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25 March 2002

Mr. James Innes
Michigan Department of Environmental Quality
Shiawassee District Headquarters
10650 Bennett Drive
Morrice, Michigan 48857-9792

Re: Additional Groundwater testing of Monitoring Well MW-3S
Linden Road Landfill Site

Dear Mr. Innes:

As proposed in Roy F. Weston, Inc. (Weston) letter to the Michigan Department of Environmental Quality (MDEQ) dated 11 January 2002, an additional ground water sample was collected and analyzed from Monitoring Well MW-3S at the above-referenced site. This additional sampling was performed in order to address an apparent low-level exceedance of vinyl chloride in Well MW-3S during the annual groundwater sampling at the subject site in October 2001. The following letter report describes the sampling and presents the sample analytical results.

On February 20 2002, a Weston geologist collected a single groundwater sample from Monitoring Well MW-3S. The sample was submitted for volatile organic analysis (VOC) by Merit Laboratories, Inc. of East Lansing, Michigan. A field duplicate and trip blank were also analyzed for quality assurance/quality control (QA/QC) purposes. All sampling and shipping procedures were consistent with those performed previously.

Analytical results indicated that three VOCs were detected in the investigative sample. Vinyl chloride was detected at a trace concentration of .013 mg/L, which is above the MDEQ Generic Drinking Water Criteria of 0.002 mg/L for residential and industrial/commercial categories. The concentration of vinyl chloride detected was almost half of what was detected in a sample from the same well in October 2001. Other VOCs detected include 1,1-Dichloroethane (0.011 mg/L) and cis-1,2-Dichloroethene (0.016 mg/L) at concentrations well below the above-referenced criteria. The duplicate sample from Well MW-3S also contained the same VOCs at comparable levels. No VOCs were detected in the trip blank. Laboratory analytical data including the chain-of-custody documentation are included as Attachment A.

Weston, on behalf of General Motors will continue to sample and analyze groundwater from Monitoring Well MW-3S on a quarterly basis as indicated in Weston's January 11, 2002 letter. Analytical results will be forwarded to the MDEQ as soon as they become available.





Mr. James Innes
Michigan Department of Environmental Quality

-2-

25 March 2002

If you have any questions or require additional information, please call me at (847) 918-4018.

Very truly yours,

ROY F. WESTON, INC.

A handwritten signature in black ink, appearing to read "S. Babusukumar". The signature is written in a cursive style with a horizontal line underneath.

S. Babusukumar, P.G.
Project Manager

cc: R. Metcalf, GM

Attachment

Attachment A
Laboratory Analytical Results



Analytical Laboratory Report

Report ID: S08388.01(01)
Generated on 02/27/2002

Report to

Attention: Mr. Babusukumar
Roy F. Weston, Inc.
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Phone: 847-918-4000 FAX: 847-918-4055

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S08388.01-S08388.03
Project: GM Linden Rd. Site
Submitted Date/Time: 02/21/2002 08:00
Sampled by: M.W.
P.O. #:

Report Notes

Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
Results relate only to items tested.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Lab Sample ID: S08388.01
Sample Tag: MW-3S
Collected Date/Time: 02/20/2002 11:00
Matrix: Groundwater
COC Reference: 008398

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	4	4025

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics								
Volatile Organics								
Benzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	71-43-2	
Bromodichloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-27-4	
Bromoform	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-25-2	
Bromomethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	74-83-9	
n-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	104-51-8	
sec-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	135-98-8	
tert-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	98-06-6	
Carbon tetrachloride	Not detected	mg/L	0.001	8260	02/26/02	JGH	56-23-5	
Chlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-90-7	
Chloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-00-3	
Chloroform	Not detected	mg/L	0.001	8260	02/26/02	JGH	67-66-3	
Chloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	74-87-3	
Dibromochloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	124-48-1	
1,2-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-50-1	
1,3-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	106-46-7	
1,1-Dichloroethane	0.011	mg/L	0.001	8260	02/26/02	JGH	75-34-3	
1,2-Dichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	107-06-2	
1,1-Dichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-35-4	
cis-1,2-Dichloroethene	0.016	mg/L	0.001	8260	02/26/02	JGH	156-59-2	
trans-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	156-60-5	
1,2-Dichloropropane	Not detected	mg/L	0.001	8260	02/26/02	JGH	78-87-5	
cis-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/26/02	JGH	10061-01-5	
trans-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/26/02	JGH	10061-02-6	
Ethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	100-41-4	
Isopropylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	98-82-8	
p-Isopropyltoluene	Not detected	mg/L	0.001	8260	02/26/02	JGH	99-87-6	
Methylene chloride	Not detected	mg/L	0.005	8260	02/26/02	JGH	75-09-2	
Naphthalene	Not detected	mg/L	0.001	8260	02/26/02	JGH	91-20-3	
n-Propylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	103-65-1	
Styrene	Not detected	mg/L	0.001	8260	02/26/02	JGH	100-42-5	
1,1,2,2-Tetrachloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-34-5	
Tetrachloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	127-18-4	
Toluene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-00-5	
Trichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-01-6	
1,2,4-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-63-6	
1,3,5-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-67-8	
Vinyl chloride	0.013	mg/L	0.001	8260	02/26/02	JGH	75-01-4	
o-Xylene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-47-6	
p,m-Xylene	Not detected	mg/L	0.001	8260	02/26/02	JGH	106-42-3	



Analytical Laboratory Report

Lab Sample ID: S08388.01 (continued)

Sample Tag: MW-3S

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
Acetone	Not detected	mg/L	0.05	8260	02/26/02	JGH	67-64-1	
2-Butanone (MEK)	Not detected	mg/L	0.05	8260	02/26/02	JGH	78-93-3	
Carbon disulfide	Not detected	mg/L	0.05	8260	02/26/02	JGH	75-15-0	
2-Hexanone	Not detected	mg/L	0.05	8260	02/26/02	JGH	591-78-6	
4-Methyl-2-pentanone (MIBK)	Not detected	mg/L	0.05	8260	02/26/02	JGH	108-10-1	



Analytical Laboratory Report

Lab Sample ID: S08388.02
 Sample Tag: MW-3D
 Collected Date/Time: 02/20/2002 11:15
 Matrix: Groundwater
 COC Reference: 008398

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	4	4025

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics								
Volatile Organics								
Benzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	71-43-2	
Bromodichloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-27-4	
Bromoform	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-25-2	
Bromomethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	74-83-9	
n-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	104-51-8	
sec-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	135-98-8	
tert-Butylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	98-06-6	
Carbon tetrachloride	Not detected	mg/L	0.001	8260	02/26/02	JGH	56-23-5	
Chlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-90-7	
Chloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-00-3	
Chloroform	Not detected	mg/L	0.001	8260	02/26/02	JGH	67-66-3	
Chloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	74-87-3	
Dibromochloromethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	124-48-1	
1,2-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-50-1	
1,3-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	106-46-7	
1,1-Dichloroethane	0.012	mg/L	0.001	8260	02/26/02	JGH	75-34-3	
1,2-Dichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	107-06-2	
1,1-Dichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	75-35-4	
cis-1,2-Dichloroethene	0.016	mg/L	0.001	8260	02/26/02	JGH	156-59-2	
trans-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	156-60-5	
1,2-Dichloropropane	Not detected	mg/L	0.001	8260	02/26/02	JGH	78-87-5	
cis-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/26/02	JGH	10061-01-5	
trans-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/26/02	JGH	10061-02-6	
Ethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	100-41-4	
Isopropylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	98-82-8	
p-Isopropyltoluene	Not detected	mg/L	0.001	8260	02/26/02	JGH	99-87-6	
Methylene chloride	Not detected	mg/L	0.005	8260	02/26/02	JGH	75-09-2	
Naphthalene	Not detected	mg/L	0.001	8260	02/26/02	JGH	91-20-3	
n-Propylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	103-65-1	
Styrene	Not detected	mg/L	0.001	8260	02/26/02	JGH	100-42-5	
1,1,2,2-Tetrachloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-34-5	
Tetrachloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	127-18-4	
Toluene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-00-5	
Trichloroethene	Not detected	mg/L	0.001	8260	02/26/02	JGH	79-01-6	
1,2,4-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-63-6	
1,3,5-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/26/02	JGH	108-67-8	
Vinyl chloride	0.014	mg/L	0.001	8260	02/26/02	JGH	75-01-4	
o-Xylene	Not detected	mg/L	0.001	8260	02/26/02	JGH	95-47-6	
p,m-Xylene	Not detected	mg/L	0.001	8260	02/26/02	JGH	106-42-3	



Analytical Laboratory Report

Lab Sample ID: S08388.02 (continued)

Sample Tag: MW-3D

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
Acetone	Not detected	mg/L	0.05	8260	02/26/02	JGH	67-64-1	
2-Butanone (MEK)	Not detected	mg/L	0.05	8260	02/26/02	JGH	78-93-3	
Carbon disulfide	Not detected	mg/L	0.05	8260	02/26/02	JGH	75-15-0	
2-Hexanone	Not detected	mg/L	0.05	8260	02/26/02	JGH	591-78-6	
4-Methyl-2-pentanone (MIBK)	Not detected	mg/L	0.05	8260	02/26/02	JGH	108-10-1	



Analytical Laboratory Report

Lab Sample ID: S08388.03
Sample Tag: Trip Blank
Collected Date/Time: 02/20/2002 :
Matrix: Groundwater
COC Reference: 008398

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	4	4025

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics								
Volatile Organics								
Benzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	71-43-2	
Bromodichloromethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-27-4	
Bromoform	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-25-2	
Bromomethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	74-83-9	
n-Butylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	104-51-8	
sec-Butylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	135-98-8	
tert-Butylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	98-06-6	
Carbon tetrachloride	Not detected	mg/L	0.001	8260	02/27/02	JGH	56-23-5	
Chlorobenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	108-90-7	
Chloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-00-3	
Chloroform	Not detected	mg/L	0.001	8260	02/27/02	JGH	67-66-3	
Chloromethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	74-87-3	
Dibromochloromethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	124-48-1	
1,2-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	95-50-1	
1,3-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	106-46-7	
1,1-Dichloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-34-3	
1,2-Dichloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	107-06-2	
1,1-Dichloroethene	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-35-4	
cis-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	02/27/02	JGH	156-59-2	
trans-1,2-Dichloroethene	Not detected	mg/L	0.001	8260	02/27/02	JGH	156-60-5	
1,2-Dichloropropane	Not detected	mg/L	0.001	8260	02/27/02	JGH	78-87-5	
cis-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/27/02	JGH	10061-01-5	
trans-1,3-Dichloropropene	Not detected	mg/L	0.001	8260	02/27/02	JGH	10061-02-6	
Ethylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	100-41-4	
Isopropylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	98-82-8	
p-Isopropyltoluene	Not detected	mg/L	0.001	8260	02/27/02	JGH	99-87-6	
Methylene chloride	Not detected	mg/L	0.005	8260	02/27/02	JGH	75-09-2	
Naphthalene	Not detected	mg/L	0.001	8260	02/27/02	JGH	91-20-3	
n-Propylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	103-65-1	
Styrene	Not detected	mg/L	0.001	8260	02/27/02	JGH	100-42-5	
1,1,2,2-Tetrachloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	79-34-5	
Tetrachloroethene	Not detected	mg/L	0.001	8260	02/27/02	JGH	127-18-4	
Toluene	Not detected	mg/L	0.001	8260	02/27/02	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	mg/L	0.001	8260	02/27/02	JGH	79-00-5	
Trichloroethene	Not detected	mg/L	0.001	8260	02/27/02	JGH	79-01-6	
1,2,4-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	95-63-6	
1,3,5-Trimethylbenzene	Not detected	mg/L	0.001	8260	02/27/02	JGH	108-67-8	
Vinyl chloride	Not detected	mg/L	0.001	8260	02/27/02	JGH	75-01-4	
o-Xylene	Not detected	mg/L	0.001	8260	02/27/02	JGH	95-47-6	
p,m-Xylene	Not detected	mg/L	0.001	8260	02/27/02	JGH	106-42-3	



Lab Sample ID: S08388.03 (continued)

Sample Tag: Trip Blank

Analysis	Results	Units	MDL	Method	Date Run	Analyst	CAS #	Flags
Organics (continued)								
Volatile Organics (continued)								
Acetone	Not detected	mg/L	0.05	8260	02/27/02	JGH	67-64-1	
2-Butanone (MEK)	Not detected	mg/L	0.05	8260	02/27/02	JGH	78-93-3	
Carbon disulfide	Not detected	mg/L	0.05	8260	02/27/02	JGH	75-15-0	
2-Hexanone	Not detected	mg/L	0.05	8260	02/27/02	JGH	591-78-6	
4-Methyl-2-pentanone (MIBK)	Not detected	mg/L	0.05	8260	02/27/02	JGH	108-10-1	



2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-6333

C.O.C. PAGE # 1 OF 1

008398

REPORT TO

CONTACT NAME: Balvius Lukman
 COMPANY: Ray Weston, Inc
 ADDRESS: 3 Hawthorn Parkway, Suite 400
 CITY: Vernon Hills STATE: IL ZIP CODE: 60061
 PHONE NO.: 847-918-4000 FAX NO.: _____ P.O. NO.: _____
 E-MAIL ADDRESS: _____ QUOTE NO.: _____

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ FAX NO.: _____ P.O. NO.: _____

PROJECT NO./NAME: GM Linden Rd Site
 SAMPLER(S) - PLEASE PRINT NAME: M. Weisbrod

PRESERVATIVE CODE: E
 REFRIGERATE (Y/N): _____
 BOTTLE TYPE: _____
 SAMPLE TYPE: GW WW OIL SOIL OTHER _____
 RUSH ANALYSES DUE DATE: _____
 RUSH PICK-UP APPROVED BY: _____
 ANALYSES

MERIT LAB NO.	SAMPLE COLLECTION YEAR:		SAMPLE TAG IDENTIFICATION-DESCRIPTION	# OF BOTTLES
	DATE	TIME		
	02/20/02	11:00	MW-3S	2
	02/20/02	11:15	MW-3D	2
	02/20/02	---	Trip Blank	2

BOTTLE TYPE	ANALYSES
X	VOCs
X	VOCs
X	VOCs

RELINQUISHED BY: Michelle Weisbrod DATE: 2/20/02 TIME: 5:25p
 RECEIVED BY: [Signature] DATE: 2/20/02 TIME: 5:25p
 RELINQUISHED BY: [Signature] DATE: 2/20/02 TIME: 5:40p
 RECEIVED BY: Storage DATE: 2/20/02 TIME: 5:40p

RELINQUISHED BY: [Signature] DATE: 2-20-02 TIME: 5:00
 RECEIVED AT MERIT BY: [Signature] DATE: 2-20-02 TIME: 5:00
 SEAL NO. SEAL INTACT YES NO INITIALS: _____
 SEAL NO. SEAL INTACT YES NO INITIALS: _____
 NOTES: TEMP. ON ARRIVAL: _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE