MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY (517) 335-9800

P.O. Box 30270
Lansing, MI 48909

Report To: Remediation and Redevelopmen
10650 Bennett Drive
Morrice, MI 48857-9792

Attn: JAMES INNES
Total: $150.00

Lab Work Order # 0210139
Work Site ID: LINDEN RD. LANDFILL
Matrix: Water
Received: 10/22/2002
Client: RRD SHIAWASE

Reported: 11/6/2002
Number of Samples: 1

This is an original report: Deb Scott Date: _____

Copies faxed to
Bob Metcalf, GM
Baba, Weston
on 11-8-02
JI

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 0210139-01POX

Date Collected: 10/22/2002
Test Code: WPS
Test Name: 8260 Plus - Water
Date Analyzed: 10/31/2002 by PCR
Sample ID: MW-03S

CAS #	COMPOUND	RESULTS ug/L	REMARK	REPORTING LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		5.0	1
74-87-3	Chloromethane	ND		5.0	1
75-01-4	Vinyl chloride	15		1.0	1
74-83-9	Bromomethane	ND		5.0	1
75-00-3	Chloroethane	ND		5.0	1
75-69-4	Trichlorofluoromethane	ND		1.0	1
67-64-1	Acetone	ND		20	1
60-29-7	Diethyl ether	ND		5.0	1
75-35-4	1,1-Dichloroethylene	ND		1.0	1
74-88-4	Methyl iodide	ND		1.0	1
107-13-1	Acrylonitrile	ND		5.0	1
75-09-2	Methylene chloride	ND		5.0	1
75-15-0	Carbon disulfide	ND		1.0	1
156-60-5	trans-1,2-Dichloroethylene	1.7		1.0	1
1634-04-4	Methyltertbutylether (MTBE)	ND		1.0	1
75-34-3	1,1-Dichloroethane	13		1.0	1
78-93-3	2-Butanone (MEK)	ND		5.0	1
156-59-2	cis-1,2-Dichloroethylene	22		1.0	1
67-66-3	Chloroform	ND		1.0	1
109-99-9	Tetrahydrofuran	ND		5.0	1
74-97-5	Bromochloromethane	ND		1.0	1
71-55-6	1,1,1-Trichloroethane	ND		1.0	1
107-06-2	1,2-Dichloroethane	ND		1.0	1
71-43-2	Benzene	ND		1.0	1
56-23-5	Carbon tetrachloride	ND		1.0	1
78-87-5	1,2-Dichloropropane	ND		1.0	1
79-01-6	Trichloroethylene	ND		1.0	1
74-95-3	Dibromomethane	ND		1.0	1
75-27-4	Bromodichloromethane	ND		1.0	1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	1
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	1
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	1
108-88-3	Toluene	ND		1.0	1
79-00-5	1,1,2-Trichloroethane	ND		1.0	1
591-78-6	2-Hexanone	ND		5.0	1

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ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/L	REMARK	REPORTING LIMIT	DILUTION FACTOR
124-48-1	Dibromochloromethane	ND		1.0	1
106-93-4	1,2-Dibromoethane	ND		1.0	1
127-18-4	Tetrachloroethene	ND		1.0	1
108-90-7	Chlorobenzene	ND		1.0	1
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	1
100-41-4	Ethylbenzene	ND		1.0	1
108383,106423	m & p-Xylene	ND		2.0	1
75-25-2	Bromoform	ND		1.0	1
100-42-5	Styrene	ND		1.0	1
95-47-6	o-Xylene	ND		1.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	1
96-18-4	1,2,3-Trichloropropane	ND		1.0	1
110-57-6	trans-1,4-Dichloro-2-butene	ND		5.0	1
98-82-8	Isopropylbenzene	ND		1.0	1
108-86-1	Bromobenzene	ND		1.0	1
103-65-1	n-Propylbenzene	ND		1.0	1
108-67-8	1,3,5-Trimethylbenzene	ND		1.0	1
98-06-6	tert-Butylbenzene	ND		1.0	1
95-63-6	1,2,4-Trimethylbenzene	ND		1.0	1
135-98-8	sec-Butylbenzene	ND		1.0	1
541-73-1	1,3-Dichlorobenzene	ND		1.0	1
106-46-7	1,4-Dichlorobenzene	ND		1.0	1
99-87-6	p-Isopropyl toluene	ND		1.0	1
95-50-1	1,2-Dichlorobenzene	ND		1.0	1
104-51-8	n-Butylbenzene	ND		1.0	1
67-72-1	Hexachloroethane	ND		5.0	1
96-12-8	1,2-Dibromo-3-chloropropane	ND		5.0	1
120-82-1	1,2,4-Trichlorobenzene	ND		5.0	1
91-20-3	Naphthalene	ND		5.0	1
87-61-6	1,2,3-Trichlorobenzene	ND		5.0	1
91-57-6	2-Methylnaphthalene	ND		5.0	1

ND = not detected at the specified reporting limit. NM = not measured.
Reference method is 8260/624.
USEPA Methods 8260 and 624 are used to quantitate volatile organic compounds that have boiling points below 200°C.
2-Methylnaphthalene and naphthalene are compounds with boiling points above 200°C and are better suited to quantitation by USEPA Methods 8270 or 625 as semivolatile organic compounds.

DEQ

MICHIGAN DEPT. OF ENVIRONMENTAL QUA
ENVIRONMENTAL LABORATORY
ANALYSIS REQUEST SHEET

White

LAB ORDER # 02-10-139

MATRIX=WATER

ACCEPT HT CODES? YES / NO

SUBMITTER DIVISION	DISTRICT OR OFFICE	MDEQ PROJECT MANAGER & PHONE	
R&RD	Shiawassee	Innes	517-625-4693

LOCATION SAMPLED / SITE ID NUMBER	INDEX	PCA	PROJECT	PH
Linden Rd Landfill	25000016	47971	30719	452223 65

COLLECTED BY	PHONE
Innes	517-625-4693

ADDITIONAL REPORT TO ATTENTION OF

AT (ADDRESS) (If different than above office)

OVERFLOW CONTRACT LAB (Required for ERD & CMI)
1ST CHOICE: Trace 2ND CHOICE:

PRIMARY CONTACT & PHONE:

****** SAFETY INFORMATION REQUIRED ******
SEE BACK OF FORM

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE COLLECTED DATE	SAMPLE COLLECTED TIME	COMMENTS
1	MW-03S	10-22-02	11:40	
2				
3				
4				
5				
6				
7				
8				
9				
10				

ORGANIC

VOA VOLATILES (624/8260)
Full List (1) 2 3 4 5 6 7 8 9 10
BTEX/MTBE only 1 2 3 4 5 6 7 8 9 10

ON PESTICIDES/PCBS (608/8081/8082)
Pesticides & PCBs 1 2 3 4 5 6 7 8 9 10
Pesticides only 1 2 3 4 5 6 7 8 9 10
PCBs only 1 2 3 4 5 6 7 8 9 10
****** NPDES ONLY******
Scan 3 (NPDES Only) 1 2 3 4 5 6 7 8 9 10

BNA BASE NEUTRAL & ACIDS (625/8270)
BNAs 1 2 3 4 5 6 7 8 9 10
PNAs only 1 2 3 4 5 6 7 8 9 10
BNs only 1 2 3 4 5 6 7 8 9 10
ACIDs only 1 2 3 4 5 6 7 8 9 10

SPECIAL REQUESTS
Library Search (Qualitative)
Volatiles 1 2 3 4 5 6 7 8 9 10
Semivolatiles 1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

DO Diss Oxygen 1 2 3 4 5 6 7 8 9 10
GN NO_3, o-Phos 1 2 3 4 5 6 7 8 9 10
Residue SS 1 2 3 4 5 6 7 8 9 10
Residue TDS 1 2 3 4 5 6 7 8 9 10
_____ 1 2 3 4 5 6 7 8 9 10
BOD Tot 5 day 1 2 3 4 5 6 7 8 9 10
BOD Carb 5 day 1 2 3 4 5 6 7 8 9 10
_____ 1 2 3 4 5 6 7 8 9 10
CA Chlorophyll 1 2 3 4 5 6 7 8 9 10
GA COD 1 2 3 4 5 6 7 8 9 10
TOC 1 2 3 4 5 6 7 8 9 10
NO3 + NO2, NH3 1 2 3 4 5 6 7 8 9 10
KJEL N, Tot P 1 2 3 4 5 6 7 8 9 10
S Sulfide 1 2 3 4 5 6 7 8 9 10
GG Phenolics 1 2 3 4 5 6 7 8 9 10
GP Phenolics (NPDES) 1 2 3 4 5 6 7 8 9 10
GB Total CN 1 2 3 4 5 6 7 8 9 10
Amenable CN 1 2 3 4 5 6 7 8 9 10

INORGANIC

MA Total Metals 1 2 3 4 5 6 7 8 9 10
MAD Diss-Field Filtered 1 2 3 4 5 6 7 8 9 10
MD Diss-Lab Filtered 1 2 3 4 5 6 7 8 9 10

MICH TEN METALS 1 2 3 4 5 6 7 8 9 10
(As, Ba, Cd, Cr, Cu, Pb, Hg, Se, Ag, Zn)
Fe Co Li Mn 1 2 3 4 5 6 7 8 9 10
Al Be Mo Ti V 1 2 3 4 5 6 7 8 9 10
B Sr 1 2 3 4 5 6 7 8 9 10
Ni - Nickel 1 2 3 4 5 6 7 8 9 10
Sb - Antimony 1 2 3 4 5 6 7 8 9 10
Tl - Thallium 1 2 3 4 5 6 7 8 9 10
Ca Mg Na K 1 2 3 4 5 6 7 8 9 10
Hardness 1 2 3 4 5 6 7 8 9 10

MN pH, Conductance 1 2 3 4 5 6 7 8 9 10
Cl, SO_4, Total Alk 1 2 3 4 5 6 7 8 9 10
HCO_3/CO_3 1 2 3 4 5 6 7 8 9 10
Cr^{+6} 1 2 3 4 5 6 7 8 9 10

OG Oil & Grease 1 2 3 4 5 6 7 8 9 10

Chain-of-Custody

	RELEASED BY / AFFILIATION	RECEIVED BY / AFFILIATION	DATE & TIME
Print Name & Affliation	James Innes MDEQ	Print Name & Affliation	Date: 10/22/02
Signature		Signature	Time: 1:30 pm.
Print Name & Affliation	Kim Sakowski MDEQ	Print Name & Affliation Bryan Feldpausch	Date: 10/22/02
Signature		Signature	Time: 2:30 PM

See Safety Section "Back of Form"

Revised February 2001

DEQ

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY
ANALYSIS REQUEST SHEET

SAFETY INFORMATION

(MUST BE COMPLETED PRIOR TO SAMPLE SUBMITTAL)

1 Are samples expected to contain cyanide (CN)? YES (NO)
If yes, at what level? _____

2 Are samples expected to be flamable? YES (NO)

3 Are samples acidic prior to preservation (pH < 2)? YES (NO)

4 Are samples caustic prior to preservation (pH > 12)? YES (NO)

5 Are samples expected to be a Biohazard? YES (NO)

6 Are samples expected to be reactive with water or acid? YES (NO)

7 Are samples expected to be radioactive? YES (NO)

8 Are samples expected to contain dioxin? YES (NO)

9 Are samples expected to be explosive? YES (NO)

10 List additional suspected hazard information.

_____

_____

_____

PRESERVATIVE TRACKING NUMBERS

BOTTLE CODE	PRESER-VATIVE	PRESERVATIVE TRACKING NUMBER (FL NUMBER)	BOTTLE CODE	PRESER-VATIVE	PRESERVATIVE TRACKING NUMBER (FL NUMBER)
VOA	HCl	FL -	S	ZnAC	FL -
DO	DO-1	FL -	S	NaOH	FL -
DO	DO-2	FL -	CA	$MgCO_3$	FL -
DO	H_2SO_4	FL -	MA/MAD	HNO_3	FL -
GA/GG	H_2SO_4	FL -	OG	H_2SO_4	FL -
GB	NaOH	FL -			FL -

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	LABORATORY SERVICES SECTION PROCEDURE	NO: SOP 106 Ver. 3 DATE REV.: 05/01

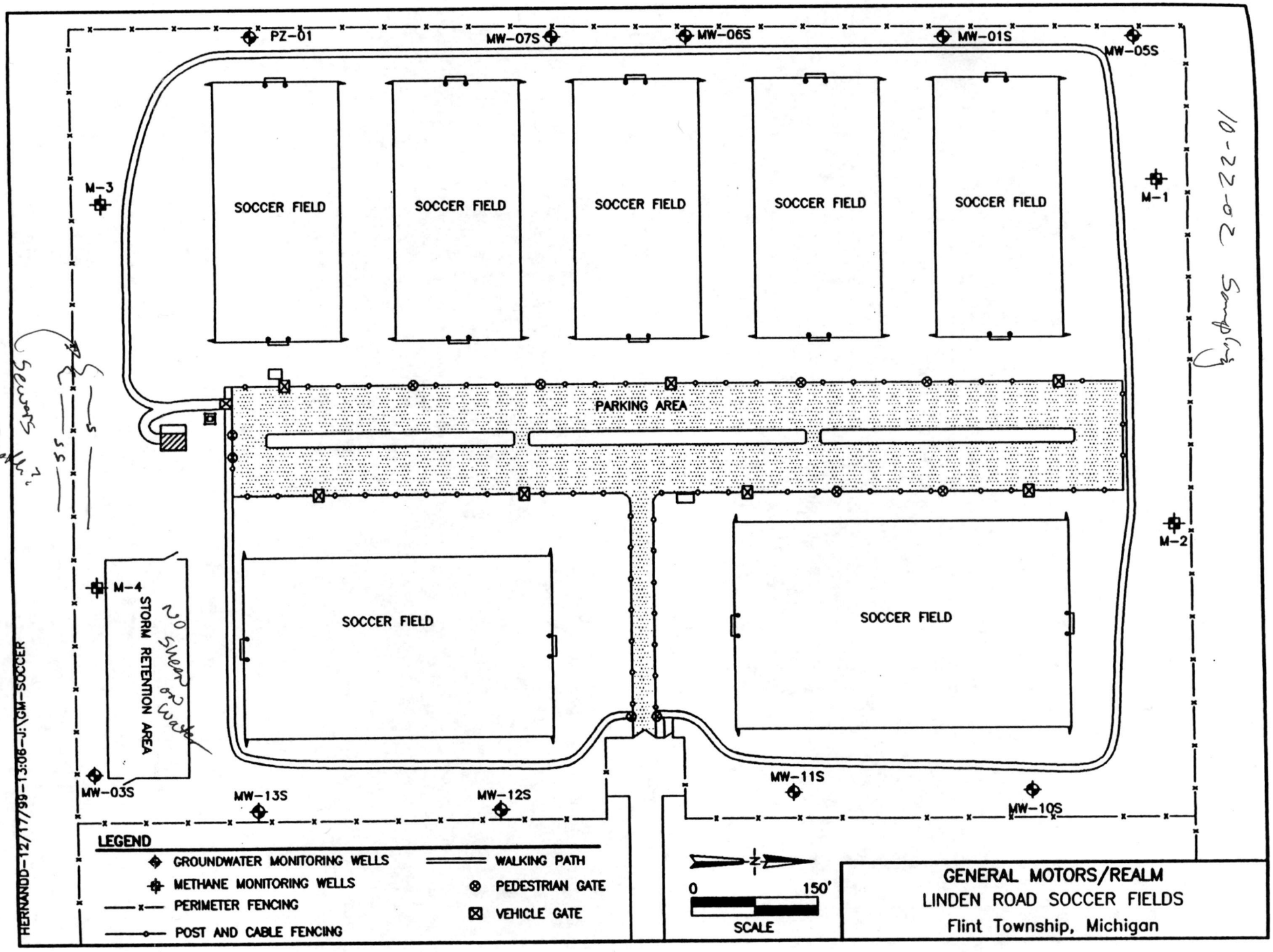
SUBJECT: Laboratory Result Remark Codes

EFFECTIVE DATE: May 2001

A	value reported is the mean of two or more determinations.
C	value calculated from other independent parameters.
J	estimated value or value not accurate.
K	actual value is known to be less than the value given, i.e., substance, if present, is below Reporting Limit (RL).
L	actual value is known to be greater than the value given.
T	value reported is less than Reporting Limit (RL).
W	value observed is less than lowest value reportable under "T" code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	recommended laboratory holding time was exceeded before analysis.
LH	QC indicated possible low recovery. Actual level may be higher.
LL	QC indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exist.
RB	reagent blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value.
IST	improper sample collection/preservation. Sample not suitable for analysis.
NAV	requested analysis not available.
QNS	quantity not sufficient to perform requested analysis.
STR	settleable residue was not analyzed due to low suspended solids.

Approved by:

Bob Avery, Laboratory Services Section Chief 5/03/2001 Date


PZ-01
MW-07S
MW-06S
MW-01S
MW-05S
M-3
M-1
M-2
M-4
SOCCER FIELD
SOCCER FIELD
SOCCER FIELD
SOCCER FIELD
SOCCER FIELD
PARKING AREA
SOCCER FIELD
SOCCER FIELD
STORM RETENTION AREA
MW-03S
MW-13S
MW-12S
MW-11S
MW-10S
LEGEND
GROUNDWATER MONITORING WELLS
METHANE MONITORING WELLS
PERIMETER FENCING
POST AND CABLE FENCING
WALKING PATH
PEDESTRIAN GATE
VEHICLE GATE
0
150'
SCALE
GENERAL MOTORS/REALM
LINDEN ROAD SOCCER FIELDS
Flint Township, Michigan
HERNANDD-12/17/99-13:06-J:\GM-SOCCER