	P1092,	480	[illegible]	TR	
☐					

NON-METALS	STORET CODE	RESULTS	DATE ANALYZED	ANALYST
☐ Acidity, Total $CaCO_3$ mg/l	P70508,			
☐ Alkalinity, Total $CaCO_3$ mg/l	P410,			
☐ BOD, 5-day, mg/l	P310,			
☐ cBOD, 5 Day, mg/l	P80082,			
☐ BOD, 20 Day, mg/l	P324,			
☐ cBOD, 20 Day, mg/l	P80087,			
☐ MBAS, mg/l	P38260,			
☐ Carbon, Total Org., mg/l	P680,			
☐ COD, mg/l	P335,			
☐ Chloride, Cl, mg/l	P940,			
☐ Conductivity at 25°C, umhos/cm	P95,			
☐ Cyanide, Total, mg/l	P720,			
☐ Fluoride, F, mg/l	P951,			
☒ Hardness, Total as $CaCO_3$ mg/l	P900,	470.	9/1	KS
☐ Nitrate-Nitrite, as N, mg/l	P620,			
☐ Nitrite, as N, mg/l	P615,			
☐ Nitrogen, Ammonia as N, mg/l	P610,			
☐ Nitrogen, Total Kjeldahl, mg/l	P625,			
☐ Oil and Grease, mg/l	P556,			
☐ pH, SU	P403,			
☐ Phenolics, ug/l	P32730,			
☐ Phosphorus, Diss. P, mg/l	P666,			
☐ Phosphorus, Total P, mg/l	P665,			
☐ Residue, Total, mg/l	P550,			
☐ Residue, Total Flt, mg/l	P70300,			
☐ Residue, Total Nflt, mg/l	P530,			
☐ Silica, Dissolved, mg/l	P955,			
☐ Sulfate, SO_4, mg/l	P945,			
☐				
☐				
MICROBIOLOGY				
☐ Fecal Coliform, MF, #/100 ml	P31616,			
☐ Fecal Strep, MF # / 100 ml	P31679,			
☐				

Comments: * Main WWTP, collected at mix tank with Al_2SO_4 feed turned off

PRESERVATIVES

☐ NaOH ☐ $K_2Cr_2O_7$ ☐ N/P

☐ H_2SO_4 ☐ $CuSO_4$-H_3PO_4

☒ HNO_3 ☐ Other

DISTRIBUTION: WHITE-LAB, GREEN-PERMITS, CANARY-STORET, PINK-DISTRICT, GOLDENROD-D

OEPA 4700

C402

OhioEPA DIVISION OF WASTEWATER POLLUTION CONTROL

Report – Chemistry Labor

Date Received 8 08 08

Laboratory Number C1020

D Reported 8 01 09

Approved By: GT SC, ☐☐☐☐☐

Station Timken Co. (Dueber Ave. WWTP) 015 effluent

Sample Type: Grab ☐ Composite ☒

Sample Type: Monthly ☐ Compliance ☒ Litigation ☐ WQPA Survey ☐ Complaint ☐ B-WQ Survey ☐

Date & Time of Sample: Begin Y Y M M D D H H 8 8 0 8 0 6 1 0; End 8 8 0 8 0 7 1 0

Sample Collected By R. Wyseuski / L. Balazs

Report Analysis To R. Wyseuski

Frequency & Duration of Composite Sample 1/15 min

CO ☐ NEDO ☒ NWDO ☐ SEDO ☐ SWDO ☐ CDO ☐ WQPA ☐

(25)

PARAMETER	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
FIELD MEASUREMENTS					
☐ Chlorine, Free Avl., mg/l	P50064,				
☐ Chlorine, Total Resd., mg/l	P50060,				
☐ Conductivity, umhos/cm	P94,				
☐ Dissolved Oxygen, mg/l	P299,				
☐ Flow, CFS	P61,				
☐ pH, SU	P400,				
☐ Temperature, Water, °C	P10,				
☐ Gage Height, ft.	P65,				
☐					
☐					
METALS					
☐ Aluminum, Total Al, ug/l	P1105,				
☐ Arsenic, Total As.ug/l	P1002,				
☐ Barium, Total Ba, ug/l	P1007,				
☒ Cadmium, Total Cd, ug/l	P1027,	<0.2	8/10	PS	
☒ Calcium, Total Ca, mg/l	P916,	[illegible]	[illegible]	[illegible]	
☐ Chromium, Hex Cr, ug/l	P1032,				
☒ Chromium, Total Cr, ug/l	P1034,	<10	[illegible]	TK	
☒ Copper, Total Cu, ug/l	P1042,	15	[illegible]	TK	
☐ Iron, Diss, Fe, ug/l	P1046,				
☒ Iron, Total Fe, ug/l	P1045,	<50	[illegible]	TK	
☒ Lead, Total Pb, ug/l	P1051,	6	8/14	PS	
☒ Magnesium, Total Mg, mg/l	P927,	[illegible]	[illegible]	TK	
☐ Manganese, Total Mn, ug/l	P1055,				
☐ Mercury, Total Hg, ug/l	P71900,				
☒ Nickel, Total Ni, ug/l	P1067,	6.0	[illegible]	MH	
☐ Potassium, Total K, mg/l	P937,				
☐ Selenium, Total Se, ug/l	P1147,				
☐ Silver, Total Ag, ug/l	P1077,				
☐ Sodium, Total Na, mg/l	P929,				
☐ Strontium	P1082,				
☒ Zinc, Total, ug/l	P1092,	[illegible]	[illegible]	TK	
☐					

NON-METALS	STORET CODE	RESULTS	DATE ANALYZED	ANALYST
☐ Acidity, Total $CaCO_3$ mg/l	P70508,			
☐ Alkalinity, Total $CaCO_3$ mg/l	P410,			
☒ BOD, 5-day, mg/l	P310,	<1	[illegible]	MN
☒ cBOD, 5 Day, mg/l	P80082,	<1	[illegible]	MN
☐ BOD, 20 Day, mg/l	P324,			
☐ cBOD, 20 Day, mg/l	P80087,			
☐ MBAS, mg/l	P38260,			
☐ Carbon, Total Org., mg/l	P680,			
☒ COD, mg/l	P335,	13	[illegible]	MA
☒ Chloride, Cl, mg/l	P940,	77	[illegible]	EN
☐ Conductivity at 25°C, umhos/cm	P95,			
☒ Cyanide, Total, mg/l *	P720,	<0.005	[illegible]	MH
☒ Fluoride, F, mg/l	P951,			
☒ Hardness, Total as $CaCo_3$ mg/l	P900,	461	7-4	KS
☒ Nitrate-Nitrite, as N, mg/l	P620,	<0.10	[illegible]	BK
☒ Nitrite, as N, mg/l	P615,	<0.02	8-9	EM
☒ Nitrogen, Ammonia as N, mg/l	P610,	<0.05	8-12	BK
☒ Nitrogen, Total Kjeldahl, mg/l	P625,	0.2	8-9	AL
☒ Oil and Grease, mg/l *	P556,	9	[illegible]	[illegible]
☐ pH, SU	P403,			
☒ Phenolics, ug/l *	P32730,	<10	[illegible]	MH
☐ Phosphorus, Diss. P, mg/l	P666,			
☒ Phosphorus, Total P, mg/l	P665,	<0.05	8-9	AL
☐ Residue, Total, mg/l	P550,			
☒ Residue, Total Flt, mg/l	P70300,	662	8-7	BN
☒ Residue, Total Nflt, mg/l	P530,	<5	8-7	BN
☐ Silica, Dissolved, mg/l	P955,			
☐ Sulfate, SO_4, mg/l	P945,			
☐				
☐				
MICROBIOLOGY				
☐ Fecal Coliform, MF, #/100 ml	P31616,			
☐ Fecal Strep, MF # / 100 ml	P31679,			
☐				

Comments: * Grab Samples only for 8/1/5

PRESERVATIVES

☒ NaOH ☐ $K_2Cr_2O_7$ ☒ N/P

☒ H_2SO_4 ☒ $CuSO_4$-H_3PO_4

☒ HNO_3 ☒ Other 1 qt. glass H_2SO_4

DISTRIBUTION: WHITE-LAB, GREEN-PERMITS, CANARY-STORET, PINK-DISTRICT, GOLDENROD-DISTRICT

OEPA 4700

OhioEPA DIVISION OF WASTEWATER POLLUTION CONTROL — Report – Chemistry Laboratory

Date Received: [illegible]
Date Reported: 87-06-08
Station: HARRISON AVE. STORM SEWER OUT. [illegible]
Sample Type: Monthly ☐ Compliance ☐ Litigation ☐ WQPA Survey ☐ Complaint ☐ BWQ Survey ☐
Sample Collected By: STROUD
Report Analysis To: "
CO ☐ NEDO ☒ NWDO ☐ SEDO ☐ SWDO ☐ CDO ☐ WQPA ☐

Laboratory Number: [illegible]
Approved By: TR SC. ☐☐☐☐☐☐
Sample Type: Grab ☐ Composite ☐
Date & Time of Sample: Begin Y Y M M D D H H M M — 8 7 0 6 0 8 1 4 0 2; End
Frequency & Duration of Composite Sample:

PARAMETER	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
FIELD MEASUREMENTS					
☐ Chlorine, Free Avl., mg/l	P50064,				
☐ Chlorine, Total Resd., mg/l	P50060,				
☐ Conductivity, umhos/cm	P94,				
☐ Dissolved Oxygen, mg/l	P299,				
☐ Flow, CFS	P61,				
☐ pH, SU	P400,				
☐ Temperature, Water, °C	P10,				
☐ Gage Height, ft.	P65,				
☐					
☐					
METALS					
☐ Aluminum, Total Al, ug/l	P1105,				
☐ Arsenic, Total As.ug/l	P1002,				
☐ Barium, Total Ba, ug/l	P1007,				
☐ Cadmium, Total Cd, ug/l	P1027,				
☐ Calcium, Total Ca, mg/l	P916,				
☐ Chromium, Hex Cr, ug/l	P1032,				
☐ Chromium, Total Cr, ug/l	P1034,				
☐ Copper, Total Cu, ug/l	P1042,				
☐ Iron, Diss, Fe, ug/l	P1046,				
☐ Iron, Total Fe, ug/l	P1045,				
☐ Lead, Total Pb, ug/l	P1051,				
☐ Magnesium, Total Mg, mg/l	P927,				
☐ Manganese, Total Mn, ug/l	P1055,				
☐ Mercury, Total Hg, ug/l	P71900,				
☐ Nickel, Total Ni, ug/l	P1067,				
☐ Potassium, Total K, mg/l	P937,				
☐ Selenium, Total Se, ug/l	P1147,				
☐ Silver, Total Ag, ug/l	P1077,				
☐ Sodium, Total Na, mg/l	P929,				
☐ Strontium, Total Sr, ug/l	P 1082,				
☐ Zinc, Total Zn, ug/l	P1092,				
☐					

NON-METALS	STORET CODE	RESULTS	DATE ANALYZED	ANALYST	METHOD CODE
☐ Acidity, Total $CaCO_3$ mg/l	P70508,				
☐ Alkalinity, Total $CaCO_3$ mg/l	P410,				
☐ BOD, 5-day, mg/l	P310,				
☐ cBOD, 5 Day, mg/l	P80082,				
☐ BOD, 20 Day, mg/l	P324,				
☐ cBOD, 20 Day, mg/l	P80087,				
☐ MBAS, mg/l	P38260,				
☐ Carbon, Total Org., mg/l	P680,				
☐ COD, mg/l	P335,				
☐ Chloride, Cl, mg/l	P940,				
☐ Conductivity at 25°C, umhos/cm	P95,				
☐ Cyanide, Total, mg/l	P720,				
☐ Fluoride, F, mg/l	P951,				
☐ Hardness, Total as $CaCo_3$ mg/l	P900,				
☐ Nitrate-Nitrite, as N, mg/l	P620,				
☐ Nitrite, as N, mg/l	P615,				
☐ Nitrogen, Ammonia as N, mg/l	P610,				
☐ Nitrogen, Total Kjeldahl, mg/l	P625,				
☒ Oil and Grease, mg/l	P556,	1.05	6/2	BN	
☐ pH, SU	P403,				
☐ Phenolics, ug/l	P32730,				
☐ Phosphorus, Diss. P, mg/l	P666,				
☐ Phosphorus, Total P, mg/l	P665,				
☐ Residue, Total, mg/l	P550,				
☐ Residue, Total Flt, mg/l	P70300,				
☐ Residue, Total Nflt, mg/l	P530,				
☐ Silica, Dissolved, mg/l	P955,				
☐ Sulfate, SO_4, mg/l	P945,				
☐					
☐					
MICROBIOLOGY					
☐ Fecal Coliform, MF, #/100 ml	P31616,				
☐ Fecal Strep, MF # / 100 ml	P31679,				
☐					

Comments:

PRESERVATIVES
☐ NaOH ☐ $K_2Cr_2O_7$ ☐ N/P
☐ H_2SO_4 ☐ $CuSO_4$-H_3PO_4
☐ HNO_3 ☒ Other OG

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