

Ontario Ministry of Environment  
Laboratory Services Branch - 125 Resources Road  
Etobicoke, Ontario M9P 3V6  
FINAL REPORT(manager4)

Print Date: Nov. 05, 2013 04:00 PM By REPORTADMIN

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Login: C205979

Program Code 130165202      Program: MOE OPERATIONS DIVISION  
   Study: SEWAGE, INDUSTRIAL, MISA, NON-MISA  
   Project: NORTHERN REG. - SUDBURY DIST  
   Activity: INSPECTION (NON-MISA FACILITY)  
   Organization: District Manager Sault Ste Mar

Org. Id: 4133

Mail this copy to :

CROSSON, KIRK  
MOE - SAULT STE. MARIE AREA OFFICE  
289 BAY STREET, 3RD FLOOR  
SAULT STE. MARIE, ONT  
P6A 1W7

Final reports to : CROSSON, KIRK

Approved for release by : KAREN MACPHERSON Manager, Toxic Organics Section

Approved date : Nov. 05, 2013

Inquiries to : KAREN MACPHERSON  
                         DAVE MORSE

Telephone : 416-235-5848  
Telephone : 416-235-5989

**LOGIN DESCRIPTION: CN RAIL YARD EAST AND WEST INDUSTRIAL SEWAGE**

The results relate only to items tested.

To provide customer service feedback on this report and/or other services provided by LaSB, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831

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Field ID	Station ID	Sample Location Description	Sampling Date	Time	Zone	Sampler Information
CHHPWE ST		WEST END SEWAGE WORKS	10 SEP 2013	09:47	5	
	Sample ID C205979-0001	Sample Comment Description				

MOE\*LIMS Products Requested:

TE	E3094B	MET3094
TE	E3216A	CONDPH3216

TE	E3132A	VOL3132
TE	E3400A	PCB3400

TE	E3201B	SXT3201
TE	E3421	PHC3421

UTM:

Zone	Easting	Northing	Collection Method	Map Datum	Accuracy (metres)
22Q	663033	5455227	GPS	NAD83	2-5M

Field ID	Station ID	Sample Location Description	Sampling Date	Time	Zone	Sampler Information
CHHPEA ST		EAST END SEWAGE WORKS	10 SEP 2013	10:40	5	
	Sample ID C205979-0002	Sample Comment Description				

MOE\*LIMS Products Requested:

TE	E3094B	MET3094
TE	E3218A	CONDPH3218

TE	E3132A	VOL3132
TE	E3400A	PCB3400

TE	E3201B	SXT3201
TE	E3421	PHC3421

UTM:

Zone	Easting	Northing	Collection Method	Map Datum	Accuracy (metres)
22Q	662163	5454484	GPS	NAD83	11-20M

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Field ID:  
 Sample ID:  
 MOE\*LIMS ID:  
 Station ID:  
 Collect Date:  
 Sample Location Description:

CHHPWEST  
 C205979-0001  
 2013TE35-00202  
 10 SEP 2013  
 WEST END SEWAGE WORKS

CHHPPEAST  
 C205979-0002  
 2013TE36-00203  
 10 SEP 2013  
 EAST END SEWAGE WORKS

Sample Comments Description:

Listid	Paramname	Value	Units	Qual	Rmk1	Rmk2	Value	Units	Qual	Rmk1	Rmk2
3094L1	Aluminum	.01	mg/L	<=W			.01	mg/L	<=W		
	Barium	0.043	mg/L				0.206	mg/L			
	Beryllium	.001	mg/L	<=W			.001	mg/L	<=W		
	Cadmium	.001	mg/L	<=W			.001	mg/L	<=W		
	Calcium	127.	mg/L				148.	mg/L			
	Chromium	.002	mg/L	<=W			.002	mg/L	<=W		
	Cobalt	.001	mg/L	<=W			.001	mg/L	<=W		
	Copper	.001	mg/L	<=W			.001	mg/L	<=W		
	Iron	4.25	mg/L				4.55	mg/L			
	Lead	.005	mg/L	<=W			.005	mg/L	<=W		
	Magnesium	11.3	mg/L				17.4	mg/L			
	Manganese	0.603	mg/L				3.618	mg/L			
	Molybdenum	0.012	mg/L	<T			.005	mg/L	<=W		
	Nickel	.01	mg/L	<=W			.01	mg/L	<=W		
	Potassium	3.99	mg/L				4.39	mg/L			
	Silver	.005	mg/L	<=W			.005	mg/L	<=W		
	Sodium	12.0	mg/L				17.1	mg/L			
	Strontium	0.194	mg/L				0.291	mg/L			
	Titanium	0.002	mg/L	<T			0.002	mg/L	<T		
	Vanadium	.001	mg/L	<=W			.001	mg/L	<=W		
	Zinc	0.010	mg/L				0.011	mg/L			
	Hardness	365.	mg/L				440.	mg/L			
3132L1	Dichlorodifluoromethane	.5	ug/L	<MDL			.5	ug/L	<MDL		
	Chloromethane	.5	ug/L	<MDL			.5	ug/L	<MDL		
	Chloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
	Bromomethane	.5	ug/L	<MDL			.5	ug/L	<MDL		
	Chloroethane	.5	ug/L	<MDL			.5	ug/L	<MDL		
	Trichlorofluoromethane	.5	ug/L	<MDL			.5	ug/L	<MDL		
	1,1-dichloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
	Dichloromethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
	trans-1,2-dichloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
	1,1-dichloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
	cis-1,2-dichloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
	Chloroform	.2	ug/L	<MDL			.2	ug/L	<MDL		
	1,2-dichloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
	1,1,1-trichloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
	Carbon tetrachloride	.2	ug/L	<MDL			.2	ug/L	<MDL		

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 Sample ID:  
 MOE/LIMS ID:  
 Station ID:  
 Collect Date:  
 Sample Location Description:

CHHPWEST  
 C205979-0001  
 2013TE36-00202

CHHPEAST  
 C205979-0002  
 2013TE36-00203

10 SEP 2013  
 WEST END SEWAGE WORKS

10 SEP 2013  
 EAST END SEWAGE WORKS

Sample Comments Description:

Parname	Value	Units	Qual	Rmk1	Rmk2	Value	Units	Qual	Rmk1	Rmk2
3132L1 Benzene	0.6	ug/L				0.2	ug/L			
1,2-dichloropropane	.2	ug/L	<MDL			.2	ug/L	<MDL		
Trichloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Bromodichloromethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
cis-1,3-dichloropropene	.2	ug/L	<MDL			.2	ug/L	<MDL		
trans-1,3-dichloropropene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,1,2-trichloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
Toluene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Dibromochloromethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,2-dibromoethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
Tetrachloroethene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,1,1,2-tetrachloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
Chlorobenzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Ethylbenzene	0.5	ug/L				.2	ug/L	<MDL		
Bromoform	.2	ug/L	<MDL			.2	ug/L	<MDL		
m- and p-xylene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Styrene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,1,2,2-tetrachloroethane	.2	ug/L	<MDL			.2	ug/L	<MDL		
o-xylene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Isopropyl benzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Propylbenzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
3-ethyltoluene	.2	ug/L	<MDL			.2	ug/L	<MDL		
4-ethyltoluene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,3,5-trimethylbenzene	2.7	ug/L				0.2	ug/L			
2-ethyltoluene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,2,4-trimethylbenzene	.2	ug/L	<MDL			3.5	ug/L			
1,3-dichlorobenzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,4-dichlorobenzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
Isopropyl toluene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,2,3-trimethylbenzene	12.	ug/L				10.	ug/L			
1,2-dichlorobenzene	.2	ug/L	<MDL			.2	ug/L	<MDL		
1,3-diethylbenzene	0.9	ug/L				2.5	ug/L			
1,4-diethylbenzene	.2	ug/L	<MDL			1.6	ug/L			
1,2-diethylbenzene	.2	ug/L	<MDL			1.6	ug/L			
Trihalomethanes: total	.2	ug/L	<MDL			.2	ug/L	<MDL		
Xylenes: total	.2	ug/L	<MDL			.2	ug/L	<MDL		
3201L1 Solvent extractable	6.2	mg/L				5.0	mg/L			

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 10 SEP 2013  
 WEST END SEWAGE WORKS

CHHPEAST  
 C205979-0002  
 2013TE36-00203  
 10 SEP 2013  
 EAST END SEWAGE WORKS

Sample Comments Description:

Paramname	Value	Units	Qual	Rmk1	Rmk2	Value	Units	Qual	Rmk1	Rmk2
3218L3 Conductivity	654.	uS/cm				786.	uS/cm			
pH	7.56	none				7.47	none			
3400L2 PCB: total	20	ng/L	<=W			20	ng/L	<=W		
3421L1 F1 (C6 - C10)	25	ug/L	<MDL			25	ug/L	<MDL		
F2 (C10 - C16)	180	ug/L				640	ug/L			
F3 (C16 - C34)	500	ug/L	<MDL			500	ug/L	<MDL		
F4 (C34 - C50)	500	ug/L	<MDL			500	ug/L	<MDL		
F4G (silica gel)		ug/L	NDND				ug/L	NDND		
PHC Profile		none	NDST				none	NDST		
Benzene	.5	ug/L	<MDL			.5	ug/L	<MDL		
Toluene	.5	ug/L	<MDL			.5	ug/L	<MDL		
Ethylbenzene	.5	ug/L	<MDL			.5	ug/L	<MDL		
m/p-xylene	.5	ug/L	<MDL			.5	ug/L	<MDL		
o-xylene	.5	ug/L	<MDL			0.0	ug/L	<MDL		

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CODE	DESCRIPTION
<T	A MEASURABLE TRACE AMOUNT; INTERPRET WITH CAUTION
NDND	NO DATA; NOT ANALYZED
<W	NO MEASURABLE RESPONSE (ZERO); <REPORTED VALUE
NDST	NO DATA; SEE ATTACHED TEXTUAL INFORMATION
<MDL	LESS THAN METHOD DETECTION LIMIT

Sample ID: C205979-0001      Matrix: Effluent      Method: E3132A      Product: VOL3132      Parameter: 1,2-dieethylbenzene

The PT/GC/MS analysis of sample C205979-01 tentatively identified by library search the presence of aromatics.

Sample ID: C205979-0001      Matrix: Effluent      Method: E3421      Product: PHC3421      Parameter: PHC Profile

The GC/FID and PT/GC/FID/MSD analysis of sample C205979-0001 identified an unresolved complex mixture (UCM) of hydrocarbons primarily in the nC12 to nC22 carbon range. The PHC profile of the sample resembles trace amount of bio-degraded or weathered fuel oil, possible diesel.

Sample ID: C205979-0002      Matrix: Effluent      Method: E3132A      Product: VOL3132      Parameter: 1,2-dieethylbenzene

The PT/GC/MS analysis of sample C205979-02 tentatively identified by library search the presence of aromatics.

Sample ID: C205979-0002      Matrix: Effluent      Method: E3421      Product: PHC3421      Parameter: PHC Profile

The GC/FID and PT/GC/FID/MSD analysis of sample C205979-0002 identified an unresolved complex mixture (UCM) of hydrocarbons primarily in the nC12 to nC22 carbon range. The PHC profile of the sample resembles bio-degraded or weathered fuel oil, possible diesel.

**Product Completion**

Sample ID	Matrix	Method	Product	Analytical Department	Completion Date
C205979-0001	TE	E3034B	MET3094	4307	18-OCT-13
C205979-0001	TE	E3132A	VOL3132	4224	24-SEP-13
C205979-0001	TE	E3201B	SXT3201	4530	16-OCT-13
C205979-0001	TE	E3216A	CONDPH3216	5216	24-SEP-13
C205979-0001	TE	E3400A	PCB3400	3340	23-OCT-13
C205979-0001	TE	E3421	PHC3421	4217	06-OCT-13
C205979-0002	TE	E3034B	MET3094	4307	18-OCT-13
C205979-0002	TE	E3132A	VOL3132	4224	24-SEP-13
C205979-0002	TE	E3201B	SXT3201	4530	16-OCT-13
C205979-0002	TE	E3216A	CONDPH3216	5216	24-SEP-13
C205979-0002	TE	E3400A	PCB3400	3340	23-OCT-13
C205979-0002	TE	E3421	PHC3421	4217	06-OCT-13

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**LaSB Method Summary**

Method	Method Description	Status	Status Description
E3094B	THE DETERMINATION OF METALS IN FINAL EFFLUENT, INDUSTRIAL WASTE AND LANDFILL LEACHATES BY INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROSCOPY (ICP-AES)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.
E3132A	THE DETERMINATION OF VOLATILE ORGANOHALIDES AND HYDROCARBONS IN WATER, LEACHATES AND EFFLUENTS BY PURGE AND TRAP GAS CHROMATOGRAPHY (GC) MASS SPECTROMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.
E3201B	THE DETERMINATION OF ORGANIC SOLVENT EXTRACTABLE MATTER USING DICHLOROMETHANE BY GRAVIMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.
E3216A	THE DETERMINATION OF CONDUCTIVITY, pH AND ALKALINITY IN WATER AND EFFLUENTS BY POTENTIOMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.
E3400A	THE DETERMINATION OF ORGANOCHLORINE PESTICIDES, CHLOROBENZENES (CBS), AROCLORS AND TOXAPHENES IN WATER, EFFLUENT AND WASTEWATER BY HEXANE MICROEXTRACTION AND GAS CHROMATOGRAPHY - MASS SPECTROMETRY (GC-MS)	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.
E3421	THE DETERMINATION OF PETROLEUM HYDROCARBONS AND VOLATILE HYDROCARBONS (BTEX) IN WATER BY PURGE AND TRAP GC-FID-MS COMBINED WITH LIQUID/LIQUID EXTRACTION FOLLOWED BY GC-FID AND GRAVIMETRY	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.

\*\*\* End of Report \*\*\*