DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Richardson Smith Gardner and Associates, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Joan Smyth, P.G. Phone: 919-828-0577 x 122

E-mail: joan@rsgengineers.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Davidson County Holly Grove MSW Landfill	220 Landfill Road Lexington, NC 27292	29-02	.0500	October 12, 2007

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify)

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Joan Smyth, P.G. Senior Hydrogeologist 919-828-0577 x 122

Facility Representative Name (Print) Title (Area Code) Telephone Number

Signature: Joan Smyth Date: 11/20/07

Affix NC Licensed Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

Revised 01/2007

Ground Water Monitoring Report

October 2007 Monitoring Event

Davidson County
Holly Grove Landfill
Lexington, North Carolina
NC Solid Waste Permit # 29-02

Prepared for:
Davidson County Integrated Solid Waste
1242 Old Highway 29
Thomasville, NC 27360-0024

November 2007

Richardson Smith Gardner & Associates, Inc.
Engineering and Geological Services
14 North Boylan Avenue
Raleigh, North Carolina 27603

Ground Water Monitoring Report
Davidson County Landfill
Holly Grove Landfill
October 2007 Semi - Annual Report

Prepared for:

Davidson County Integrated Solid Waste
1242 Old Highway 29
Thomasville, NC 27360

RSG Project No. **Davdco - 1**

Joan A. Smyth 11/2007

Joan A. Smyth, P.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

November 2007

RICHARDSON SMITH GARDNER & ASSOCIATES
Engineering and Geological Services
14 N. Boylan Avenue
Raleigh, North Carolina 27603

Davidson County Holly Grove Landfill

Ground Water Monitoring Report
October 2007 Monitoring Event

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1.0 Introduction

On October11th and 12th, 2007, Richardson Smith Gardner & Associates, Inc., personnel performed the required semi-annual ground water monitoring event at the Davidson County Holly Grove Landfill. This sampling event satisfies the requirements of the monitoring programs for this site. The following report summarizes the monitoring event, sampling procedures, field and laboratory results, and ground water characterization as required by NC Solid Waste Regulations. Also included are summary tables of ground water measurements, field parameters, detected constituents, and the laboratory analytical report.

2.0 Davidson County Holly Grove Landfill

The following summarizes the monitoring event, sampling procedures, field and laboratory results, and ground water characterization as required by NC Solid Waste Regulations. Also included are summary tables of field measurements and detected constituents, as well as the laboratory analysis reports and concentration vs. time graphs.

The Holly Grove Landfills consists of three separate phases (**Figure 1**). Areas 1 and 2 were unlined municipal solid waste facilities owned and operated by Davidson County Integrated Solid Waste. The Scarlett Landfill, to the west of Areas 1 and 2, is a private landfill formerly owned by Ms. Virginia White, and previously owned and operated by Mr. Scarlett. The property was recently sold to another individual and is being used to house storage containers. These three landfills comprise the Holly Grove Landfill (under permit 29-02) and are monitored as one unit due to the close proximity of the waste margins.

2.1 Sampling Procedures

Ground water sampling was performed at 16 well locations. Monitoring well MW-7 was previously been abandoned after significant damage and could not be sampled. Well replacement efforts yielded no water, so this location has been removed from the well network. In addition, semi-annual surface water monitoring was performed at three locations around the landfills. The background well for the site, MW-4, is also MW-1s for the lined Davidson County Landfill (Permit 29-06). The lined landfill was sampled in conjunction with this site. This data is included in the summary tables of this report.

Sampling procedures followed the protocols set forth in the site's Sampling and Analysis Plan and the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities. Each well was gauged to determine ground water depth and then purged of three well volumes or until dry. Ground water purging and sample collection was performed using a factory sealed teflon bailer.

Field measurements of pH, specific conductivity, and temperature, were taken at each well and surface water sampling location. Samples were collected in laboratory containers provided by Environment 1, Inc. (NC Laboratory Certification # 10). Upon collection, the samples were sealed, placed on ice, and transported to the above referenced laboratory. All samples were

preserved and remained on fresh ice prior to shipment, and were received by the laboratory and analyzed within specified holding times.

During the sampling process, all wells were found to be in good condition and free of obstructions. The weather was sunny and clear during the event. Surface water samples were obtained for SW-1 on Hamby Creek at the location shown in **Figure 1**. Surface water locations, SW-2 & SW-3 were found to be dry during this event, and therefore no samples could be collected.

2.2 Field and Laboratory Results

All samples were transported to the laboratory facility under proper chain of custody analyzed at the specified DWM Practical Quantitation Limits for Appendix I constituents. The laboratory analysis was received by our office and reviewed for accuracy. The laboratory report is attached as **Appendix A**.

Ground water and field measurements included as **Tables 1 and 2,** respectively, remained similar to previous results. Inorganic laboratory analysis detected nine inorganic constituents (barium, cobalt, copper, total chromium, lead, nickel, selenium, vanadium and zinc) in twelve (12) wells. These results are included as **Table 3**. Three inorganic constituents: cobalt, lead and vanadium were detected above the 2L standards. Cobalt and vanadium were detected at concentrations above the 2L standard because they do not have a 2L standard.

Organic analyses resulted in eleven (11) parameters detected in eleven (11) wells. Detected organic constituents are shown in **Table 4**. Four organic constituents: vinyl chloride (MW-1a, MW-2, MW-11 & MW-12), Benzene (MW-1a, MW-9 & MW-13), 1,2 Dichloroethane (MW-1a) and 1,2 Dichloropropane (MW-1a) were detected above the 2L standards.

Analysis of surface water (SW-1) detected two inorganic constituents (nickel and zinc) above the PQL.

A review of time versus concentration graphs (included in **Appendix B**) for each well indicate general stability of detected constituents across the site. It should be noted that many of the recent detections shown are “J” values below the PQL. In general, there are few exceedances of ground water standards across the site.

3.0 Site Ground Water Characterization

A potentiometric surface map was prepared for the entire site from ground water elevation data collected during this sampling event. Ground water velocity was calculated for each monitoring well on-site using the equation V = (KI)/n where:

K = hydraulic conductivity
I = ground water gradient
n = porosity

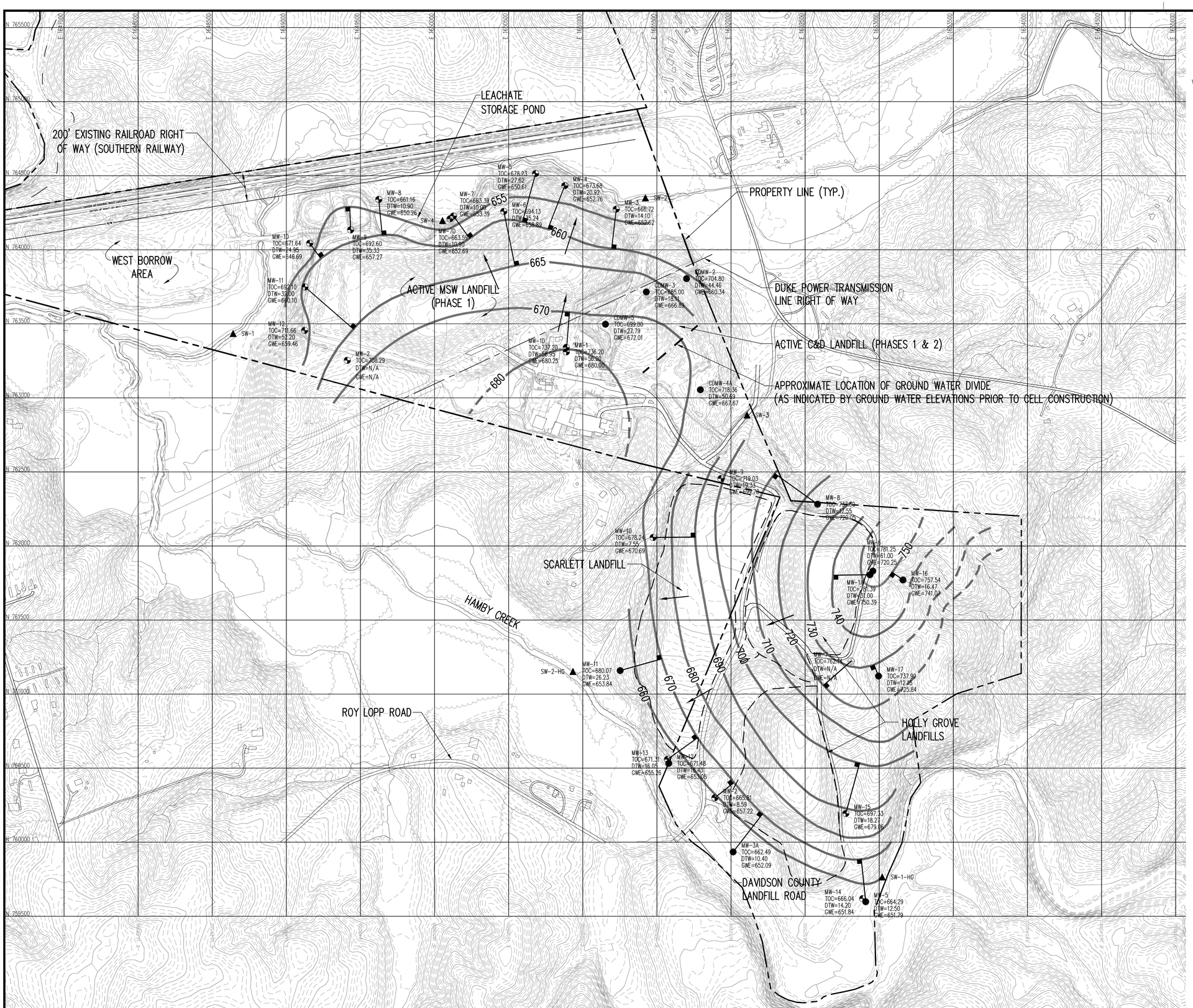
Ground water velocities at the Holly Grove Landfill ranged from 0.041 feet/day (MW-3a) to 1.65 feet/day (MW-13). These calculations are included in **Table 5**. The data indicates that ground water is flowing generally to the south and southwest across most of the site. This is consistent with ground water flow patterns previously seen at this site. The potentiometric surface map (**Figure 1**) is also attached for your review.

4.0 Conclusions

The results presented from the Holly Grove Landfills indicate an increased number of detections of certain constituents. In the case of inorganic constituents, this is likely due to turbidity of samples and an increase in suspended solids due to field procedures. In the case of organic constituents this increase is mainly due to a requirement by DENR for laboratories to lower their PQLs. In general, ground water concentrations detected at the site have remained stable with few exceedances of ground water standards.

The next ground water monitoring event is tentatively scheduled for spring 2008. The results of this event will be reported to NCDENR upon completion of analysis of laboratory data.

Figures



LEGEND

MW-1A	PREVIOUSLY INSTALLED MONITORING WELL
MW-5	BEDROCK MONITORING WELL
MW-7	ABANDONED MONITORING WELL
SW-1	EXISTING SURFACE WATER MONITORING STATION
	GROUND WATER SURFACE COUNTOUR
	DIRECTION OF GROUNDWATER FLOW
	PROPERTY LINE
	WASTE BOUNDARY
	MEASUREMENT FOR HYDRAULIC GRADIENT CALCULATION

NOTE

1. GROUND WATER DATA RECORDED ON OCTOBER 10, 11, & 12, 2007 BY RSG PERSONNEL.

REFERENCES

1. OVERALL TOPOGRAPHY PER NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, CONTOUR AND ELEVATION DATA GENERATED FROM LIGHT DETECTION AND RANGING (LIDAR) DATA OBTAINED FROM THE NORTH CAROLINA FLOOD MAPPING PROGRAM AND DATED SEPTEMBER 2004. TOPOGRAPHY IN ACTIVE C&D AND MSW AREAS FROM SPATIAL DATA, AERIAL DATED 5/7/07.

0 300' 600' 900'

NO.	DATE	REVISION

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SEAL

SEAL

PROJECT TITLE: DAVIDSON COUNTY LANDFILL LEXINGTON COUNTY, NC

DRAWING TITLE: POTENTIOMETRIC SURFACE MAP LINED LANDFILL, C&D AND HOLLY GROVE LANDFILLS (FALL 2007)

DESIGNED BY: J.A.S.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: DAVDCO-4
SCALE: AS SHOWN	DATE: NOV. 2007
FILE NAME: DAVDCO-D0431	
SHEET NO.	DRAWING NO. FIG.1

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Tables

Table 1
Ground Water Elevations
Davidson County Holly Grove Landfill
10/12/07

Well	Top of Casing	Depth to Water	Water Table Elevation
MW-1a	781.39	31	750.39
MW-2	665.81	8.59	657.22
MW-3a	662.49	10.4	652.09
MW-4	736.20	56.2	680.00
MW-5	664.29	12.5	651.79
MW-6	781.25	61	720.25
MW-7	762.14	---	---
MW-8	737.60	17.55	720.05
MW-9	719.03	19.33	699.70
MW-10	678.24	7.55	670.69
MW-11	680.07	26.23	653.84
MW-12	671.48	18.43	653.05
MW-13	671.31	16.05	655.26
MW-14	666.04	14.2	651.84
MW-15	697.33	18.27	679.06
MW-16	757.54	16.47	741.07
MW-17	737.99	12.15	725.84

Table 2
Field Parameters
Davidson County Holly Grove Landfill
10/12/07

Well	pH (std units)	Sp. Conductivity (uMhos)	Temperature (degrees C)
MW-1a	7.1	1500	14.5
MW-2	6.8	780	19
MW-3A	7.9	510	14.5
MW-4	6.7	330	18
MW-5	7	310	15
MW-6	8.2	800	14
MW-7	---	---	---
MW-8	7.8	1000	13
MW-9	6.7	1550	15
MW-10	7	2100	16.5
MW-11	6.9	1460	14
MW-12	7.4	2000	15.5
MW-13	6.8	3820	17.5
MW-14	7.8	440	15
MW-15	6.6	250	16
MW-16	7.6	970	15
MW-17	7.6	620	16
SW-1	7.6	500	18.5
SW-2	---	---	---
SW-3	---	---	---

'---' = not measured.

SW-3 associated with the C&D landfill reported in Holly Grove Landfill laboratory analysis.

Table 3
Detected Inorganic Parameters
Davidson County Holly Grove Landfill
10/12/07

Constituent	PQL	2L	MW-1a	MW-2	MW-3a	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	SW-1	SW-2	SW-3
Antimony	6	---	0.1 J	ND	0.4 J	0.1 J	0.1 J	0.4 J	NS	0.3 J	0.2 J	0.1 J	ND	0.1 J	0.2 J	ND	0.1 J	0.7 J	0.4 J	0.6 J	NS	NS
Arsenic	10	50	3 J	0.8 J	ND	ND	ND	1.6 J	NS	1 J	1.8 J	2.5 J	1 J	2.6 J	8.6 J	ND	0.9 J	1.7 J	1.7 J	1.2 J	NS	NS
Barium	100	2000	**185**	**132**	28.5 J	31.6 J	45.3 J	**277**	NS	**31.1**	**215**	**244**	69 J	93.5 J	**278**	27.7 J	**167**	59.1 J	**171**	19.1 J	NS	NS
Beryllium	1	---	ND	ND	ND	ND	ND	0.2 J	NS	ND	ND	ND	ND	0.1 J	ND	ND	0.4 J	ND	ND	ND	NS	NS
Cadmium	1	5	0.2 J	0.1 J	ND	0.1 J	ND	0.5 J	NS	0.1 J	ND	0.1 J	0.2 J	0.5 J	0.1 J	0.1 J	0.1 J	0.1 J	ND	ND	NS	NS
Cobalt	10	---	**49**	9.5 J	1.1 J	1 J	1.4 J	6.2 J	NS	0.6 J	**13**	**14**	3 J	1.2 J	**16**	ND	**24**	1.5 J	4.3 J	1.2 J	NS	NS
Copper	10	1000	3.3 J	5.2 J	3.4 J	2.1 J	3.9 J	**15**	NS	1.4 J	4.5 J	5.5 J	**10**	5.6 J	3.9 J	2.4 J	**28**	4.7 J	4.9 J	4.4 J	NS	NS
Total Chromium	10	50	1.5 J	0.9 J	0.6 J	1.5 J	0.8 J	**21**	NS	1.6 J	3.1 J	0.4 J	1.1 J	2 J	1.5 J	0.6 J	**40**	2.6 J	ND	ND	NS	NS
Lead	10	15	0.7 J	0.5 J	0.8 J	0.6 J	0.5 J	9.5 J	NS	0.3 J	0.5 J	0.4 J	0.8 J	1.9 J	0.5 J	0.1 J	2.2 J	**182**	0.9 J	0.6 J	NS	NS
Nickel	50	100	6.5 J	3.3 J	1.8 J	2.1 J	2.6 J	8.9 J	NS	3.3 J	12.7 J	21.1 J	10.2 J	6.8 J	36.8 J	1 J	**28.5**	4.3 J	2.4 J	**17.4**	NS	NS
Selenium	10	50	0.6 J	1.6 J	0.4 J	2.5 J	0.4 J	1.2 J	NS	1.7 J	1.5 J	**11**	4.2 J	8.8 J	**29**	0.5 J	0.4 J	1.7 J	0.6 J	1.2 J	NS	NS
Thallium	5	---	ND	ND	ND	ND	ND	0.2 J	NS	ND	ND	ND	ND	ND	ND	ND	0.1 J	ND	ND	ND	NS	NS
Vanadium	25	---	8.1 J	4.5 J	3.5 J	3.1 J	4.5 J	**31**	NS	12.4 J	5.6 J	7.9 J	4.4 J	3.4 J	8.5 J	5.2 J	**52**	18.5 J	**57**	3.3 J	NS	NS
Zinc	10	2100	**22**	**11**	6.5 J	4.9 J	6.5 J	**74**	NS	4.3 J	**14**	6 J	**12**	**13**	5.9 J	5 J	**67**	**13**	**11**	**45**	NS	NS

ND - Not detected at or above PQL
Shading - Levels above 2L standard or no 2L standard
Bold Letters - Constituents detected above PQL
J - Constituents detected below PQL
NS - Not Sampled

All PQLs, 2L Standards and Results are in ug/l.

Table 4
Detected Organic Parameters
Davidson County Holly Grove Landfill
10/12/07

Parameter	MDL	2L	MW-1a	MW-2	MW-3a	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	SW-1	SW-2	SW-3
Chloromethane	1	---	0.3 J	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND	ND	NS	NS
Vinyl Chloride	1	0.015	**1.2**	**1.0**	ND	ND	ND	ND	NS	ND	0.5 J	ND	**1.1**	**3.4**	ND	ND	ND	ND	ND	ND	NS	NS
Chloroethane	10	2800	3.3 J	6.2 J	0.5 J	ND	ND	ND	NS	1 J	2.4 J	0.4 J	ND	4.3 J	**19.8**	0.3 J	3 J	ND	1 J	ND	NS	NS
Trichlorofluoromethane	1	2100	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND	ND	NS	NS
1,1-Dichloroethene	5	7	0.3 J	ND	ND	ND	ND	ND	NS	0.2 J	ND	ND	ND	1.5 J	ND	ND	0.3 J	ND	ND	ND	NS	NS
Acetone	100	700	ND	ND	ND	ND	1.3 J	2.1 J	NS	2.3 J	2.8 J	1.5 J	ND	ND	2.2 J	ND	1.4 J	1.5 J	1.7 J	2.5 J	NS	NS
Carbon Disulfide	100	700	ND	0.2 J	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 J	ND	NS	NS
Methylene Chloride	1	5	0.4 J	0.2 J	0.3 J	ND	ND	0.4 J	NS	0.2 J	0.2 J	ND	0.2 J	0.5 J	0.2 J	0.2 J	0.2 J	0.2 J	0.2 J	ND	NS	NS
trans-1,2-Dichlorothene	5	70	0.6 J	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND	ND	ND	NS	NS
1,1-Dichloroethane	5	700	**42.3**	2.3 J	3.1 J	ND	1.5 J	**8.8**	NS	**6.5**	0.6 J	0.2 J	2.9 J	**26.4**	1.3 J	1 J	**7**	0.7 J	**12.8**	ND	NS	NS
Cis-1,2-Dichloroethene	5	70	**44.2**	0.2 J	0.2 J	ND	0.2 J	0.7 J	NS	ND	0.4 J	ND	0.4 J	0.5 J	ND	ND	ND	ND	1.2 J	ND	NS	NS
Benzene	1	1	**4.2**	ND	ND	ND	ND	ND	NS	0.4 J	**2.4**	ND	0.2 J	0.9 J	**2.8**	ND	ND	ND	ND	ND	NS	NS
1,2-Dichloroethane	1	0.38	**2.1**	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.8 J	0.3 J	ND	ND	ND	ND	ND	NS	NS
Trichloroethene	1	2.8	**2.6**	ND	0.2 J	ND	0.2 J	0.5 J	NS	**1.0**	ND	ND	0.2 J	0.4 J	ND	ND	0.3 J	ND	**1.1**	ND	NS	NS
1,2-Dichloropropane	1	0.56	**3.2**	ND	ND	ND	ND	0.4 J	NS	ND	0.6 J	ND	0.3 J	0.8 J	0.2 J	ND	ND	ND	0.7 J	ND	NS	NS
Toluene	1	1000	0.3 J	0.2 J	0.2 J	ND	0.2 J	0.2 J	NS	0.3 J	0.6 J	0.3 J	0.2 J	0.2 J	0.5 J	0.2 J	ND	ND	ND	0.3 J	NS	NS
Tetrachloroethene	1	0.7	0.9 J	ND	ND	ND	ND	0.8J	NS	0.2 J	ND	ND	ND	ND	ND	ND	0.2 J	ND	0.8 J	ND	NS	NS
Chlorobenzene	3	50	0.4 J	1.3 J	ND	ND	ND	ND	NS	ND	**6.0**	0.4 J	**3.1**	1.1 J	**9.1**	ND	ND	ND	ND	ND	NS	NS
Ethylbenzene	1	29	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND	ND	NS	NS
1,4-Dichlorobenzene	1	75	**2.2**	0.7 J	ND	ND	ND	ND	NS	ND	**5.6**	ND	**1.7**	**4.4**	**10.2**	ND	ND	ND	ND	ND	NS	NS
1,2-Dichlorobenzene	5	620	ND	ND	ND	ND	ND	ND	NS	ND	0.5 J	ND	0.4 J	0.3 J	1.4 J	ND	ND	ND	ND	ND	NS	NS

ND	-	Not detected at or above PQL
Shading	-	Levels above 2L standard or no 2L standard
Bold Letters	-	Constituents detected above PQL
J	-	Constituents detected below PQL
NS	-	Not Sampled

All PQLs, 2L Standards and Results are in ug/l.

Table 5
Ground Water Velocity Calculations
Holly Grove Landfill - Davidson County
10/12/07

Parameter Units	Hydraulic Conductivity feet/day	Porosity %	Hydraulic Gradient feet/foot	Velocity feet/day
MW-1a	0.415	0.15	0.042	0.116
MW-2	1.440	0.20	0.079	0.569
MW-3a	0.105	0.15	0.059	0.041
MW-5	1.814	0.20	0.072	0.653
MW-7	0.230	0.13	NA	NA
MW-9	3.787	0.20	0.034	0.644
MW-10	1.541	0.20	0.066	0.508
MW-11	1.440	0.15	0.055	0.528
MW-13	5.890	0.20	0.056	1.649
MW-15	5.688	0.20	0.031	0.882

Notes

Velocity calculated from V=KI/n

V = Velocity
K = Hydraulc Conductivity
I = Gradient
n = Porosity

Hydraulic conductivity data from slug testing

Appendix A

Laboratory Analytical Report

Environment 1, Incorporated

REC'D NOV 01 2007

Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 10/12/07
DATE REPORTED : 10/31/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1A	MW-2	MW-3A	MW-5	MW-6	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	0.1 J	--- U	0.4 J	0.1 J	0.4 J	10/22/07	CMF	EPA200.8
Arsenic, ug/l	0.47	10.0	3.0 J	0.8 J	--- U	--- U	1.6 J	10/22/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	185	132	28.5 J	45.3 J	277	10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0	--- U	--- U	--- U	--- U	0.2 J	10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0	0.2 J	0.1 J	--- U	--- U	0.5 J	10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0	49	9.5 J	1.1 J	1.4 J	6.2 J	10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0	3.3 J	5.2 J	3.4 J	3.9 J	15	10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0	1.5 J	0.9 J	0.6 J	0.8 J	21	10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0	0.7 J	0.5 J	0.8 J	0.5 J	9.5 J	10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0	6.5 J	3.3 J	1.8 J	2.6 J	8.9 J	10/22/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0	0.6 J	1.6 J	0.4 J	0.4 J	1.2 J	02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0	--- U	--- U	--- U	--- U	--- U	02/24/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	--- U	--- U	--- U	0.2 J	10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0	8.1 J	4.5 J	3.5 J	4.5 J	31	10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0	22	11	6.5 J	6.5 J	74	10/22/07	CMF	EPA200.8

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 10/12/07
DATE REPORTED : 10/31/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-7	MW-8	MW-9	MW-10	MW-11	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	Missing	0.3 J	0.2 J	0.1 J	--- U	10/22/07	CMF	EPA200.8
Arsenic, ug/l	0.47	10.0	Missing	1.0 J	1.8 J	2.5 J	1.0 J	10/22/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	Missing	31.1 J	215	244	69.0 J	10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0	Missing	--- U	--- U	--- U	--- U	10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0	Missing	0.1 J	--- U	0.1 J	0.2 J	10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0	Missing	0.6 J	13	14	3.0 J	10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0	Missing	1.4 J	4.5 J	5.5 J	10	10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0	Missing	1.6 J	3.1 J	0.4 J	1.1 J	10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0	Missing	0.3 J	0.5 J	0.4 J	0.8 J	10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0	Missing	3.3 J	12.7 J	21.1 J	10.2 J	10/22/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0	Missing	1.7 J	1.5 J	11	4.2 J	02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0	Missing	--- U	--- U	--- U	--- U	02/24/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0	Missing	--- U	--- U	--- U	--- U	10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0	Missing	12.4 J	5.6 J	7.9 J	4.4 J	10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0	Missing	4.3 J	14	6.0 J	12	10/22/07	CMF	EPA200.8
8260 (duplicate)	0.20	10.0	Missing					/ /		

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 10/12/07
DATE REPORTED : 10/31/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-12	MW-13	MW-14	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	0.1 J	0.2 J		10/22/07	CMF	EPA200.8
Antimony, ug/l	0.05	6.0			--- U	10/26/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0	2.6 J	8.6 J		10/22/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0			--- U	10/26/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	93.5 J	278		10/22/07	CMF	EPA200.8
Barium, ug/l	0.04	100.0			27.7 J	10/26/07	LFJ	EPA200.8
Beryllium, ug/l	0.08	1.0	0.1 J	--- U		10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0			--- U	10/26/07	LFJ	EPA200.8
Cadmium, ug/l	0.06	1.0	0.5 J	0.1 J		10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0			0.1 J	10/26/07	LFJ	EPA200.8
Cobalt, ug/l	0.41	10.0	1.2 J	16		10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0			--- U	10/26/07	LFJ	EPA200.8
Copper, ug/l	0.20	10.0	5.6 J	3.9 J		10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0			2.4 J	10/26/07	LFJ	EPA200.8
Total Chromium, ug/l	0.24	10.0	2.0 J	1.5 J		10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0			0.6 J	10/26/07	LFJ	EPA200.8
Lead, ug/l	0.07	10.0	1.9 J	0.5 J		10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0			0.1 J	10/26/07	LFJ	EPA200.8
Nickel, ug/l	0.66	50.0	6.8 J	36.8 J		10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0			1.0 J	10/26/07	LFJ	EPA200.8
Selenium, ug/l	0.35	10.0	8.8 J	29		02/24/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0			0.5 J	10/26/07	LFJ	EPA200.8
Silver, ug/l	0.52	10.0	--- U	--- U		02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0			--- U	10/26/07	LFJ	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	--- U		10/22/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0			--- U	10/26/07	LFJ	EPA200.8
Vanadium, ug/l	0.42	25.0	3.4 J	8.5 J		10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0			5.2 J	10/26/07	LFJ	EPA200.8
Zinc, ug/l	0.20	10.0	13	5.9 J		10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0			5.0 J	10/26/07	LFJ	EPA200.8

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 10/12/07
DATE ANALYZED: 10/24/07
DATE REPORTED: 10/31/07

Page: 1

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-1A	MW-2	MW-3A	MW-5	MW-6
1. Chloromethane	0.18	1.0	0.30 J	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	1.20	1.00	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	3.30 J	6.20 J	0.50 J	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	0.30 J	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	--- U	--- U	--- U	1.30 J	2.10 J
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	0.20 J	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.40 J	0.20 J	0.30 J	--- U	0.40 J
11. trans-1,2-Dichloroethene	0.13	5.0	0.60 J	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	42.30	2.30 J	3.10 J	1.50 J	8.80
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	44.20	0.20 J	0.20 J	0.20 J	0.70 J
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	4.20	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	2.10	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	2.60	--- U	0.20 J	0.20 J	0.50 J
23. 1,2-Dichloropropane	0.17	1.0	3.20	--- U	--- U	--- U	0.40 J
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	0.30 J	0.20 J	0.20 J	0.20 J	0.20 J
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	0.90 J	--- U	--- U	--- U	0.80 J
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	0.40 J	1.30 J	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	2.20	0.70 J	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 10/12/07
DATE ANALYZED: 10/24/07
DATE REPORTED: 10/31/07

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-8	MW-9	MW-10	MW-11	MW-12
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	0.50 J	--- U	1.10	3.40
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	1.00 J	2.40 J	0.40 J	--- U	4.30 J
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	0.20 J	--- U	--- U	--- U	1.50 J
7. Acetone	1.21	100.0	2.30 J	2.80 J	1.50 J	--- U	--- U
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.20 J	0.20 J	--- U	0.20 J	0.50 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	0.20 J
12. 1,1-Dichloroethane	0.16	5.0	6.50	0.60 J	0.20 J	2.90	26.40
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	0.40 J	--- U	0.40 J	0.50 J
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	0.40 J	2.40	--- U	0.20 J	0.90 J
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	0.80 J
22. Trichloroethene	0.13	1.0	1.00	--- U	--- U	0.20 J	0.40 J
23. 1,2-Dichloropropane	0.17	1.0	--- U	0.60 J	--- U	0.30 J	0.80 J
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	0.30 J	0.60 J	0.30 J	0.20 J	0.20 J
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	0.20 J	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	6.00	0.40 J	3.10	1.10 J
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	5.60	--- U	1.70	4.40
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	0.50 J	--- U	0.40 J	0.30 J
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 10/12/07
DATE ANALYZED: 10/24/07
DATE REPORTED: 10/31/07

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-13	MW-14
1. Chloromethane	0.18	1.0	0.20 J	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U
4. Chloroethane	0.29	10.0	19.80	0.30 J
5. Trichlorofluoromethane	0.13	1.0	--- U	1.60
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U
7. Acetone	1.21	100.0	2.20 J	--- U
8. Iodomethane	0.12	10.0	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.20 J	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	1.30 J	1.00 J
13. Vinyl Acetate	0.20	5.0	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U
20. Benzene	0.16	1.0	2.80	--- U
21. 1,2-Dichloroethane	0.12	1.0	0.30 J	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	0.20 J	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U
27. Toluene	0.13	1.0	0.50 J	0.20 J
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U
34. Chlorobenzene	0.13	3.0	9.10	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U
36. Ethylbenzene	0.16	1.0	0.20 J	--- U
37. Xylenes	0.48	5.0	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	10.20	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	1.40 J	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6037 **Week:** 40

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2
CHLORINE NEUTRALIZED AT COLLECTION										
pH CHECK (LAB)							12	12	12	12
CONTAINER TYPE, P/G						P	P	G	G	G
CHEMICAL PRESERVATION						A	A	E	E	E
MW-1A	10/12/07	8:56			4		■	■	■	■
MW-2		11:13			3		■	■	■	
MW-3A		11:23			3		■	■	■	
MW-5		9:34			3		■	■	■	
MW-6		9:04			3		■	■	■	
MW-7					3		■	■	■	
MW-8		8:40			3		■	■	■	
MW-9		8:27			3		■	■	■	
MW-10		8:15			3		■	■	■	
MW-11		10:46			3		■	■	■	
MW-12	✓	11:03			4	■	■	■	■	

PARAMETERS

CHEMICAL PRESERVATION:
A - NONE
B - HNO_3
C - H_2SO_4
D - NAOH
E - HCL
F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
☐ WASTEWATER (NPDES)
☐ DRINKING WATER
☐ DWQ/GW
☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print) Bryan D. Johnson

SAMPLES RECEIVED IN LAB AT 2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Bryan D. Johnson	10/12/07 2:37	Joan Smyth	10/12/07 2:37
Joan Smyth	10/15/07 3:30pm	Armetha Scott	10/16/07 10:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS: MW-7 Abandonded no sample taken

Instructions for completing this form are on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.

№ 152229

FORM #5

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6037 **Week: 40**

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2
							L2	L2	L2	L2
						P	P	G	G	G
						A	A	E	E	E
MW-13	10/12/07	10:57			3					
MW-14	↓	9:27			3					

PARAMETERS

CHLORINE NEUTRALIZED AT COLLECTION

pH CHECK (LAB)

CONTAINER TYPE, P/G

CHEMICAL PRESERVATION

A - NONE
B - HNO_3
C - H_2SO_4
D - NAOH
E - HCL
F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
☐ WASTEWATER (NPDES)
☐ DRINKING WATER
☐ DWQ/GW
☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY
Y N

SAMPLES COLLECTED BY: (Please Print)
Bryan D. Johnson

SAMPLES RECEIVED IN LAB AT 1.2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Bryan D. Johnson	10/12/07	Joan Smyth	10/12/07 2:37
Joan Smyth	10/15/07 3:30p	Martha Sadler	10/16/07 10:00

COMMENTS:

Instructions for completing this form are on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.

№ 152228

FORM #5

Environment 1, Incorporated

Drinking Water ID: 27313
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6037 A

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 10/11/07
DATE REPORTED : 10/30/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	SW-1	SW-2	SW-3	MW-15	MW-16	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	0.6 J	Missing	Missing	0.1 J	0.7 J	10/22/07	CMF	EPA200.8
Arsenic, ug/l	0.47	10.0	1.2 J	Missing	Missing	0.9 J	1.7 J	10/22/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	19.1 J	Missing	Missing	167	59.1 J	10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0	--- U	Missing	Missing	0.4 J	--- U	10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0	--- U	Missing	Missing	0.1 J	0.1 J	10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0	1.2 J	Missing	Missing	24	1.5 J	10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0	4.4 J	Missing	Missing	28	4.7 J	10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0	--- U	Missing	Missing	40	2.6 J	10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0	0.6 J	Missing	Missing	2.2 J	182	10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0	17.4 J	Missing	Missing	28.5 J	4.3 J	10/22/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0	1.2 J	Missing	Missing	0.4 J	1.7 J	02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0	--- U	Missing	Missing	--- U	--- U	02/24/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	Missing	Missing	0.1 J	--- U	10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0	3.3 J	Missing	Missing	52	18.5 J	10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0	45	Missing	Missing	67	13	10/22/07	CMF	EPA200.8
8260 (duplicate)	0.20	10.0		Missing	Missing			/ /		

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6037 A

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 10/11/07
DATE REPORTED : 10/30/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-17	Trip Blank	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	0.4 J		10/22/07	CMF	EPA200.8
Arsenic, ug/l	0.47	10.0	1.7 J		10/22/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	171		10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0	--- U		10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0	--- U		10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0	4.3 J		10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0	4.9 J		10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0	--- U		10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0	0.9 J		10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0	2.4 J		10/22/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0	0.6 J		02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0	--- U		02/24/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0	--- U		10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0	57		10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0	11		10/22/07	CMF	EPA200.8

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37713
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037 A

ANALYST: MAO
DATE COLLECTED: 10/11/07
DATE ANALYZED: 10/24/07
DATE REPORTED: 10/30/07

Page: 1

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	SW-1	MW-15	MW-16	MW-17	Trip Blank
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	3.00 J	--- U	1.00 J	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	0.30 J	--- U	--- U	--- U
7. Acetone	1.21	100.0	2.50 J	1.40 J	1.50 J	1.70 J	1.30 J
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	0.20 J	--- U
10. Methylene Chloride	0.14	1.0	--- U	0.20 J	0.20 J	0.20 J	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	7.00	0.70 J	12.80	--- U
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U	--- U	1.20	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	0.30 J	--- U	1.10	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U	--- U	0.70 J	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	0.30 J	--- U	--- U	--- U	0.60 J
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	0.20 J	--- U	0.80 J	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6037 A **Week:** 40

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2
CHLORINE NEUTRALIZED AT COLLECTION				
pH CHECK (LAB)	L2	L2	L2	L2
CONTAINER TYPE, P/G	P	G	G	G
CHEMICAL PRESERVATION	A	E	E	E

PARAMETERS: A - NONE; B - HNO_3; C - H_2SO_4; D - NAOH; E - HCL; F - ZINC ACETATE; G - NA THIOSULFATE

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2
SW-1	10-11-07	2:05p			3	■	■	■	
SW-2					3	■	■	■	
SW-3					3	■	■	■	
MW-15		3:40p			3	■	■	■	
MW-16		2:58p			3	■	■	■	
MW-17		2:30p			4	■	■	■	■
Trip Blank					2		■	■	

CLASSIFICATION:
- ☐ WASTEWATER (NPDES)
- ☐ DRINKING WATER
- ☐ DWQ/GW
- ☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print) Byron S. Hackney

SAMPLES RECEIVED IN LAB AT 4.6 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Byron S. Hackney	10-11-07 4:30p	Anutha Cook	10/12/07 10:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS: SW-2 + SW-3 Dry (no samples taken)

Instructions for completing this form are on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.

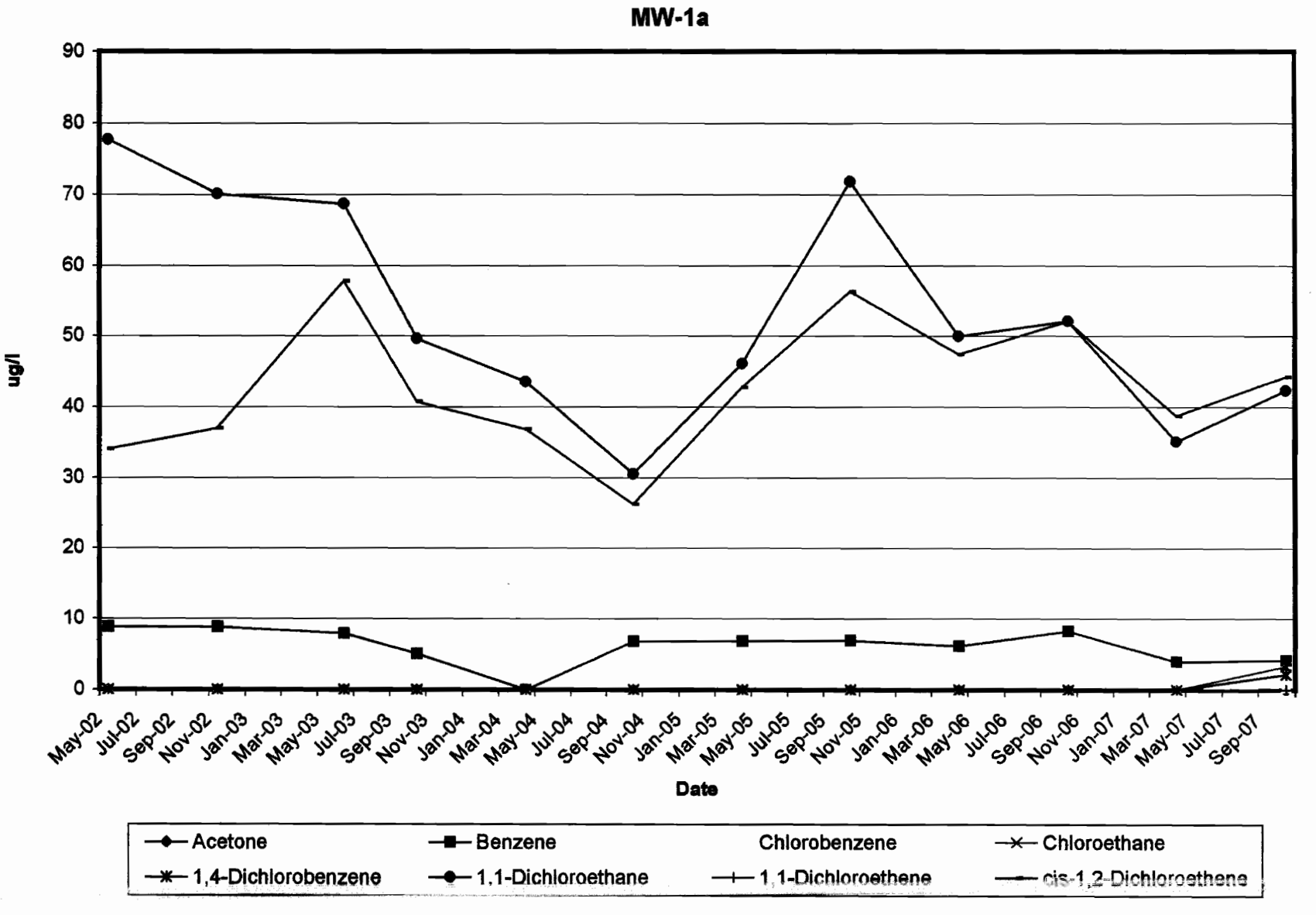
FORM #5

№ 152227

Appendix B

Time vs. Concentration Graphs

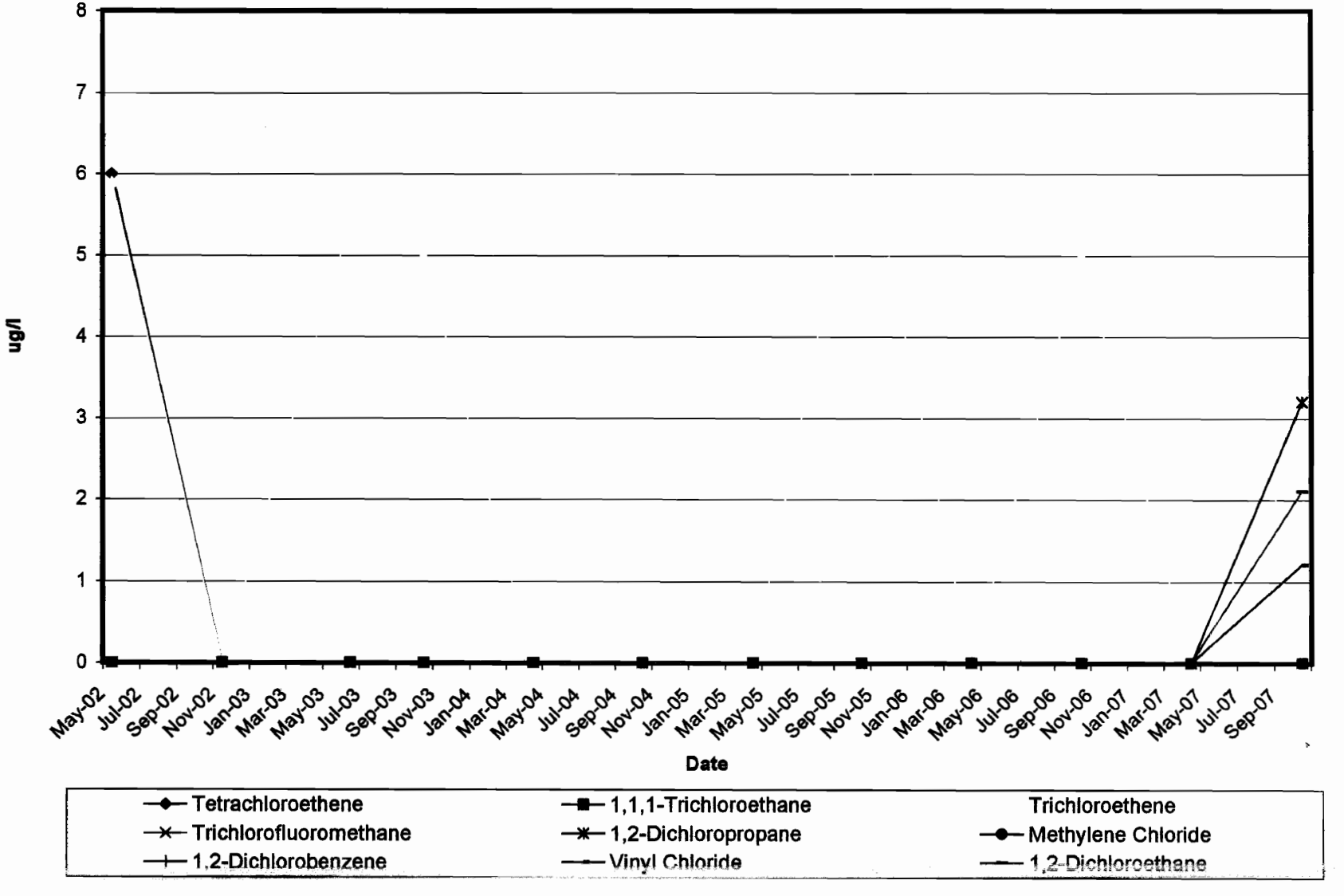
Davidson County Holly Grove Landfill



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

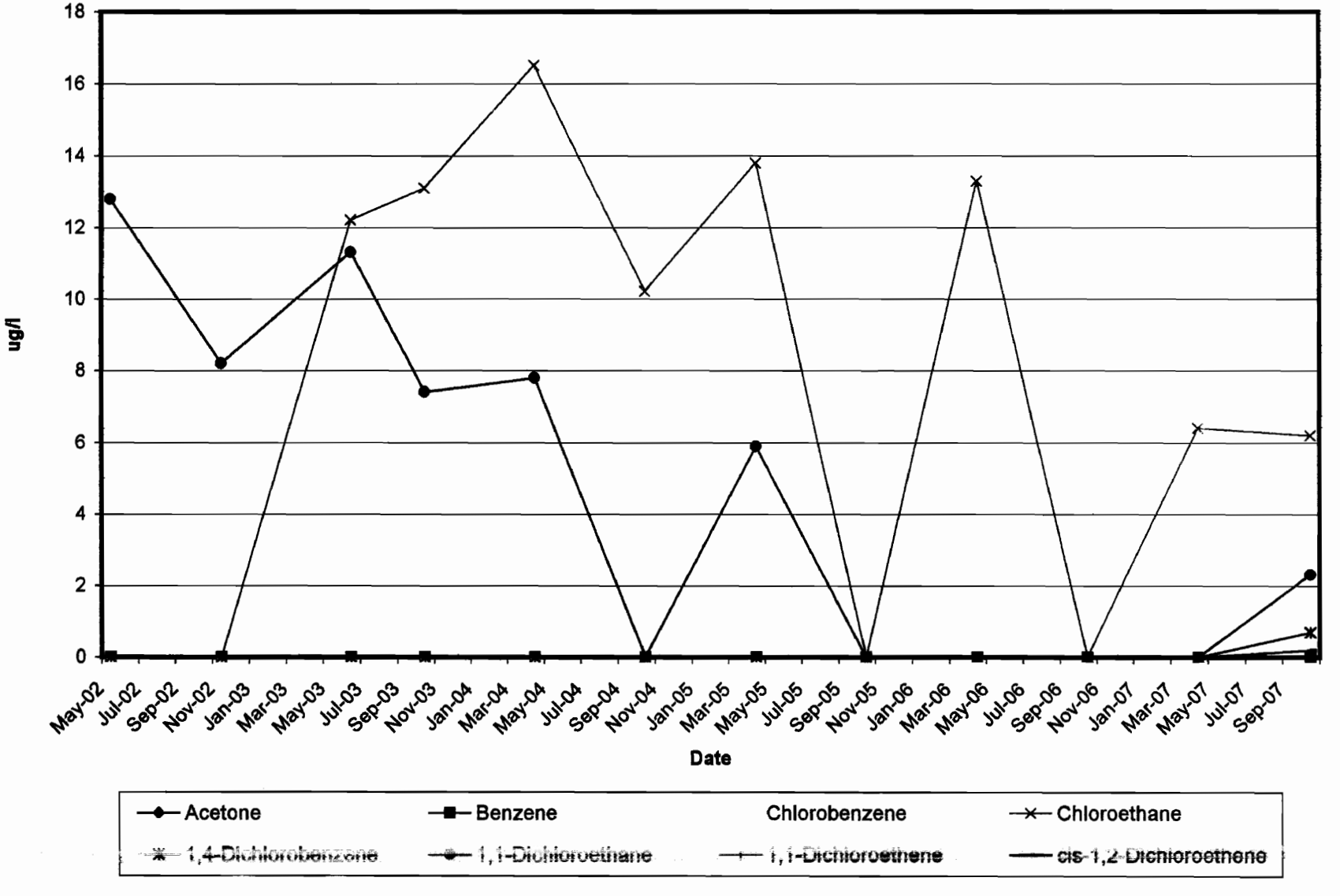
MW-1a



Richardson Smith Gardner & Associates, Inc.

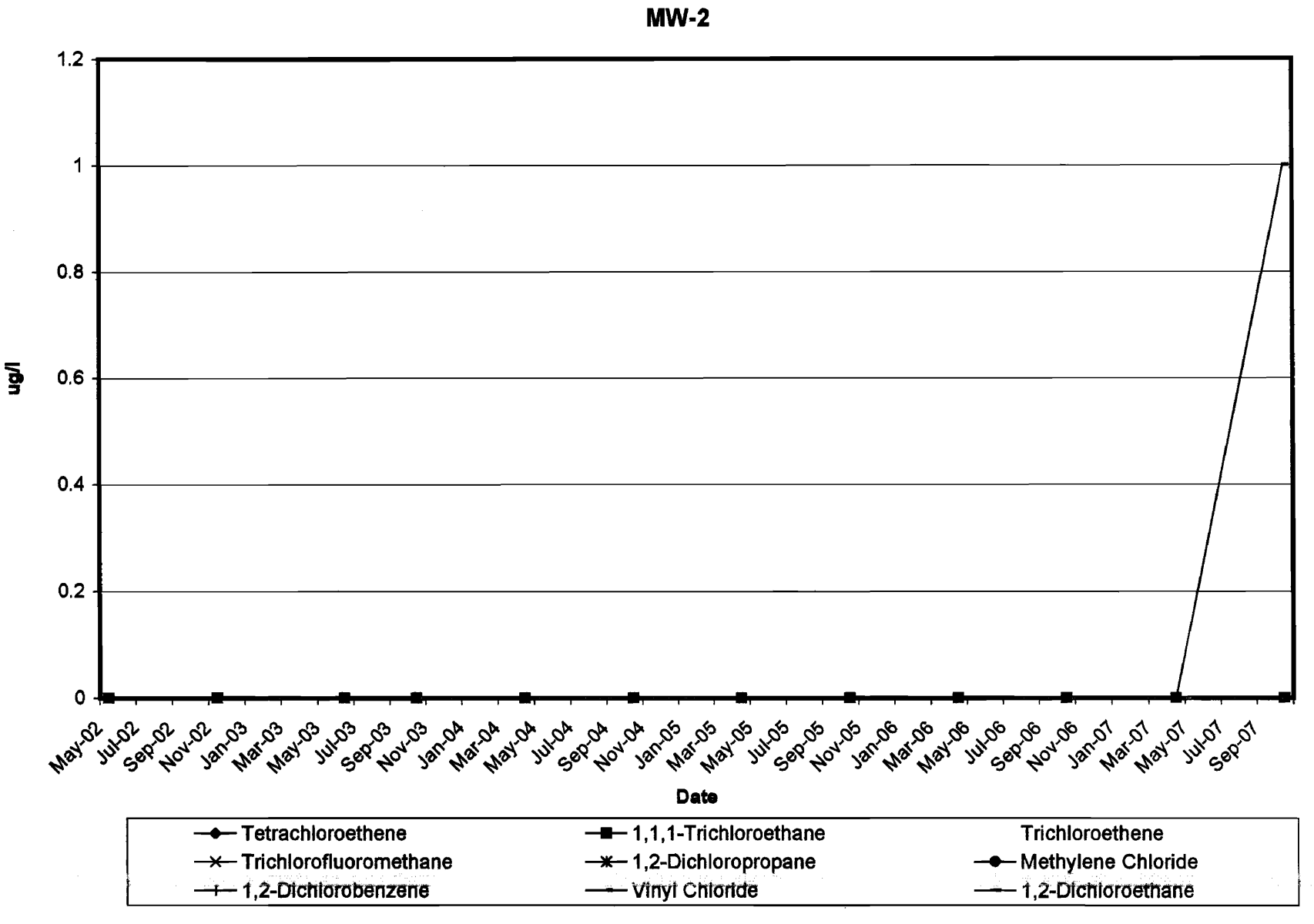
Davidson County Holly Grove Landfill

MW-2



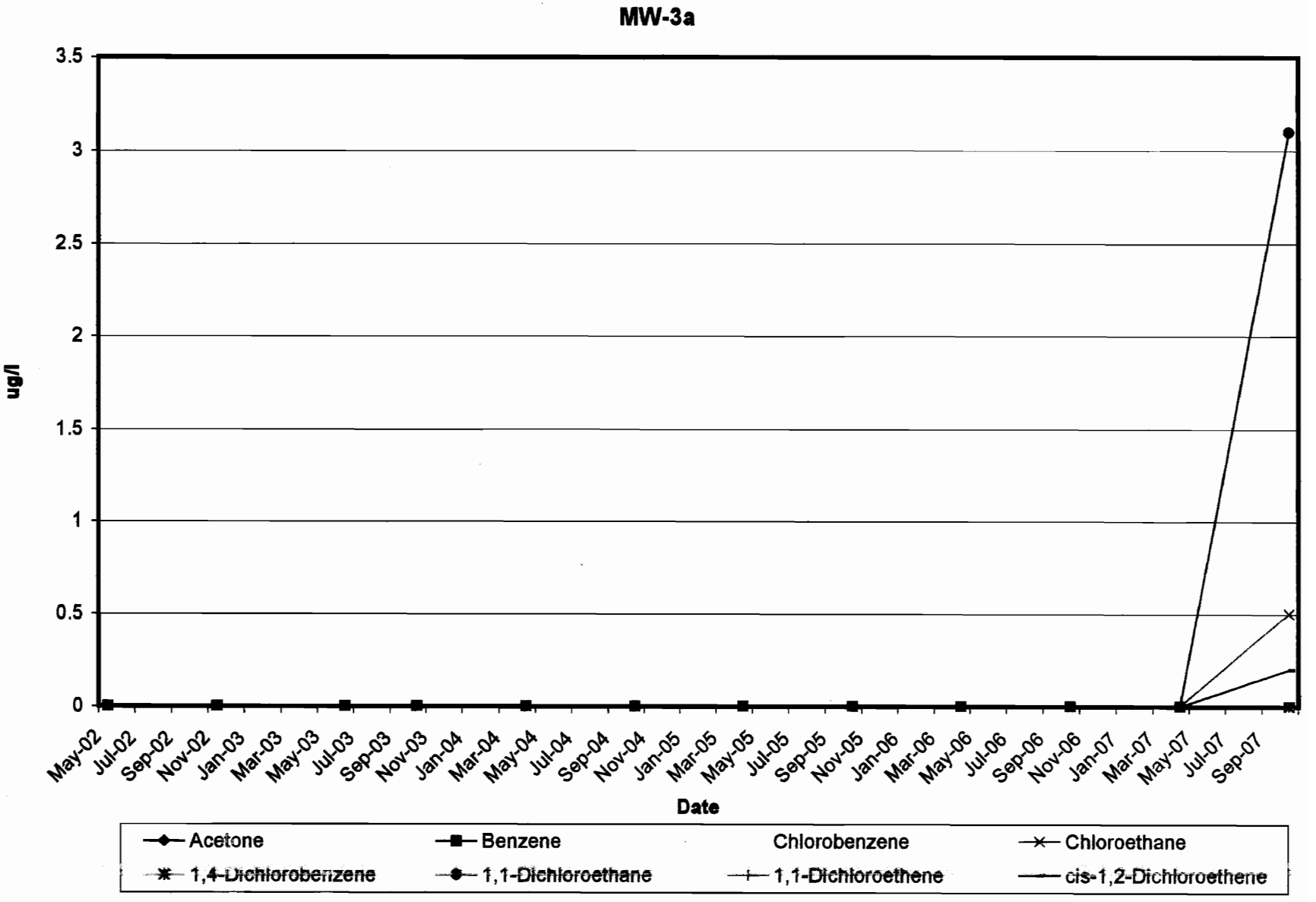
Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill



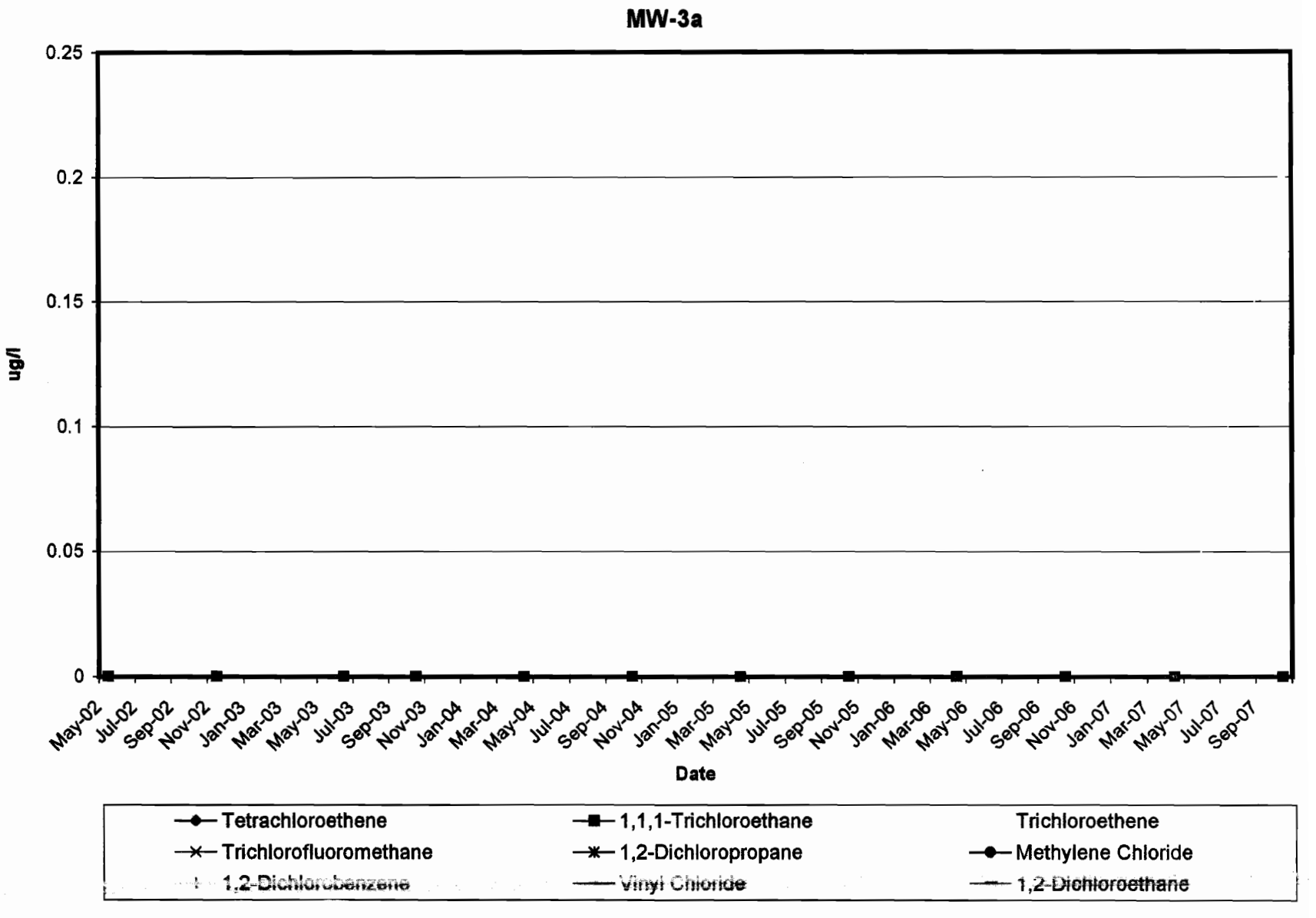
Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill



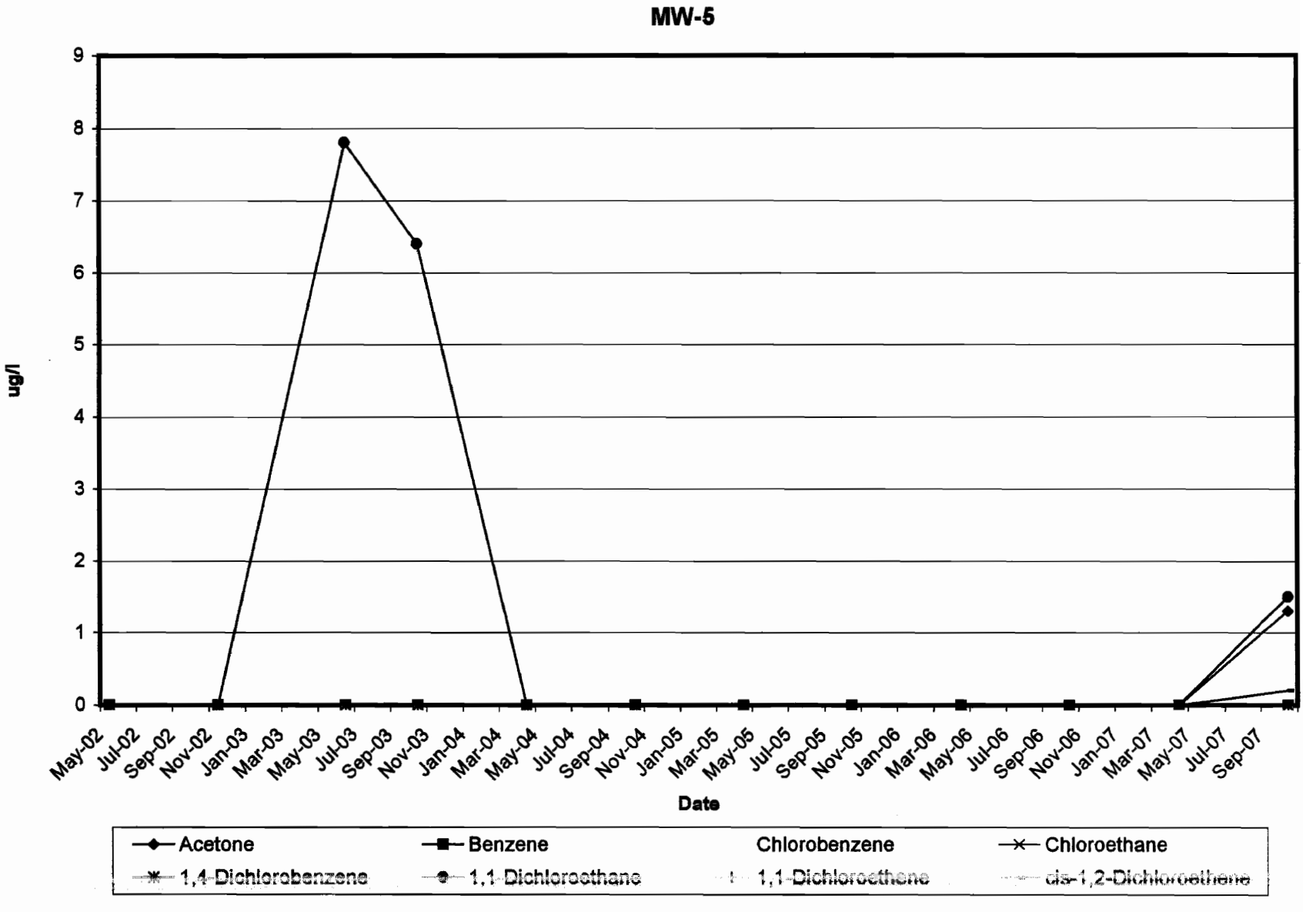
Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill



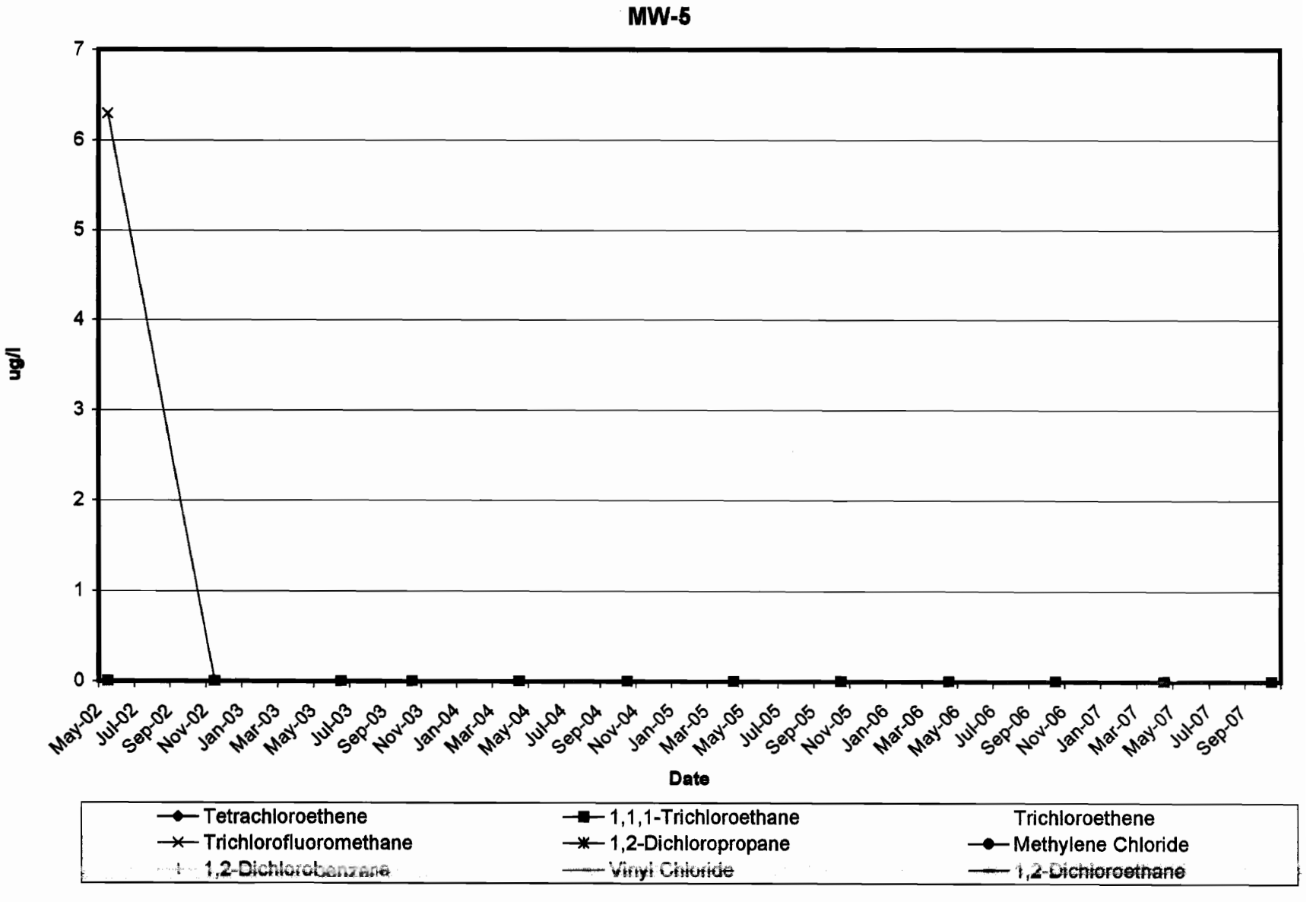
Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill



Richardson Smith Gardner & Associates, Inc.

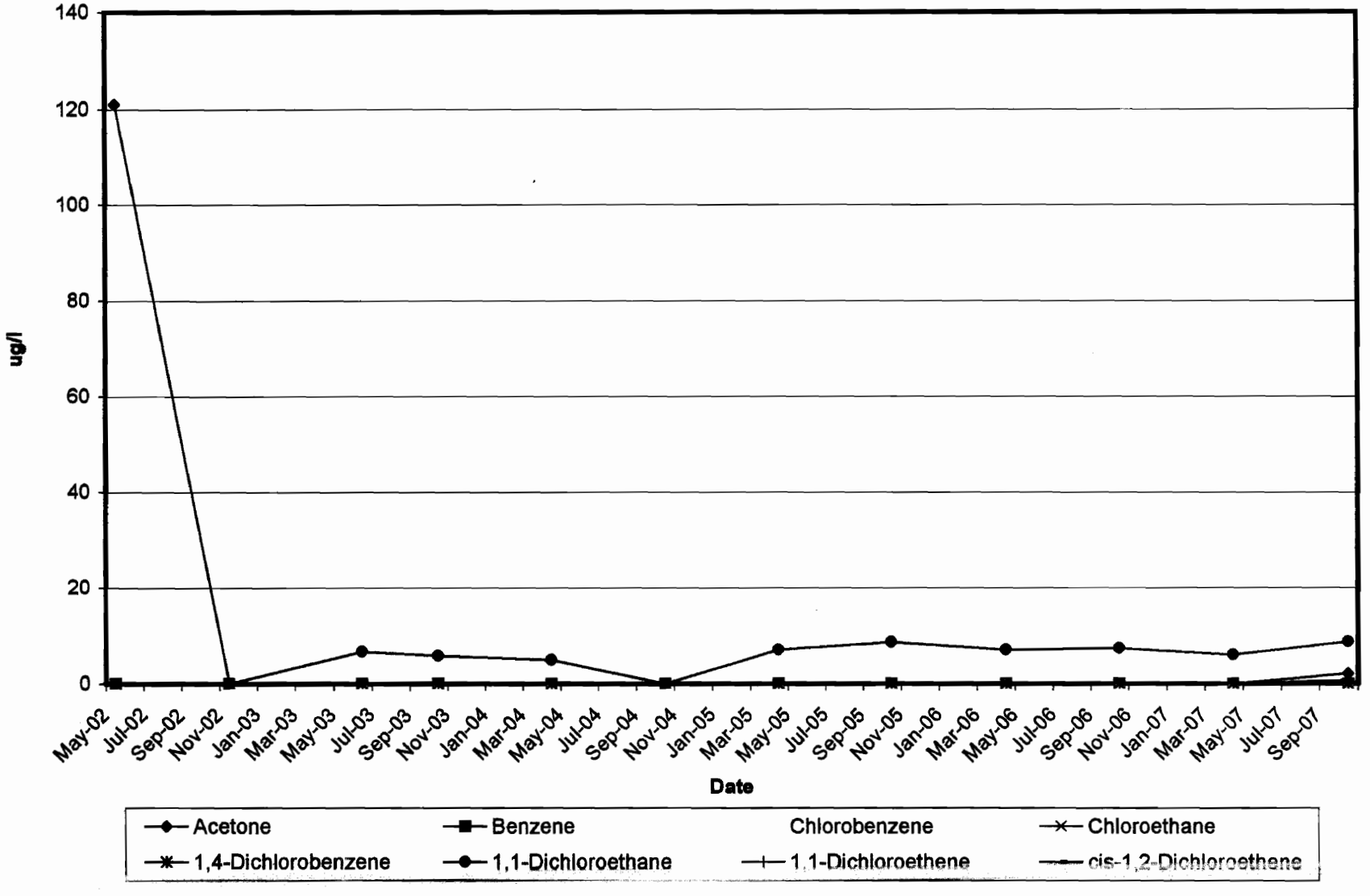
Davidson County Hollygrove Landfill



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

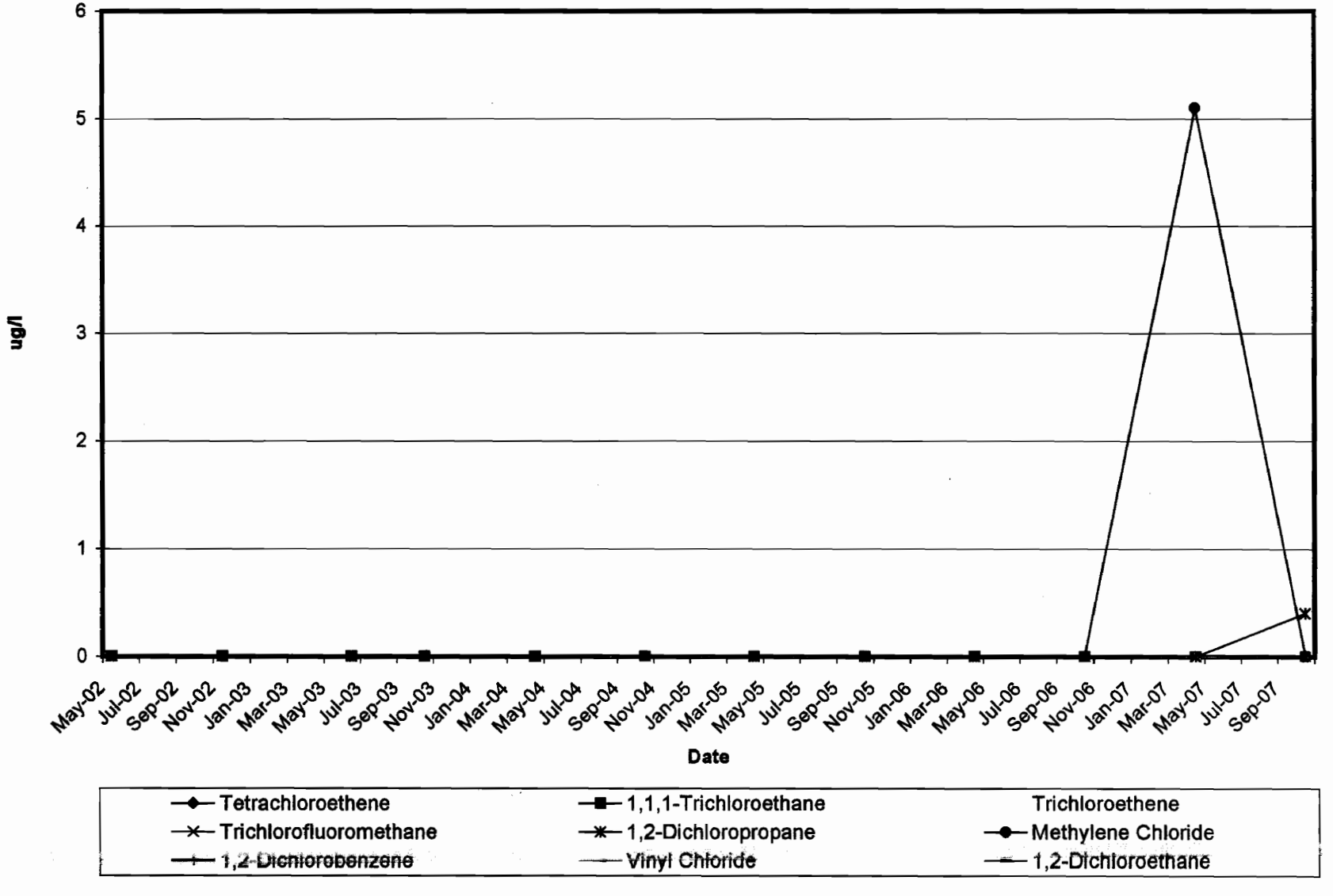
MW-6



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

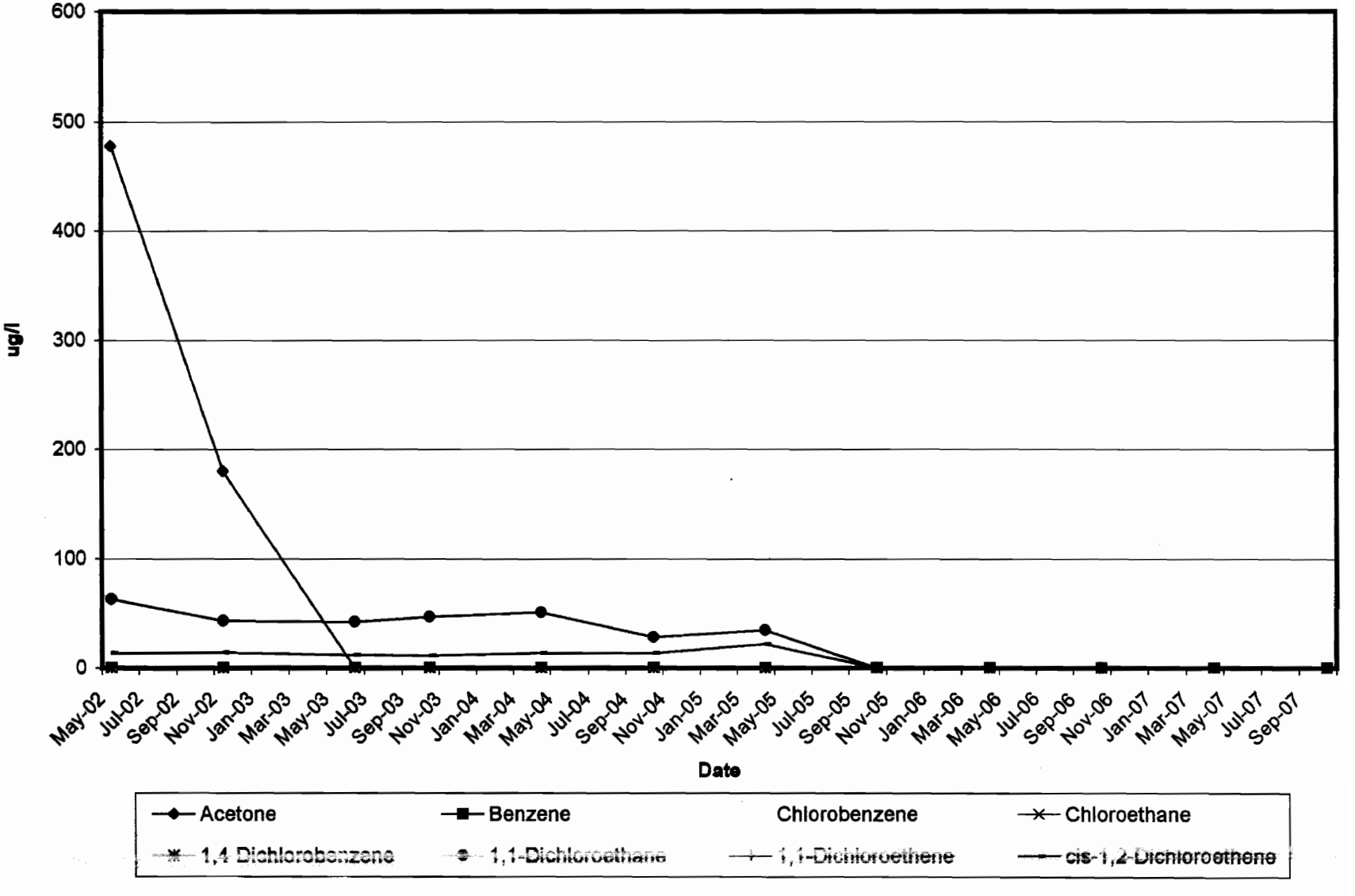
MW-6



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

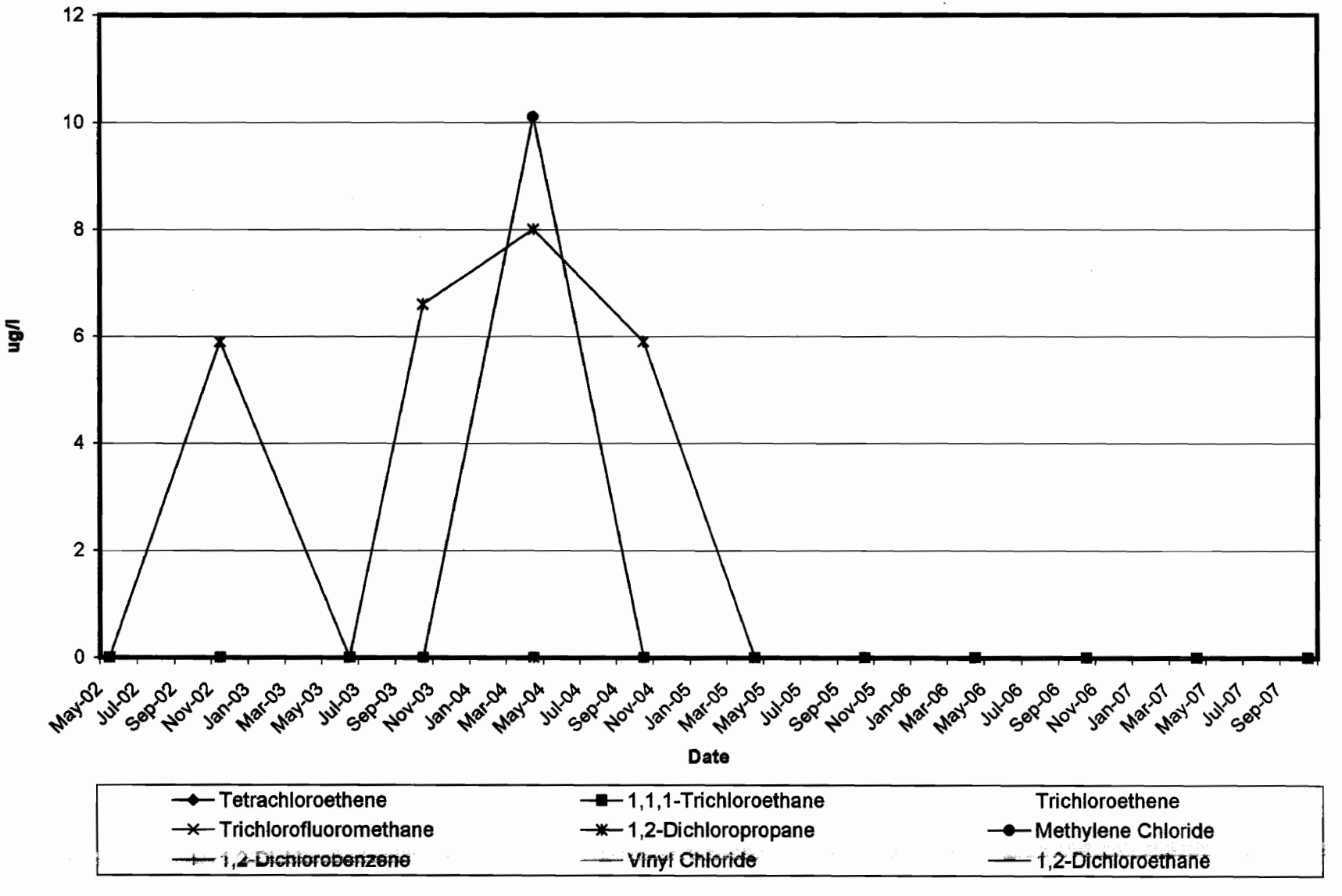
MW-7



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

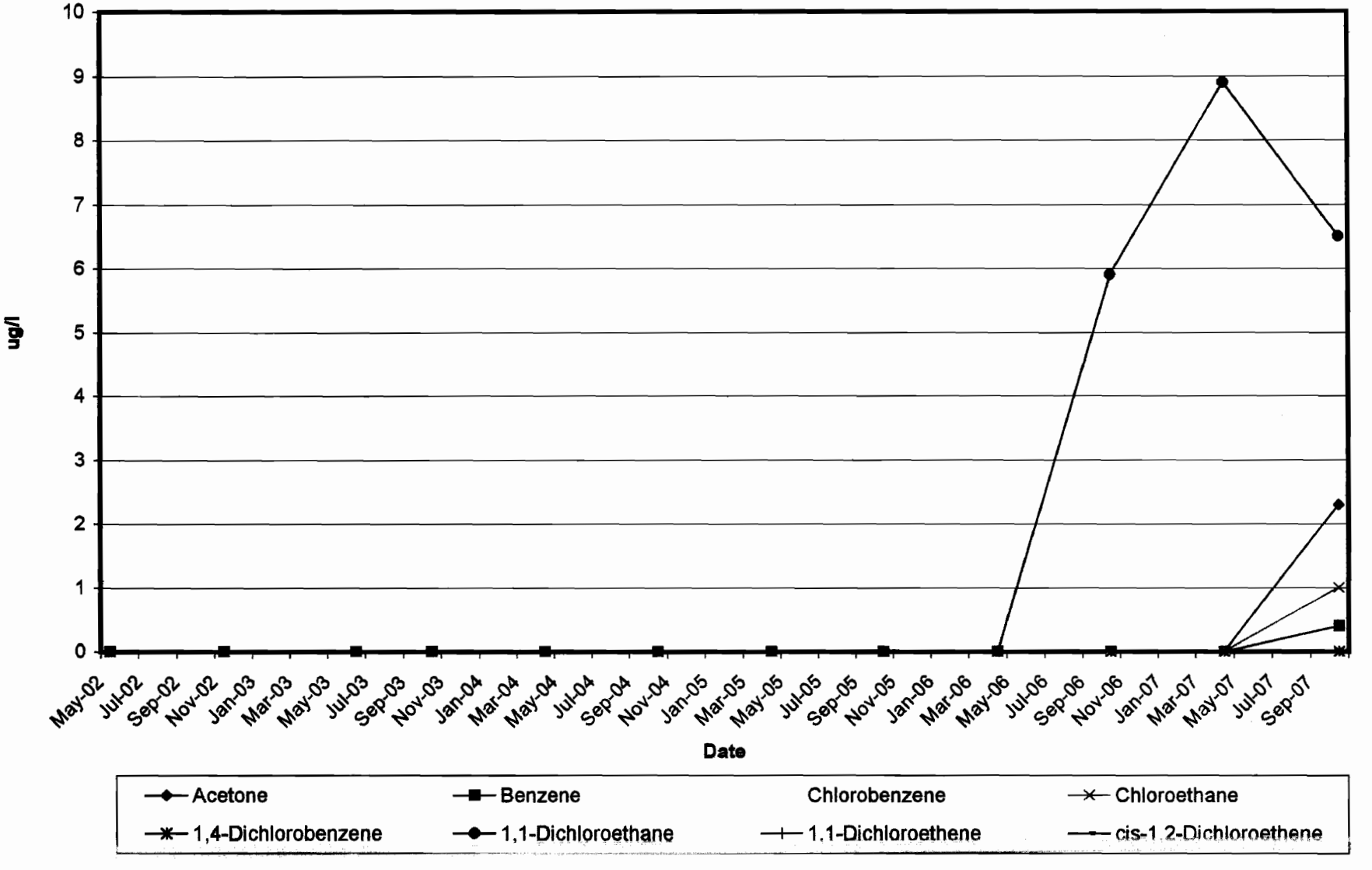
MW-7



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

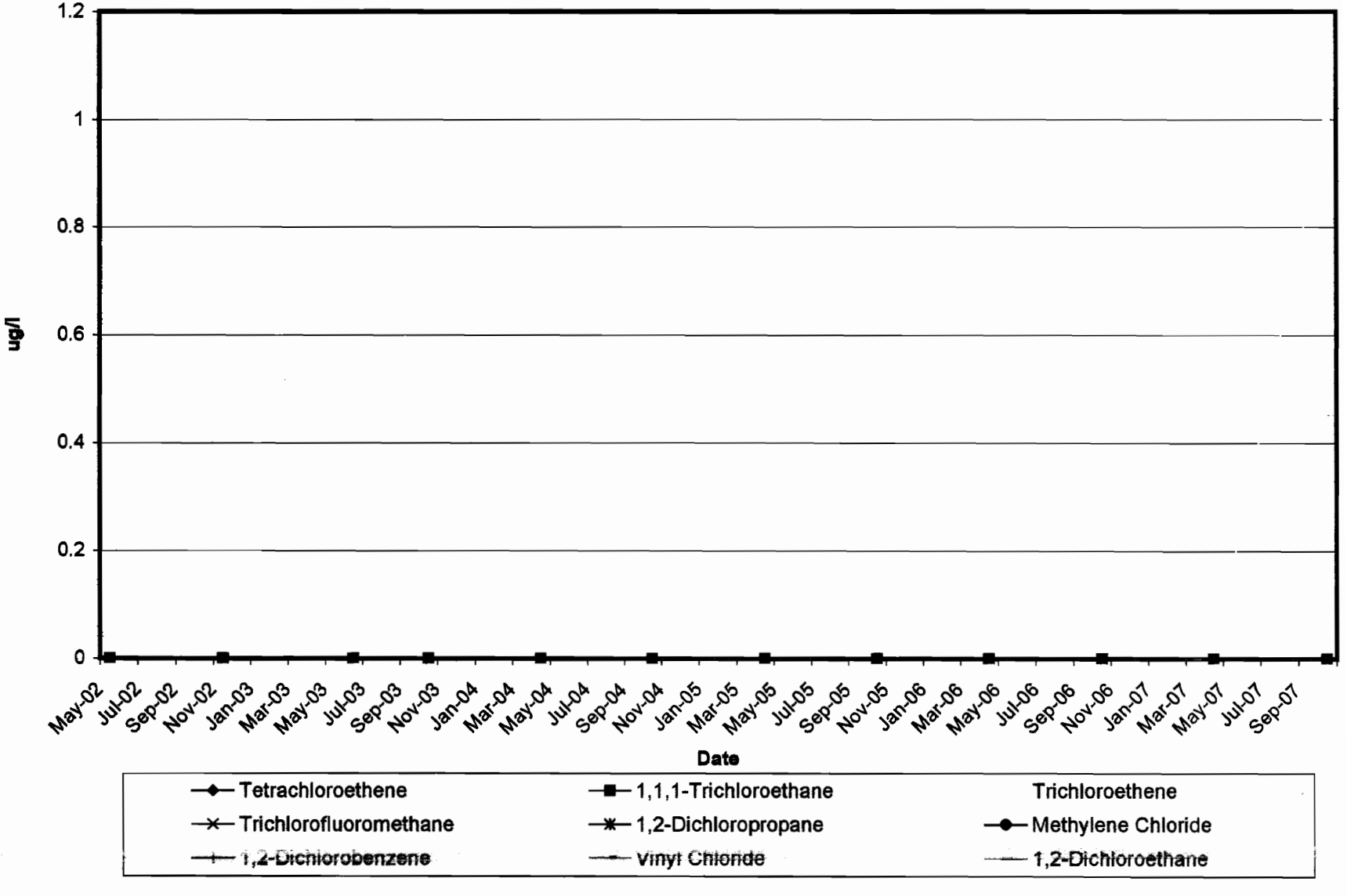
MW-8



Richardson Smith Gardner & Associates, Inc.

Davidson County Holly Grove Landfill

MW-8



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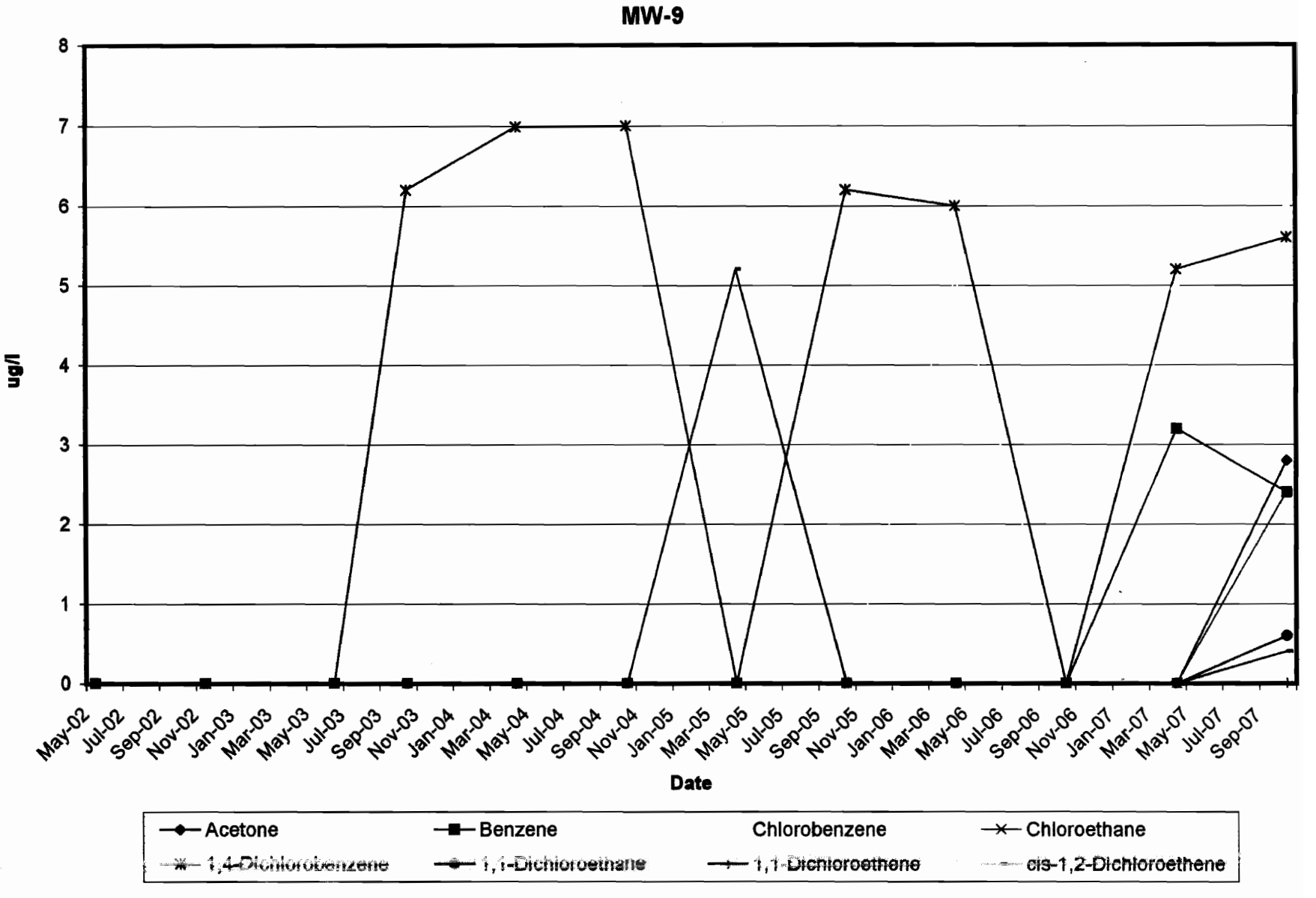
Davidson County Holly Grove Landfill



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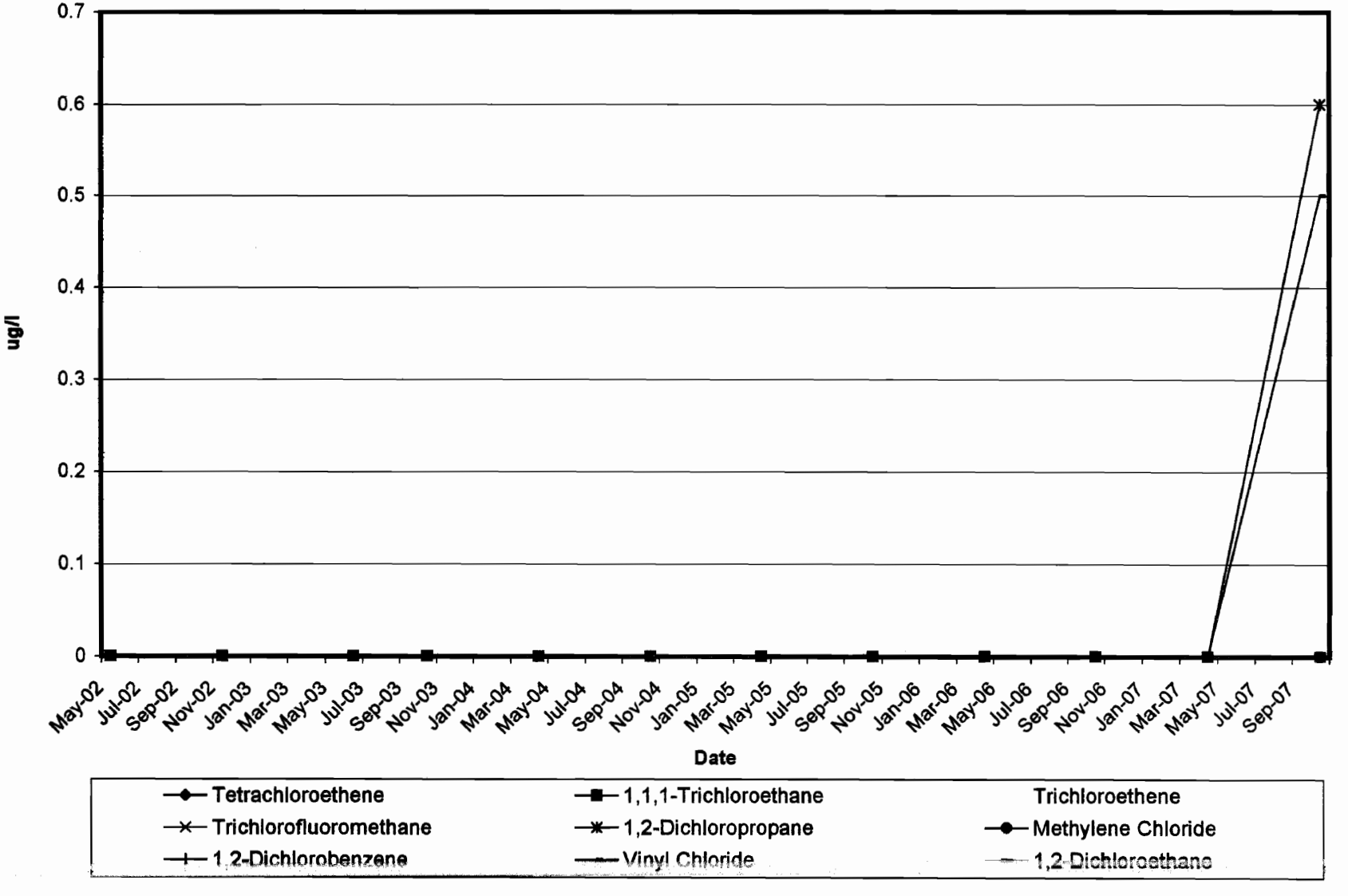
Davidson County Holly Grove Landfill

MW-9



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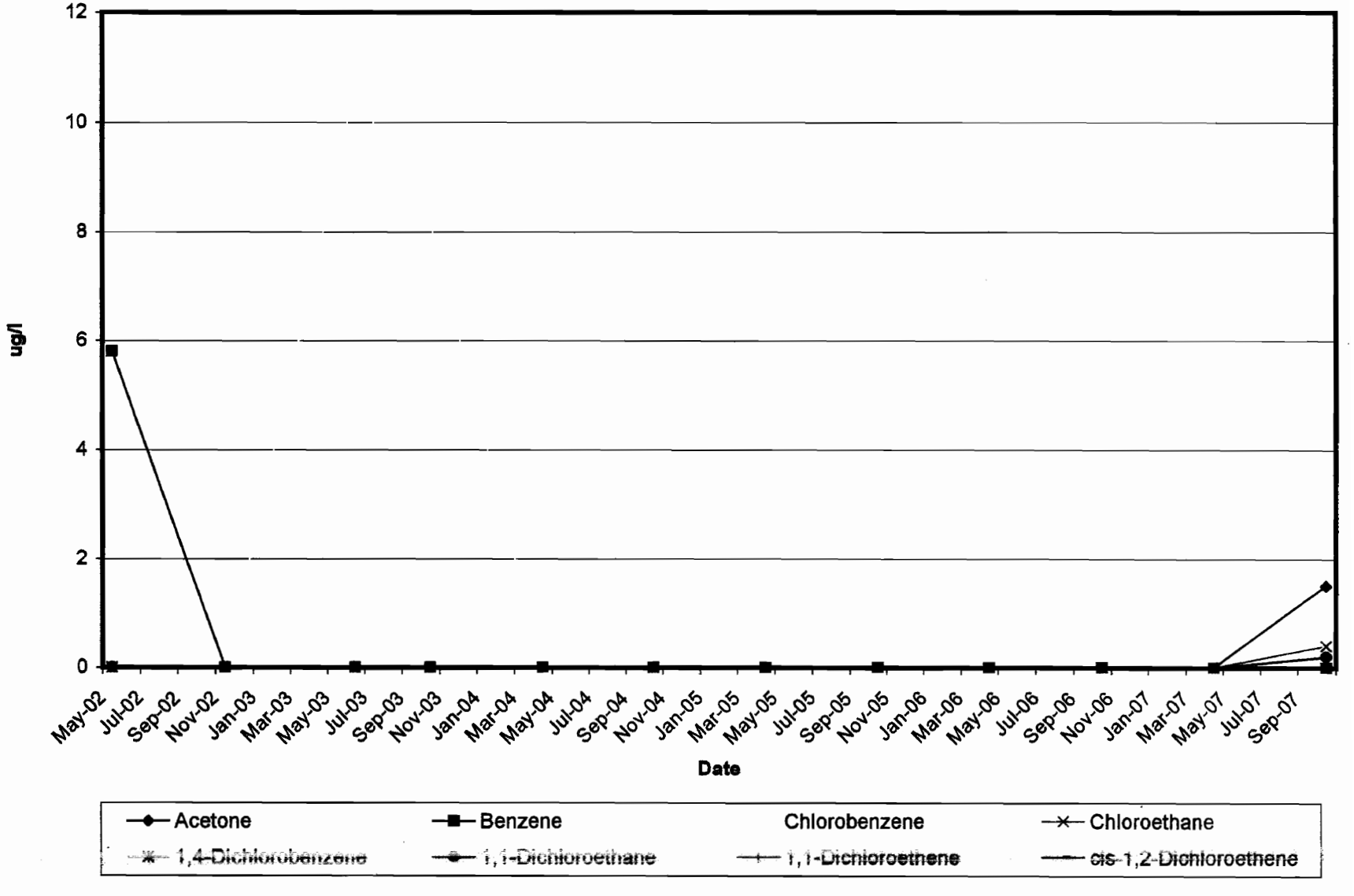
Davidson County Holly Grove Landfill

MW-10



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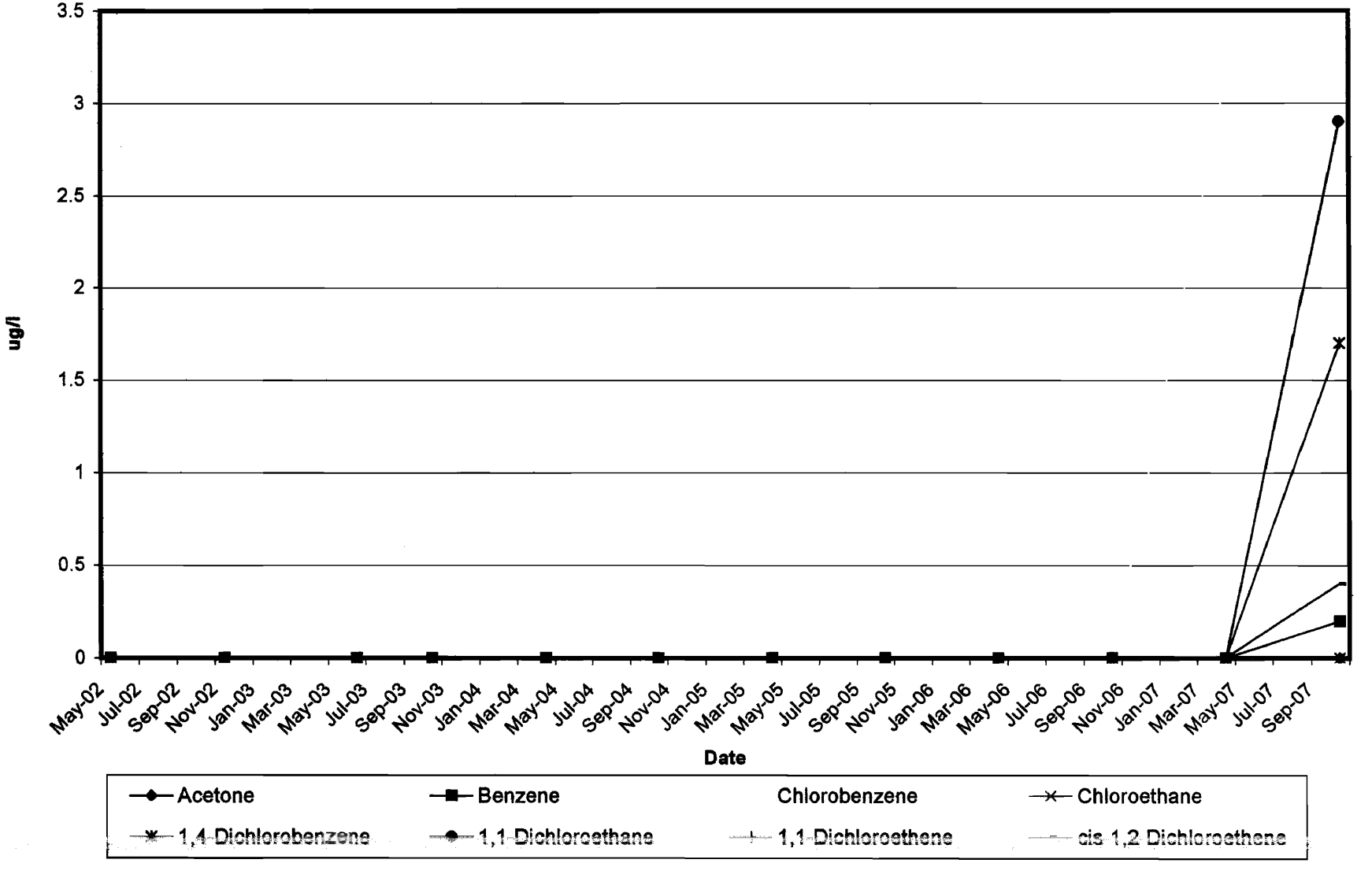
Davidson County Holly Grove Landfill

MW-11



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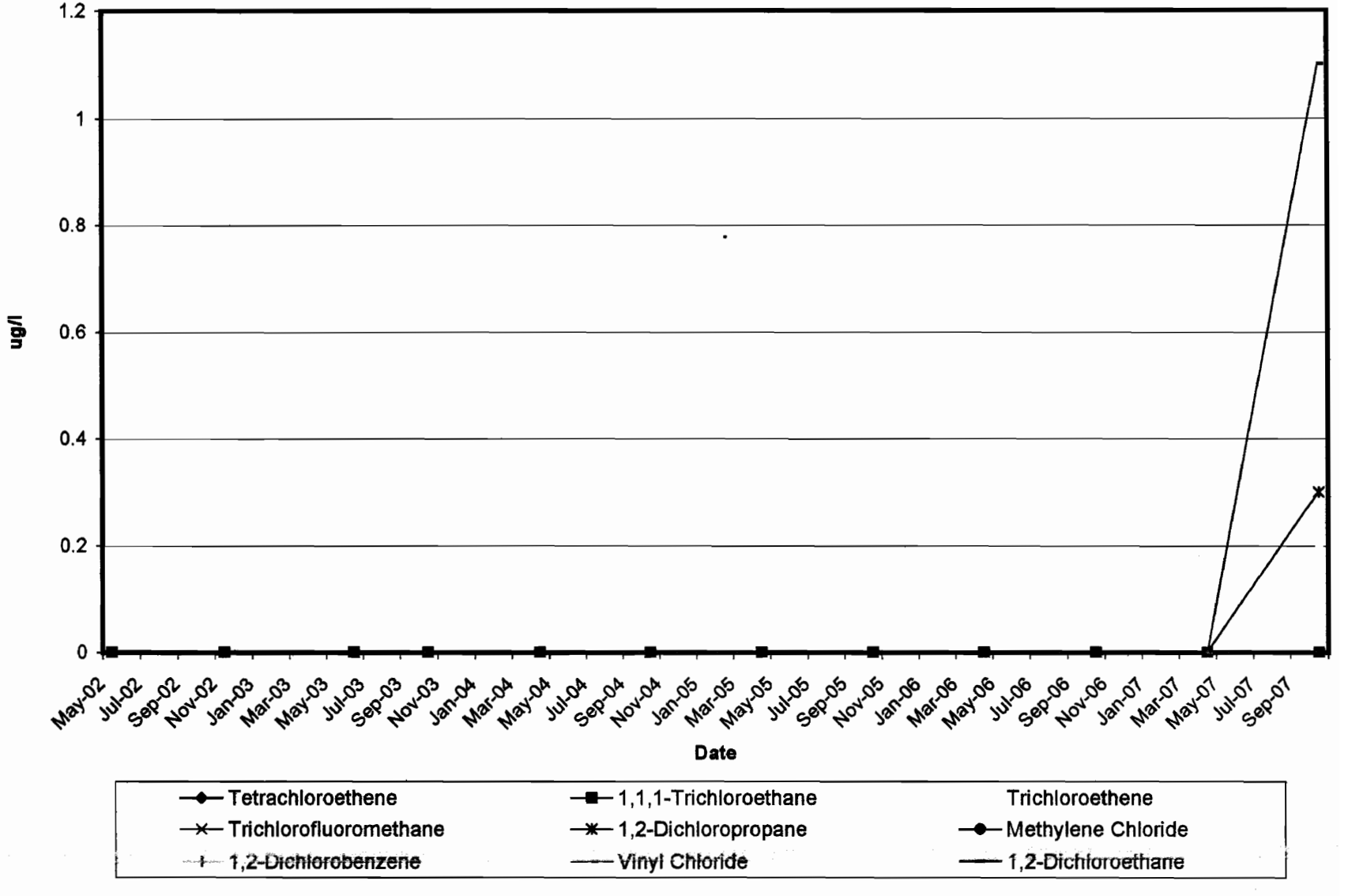
Davidson County Holly Grove Landfill

MW-11



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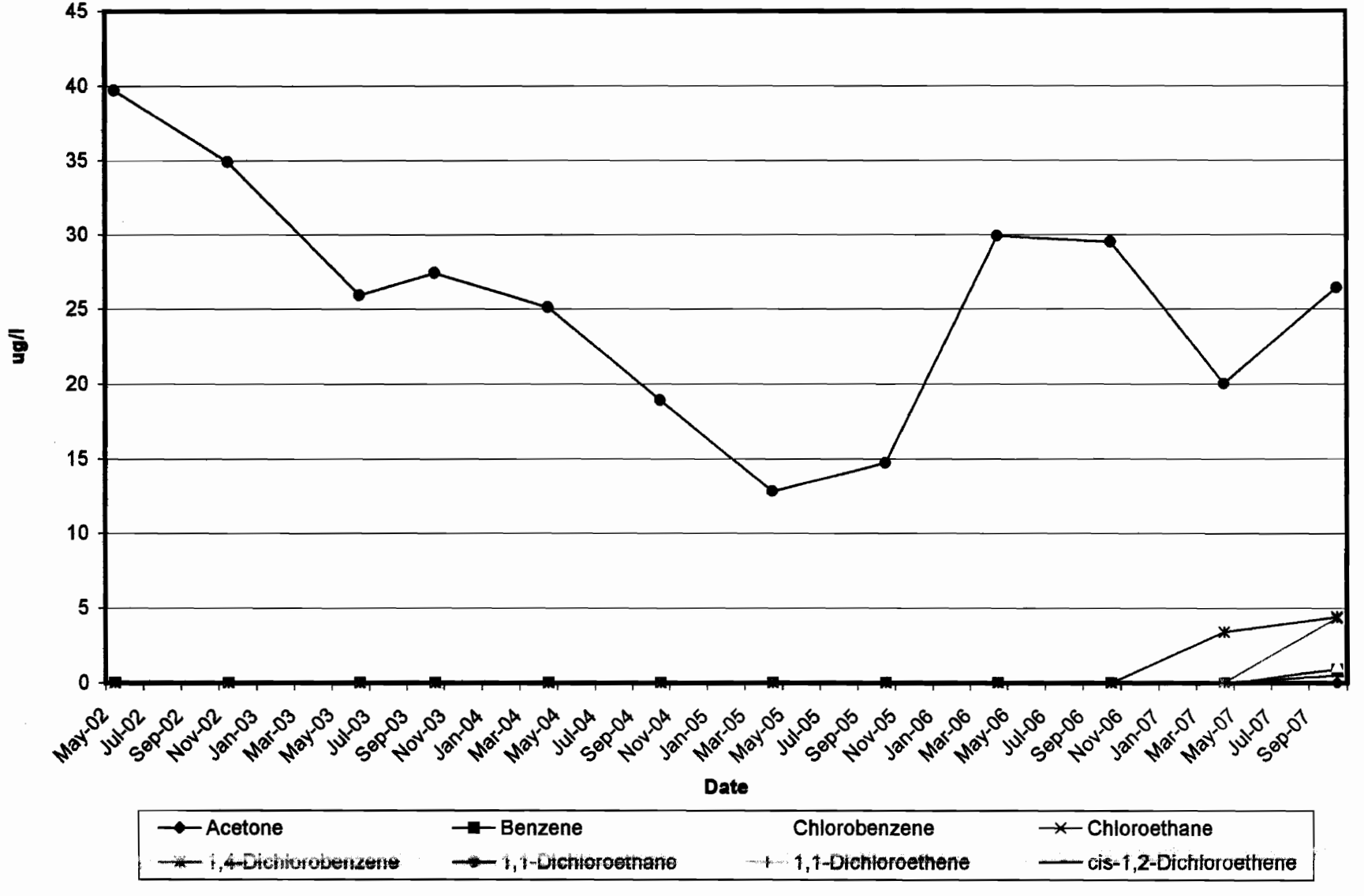
Davidson County Holly Grove Landfill

MW-12



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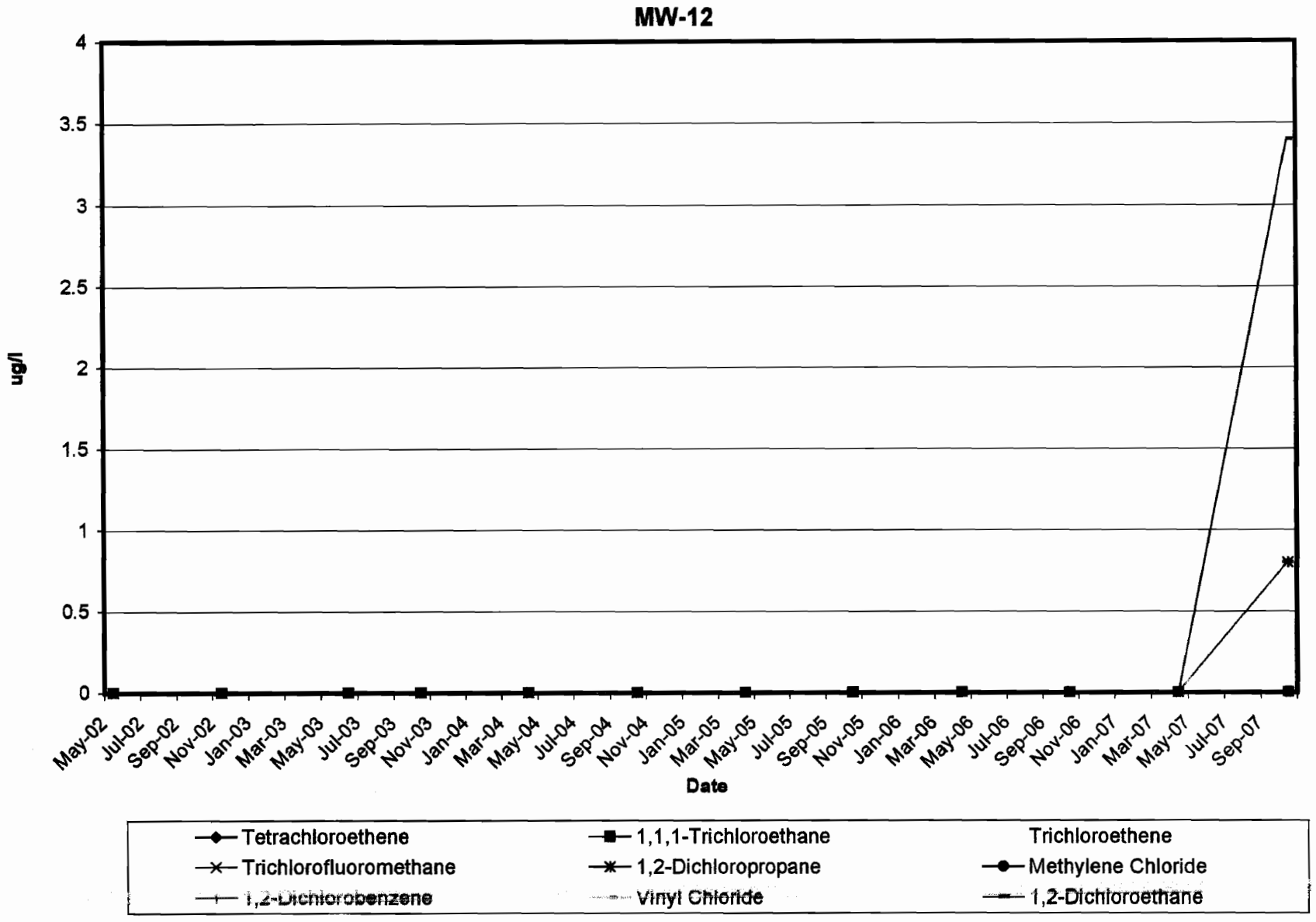
Davidson County Holly Grove Landfill



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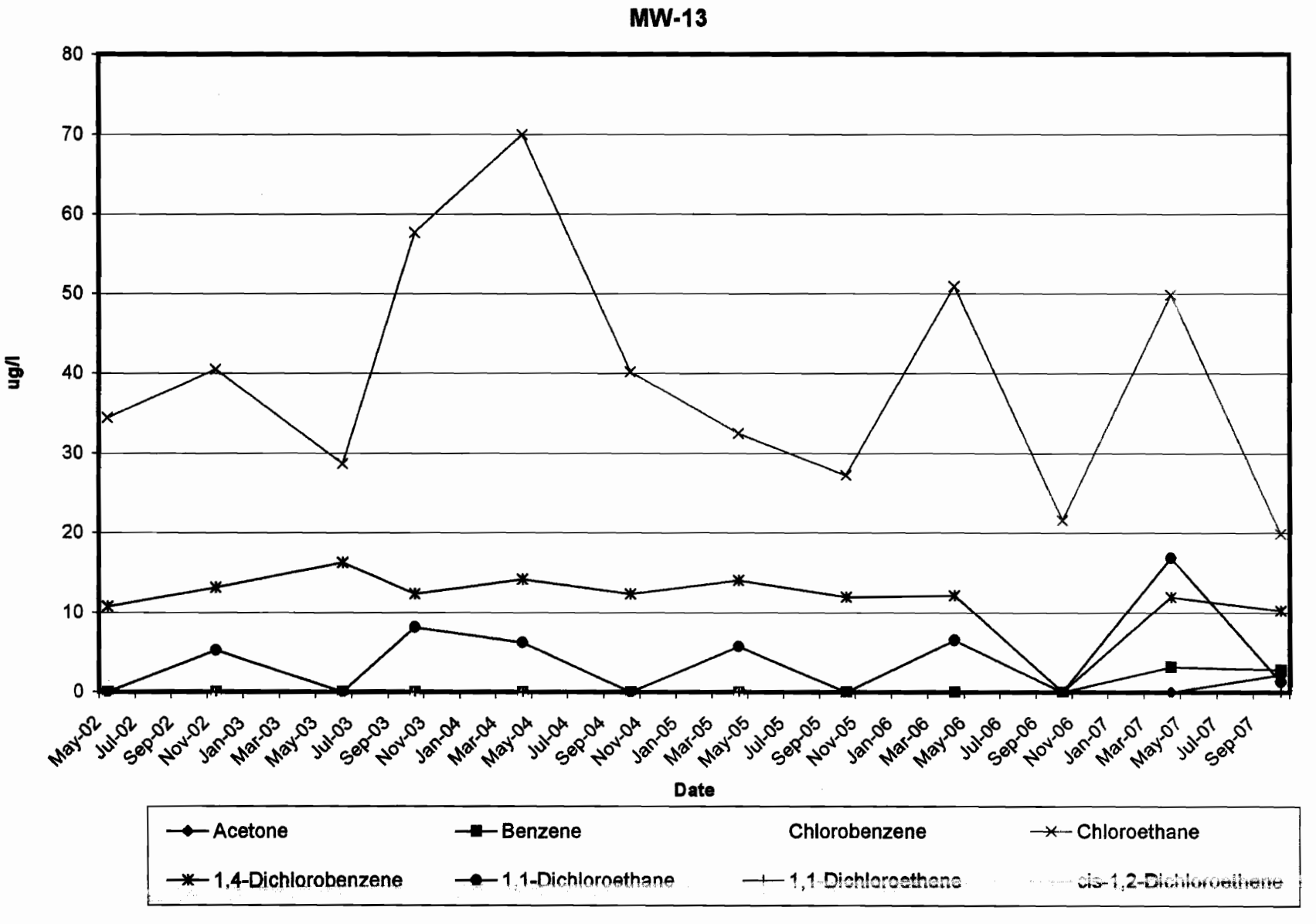
Davidson County Holly Grove Landfill



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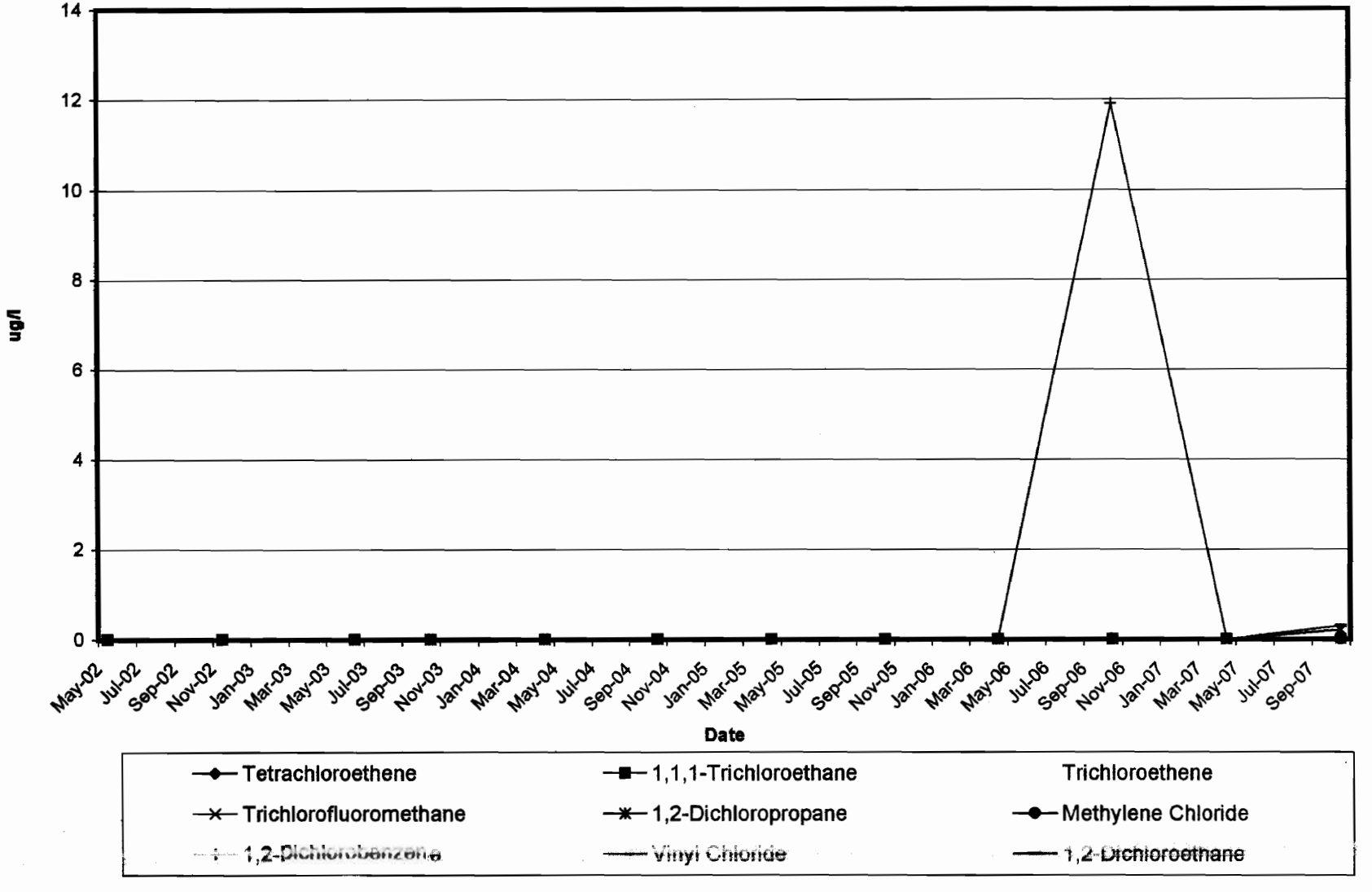
Davidson County Holly Grove Landfill

MW-13



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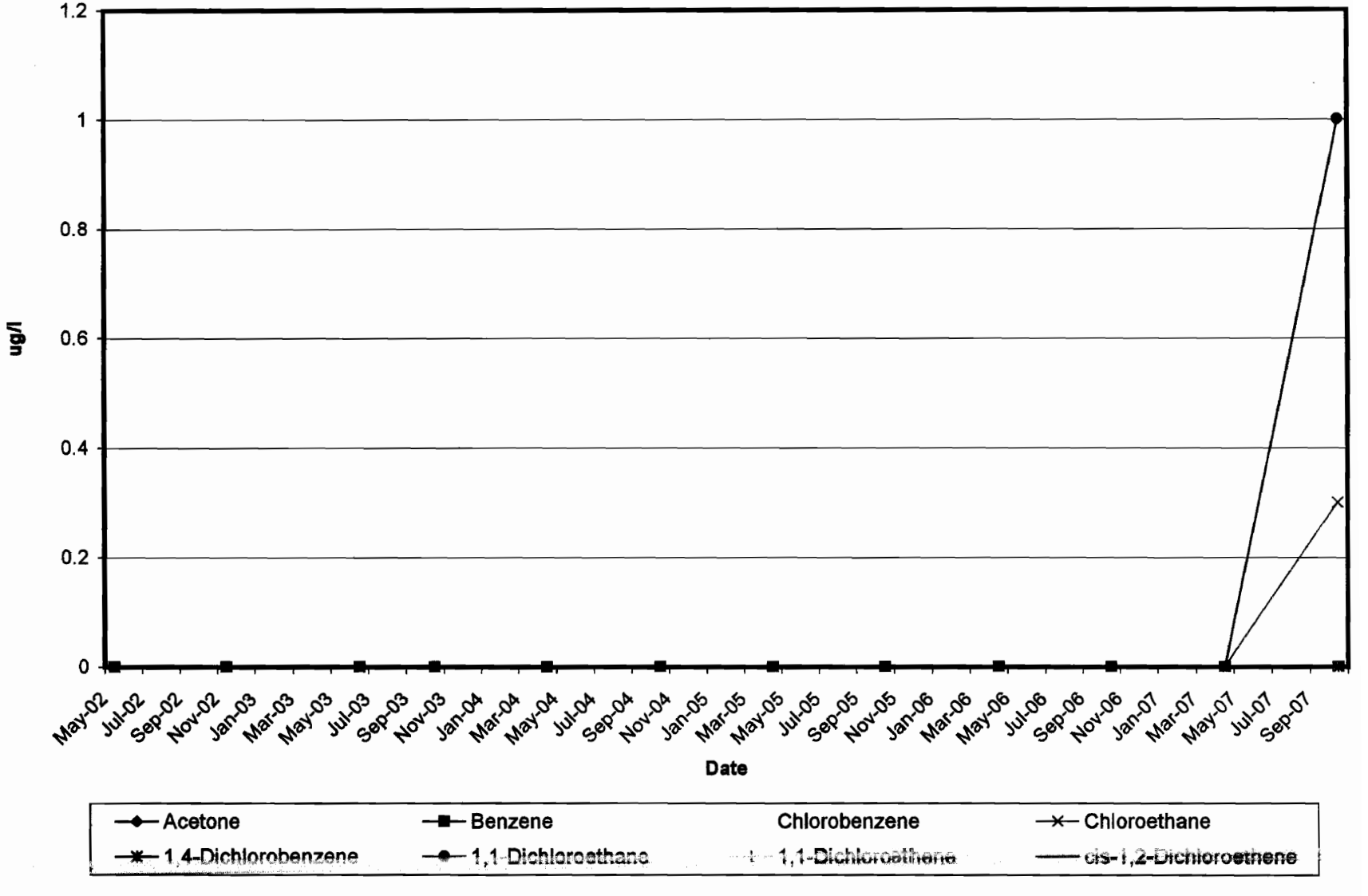
Davidson County Holly Grove Landfill

MW-14



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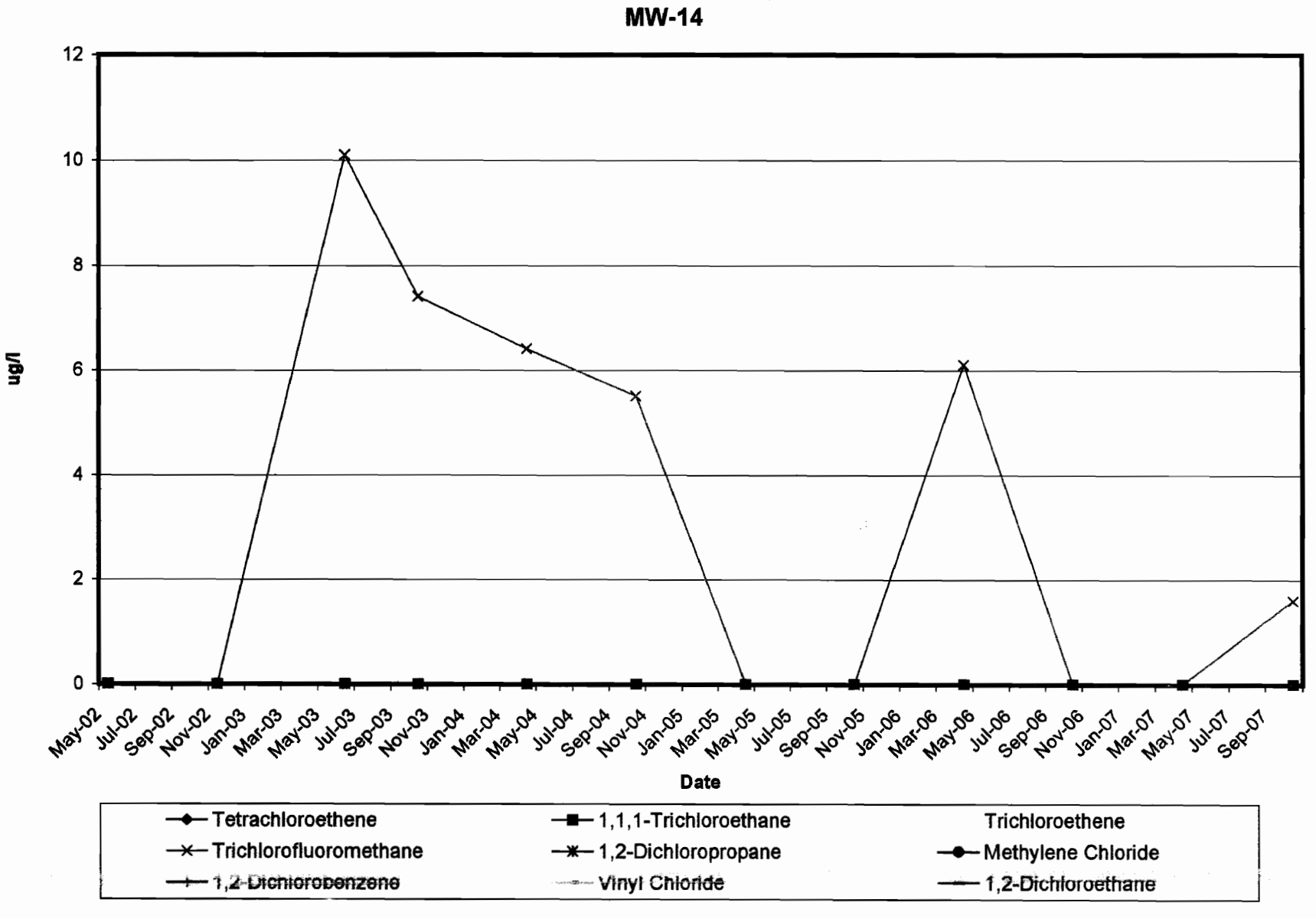
Davidson County Holly Grove Landfill



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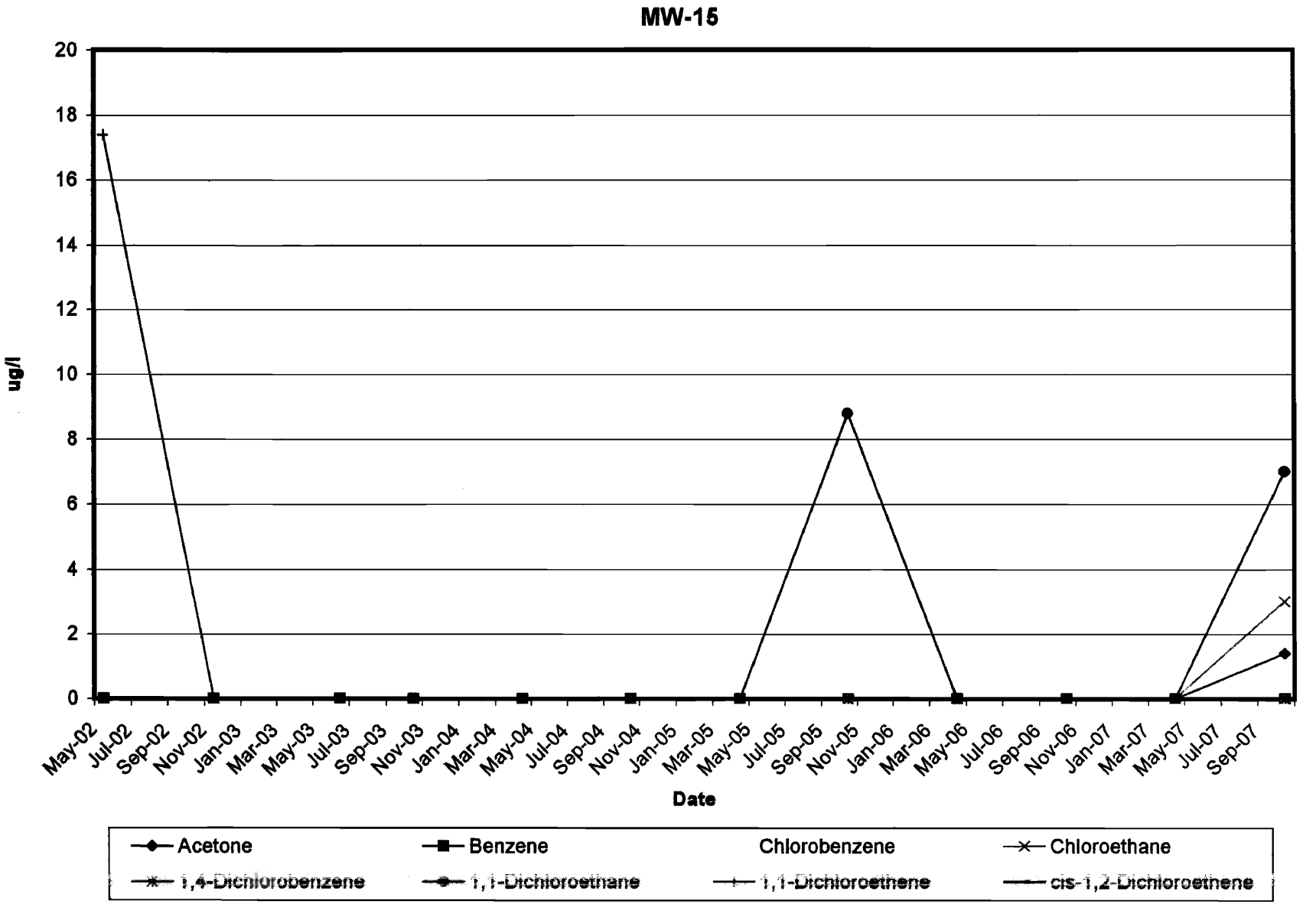

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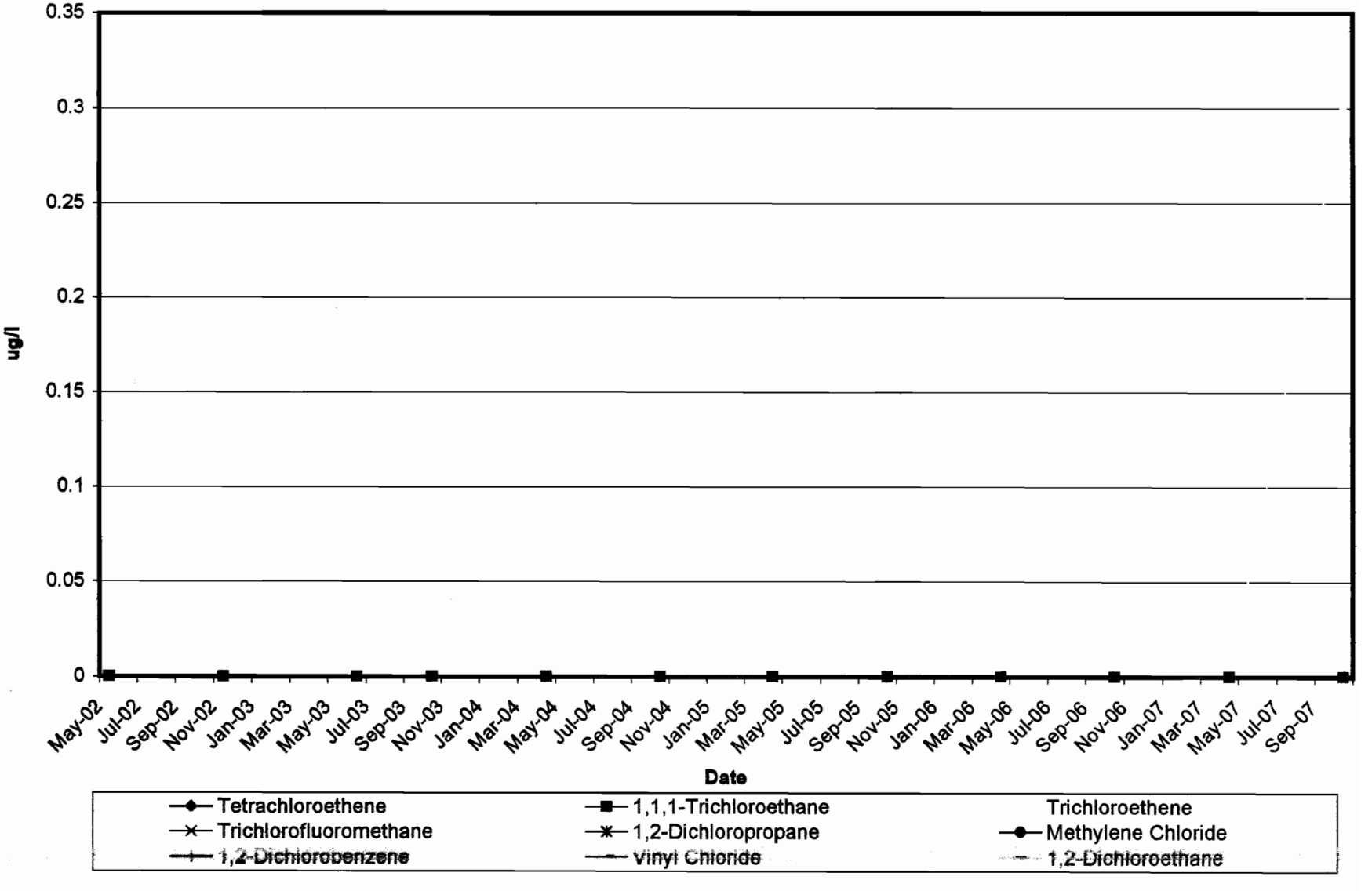
Davidson County Holly Grove Landfill

MW-15



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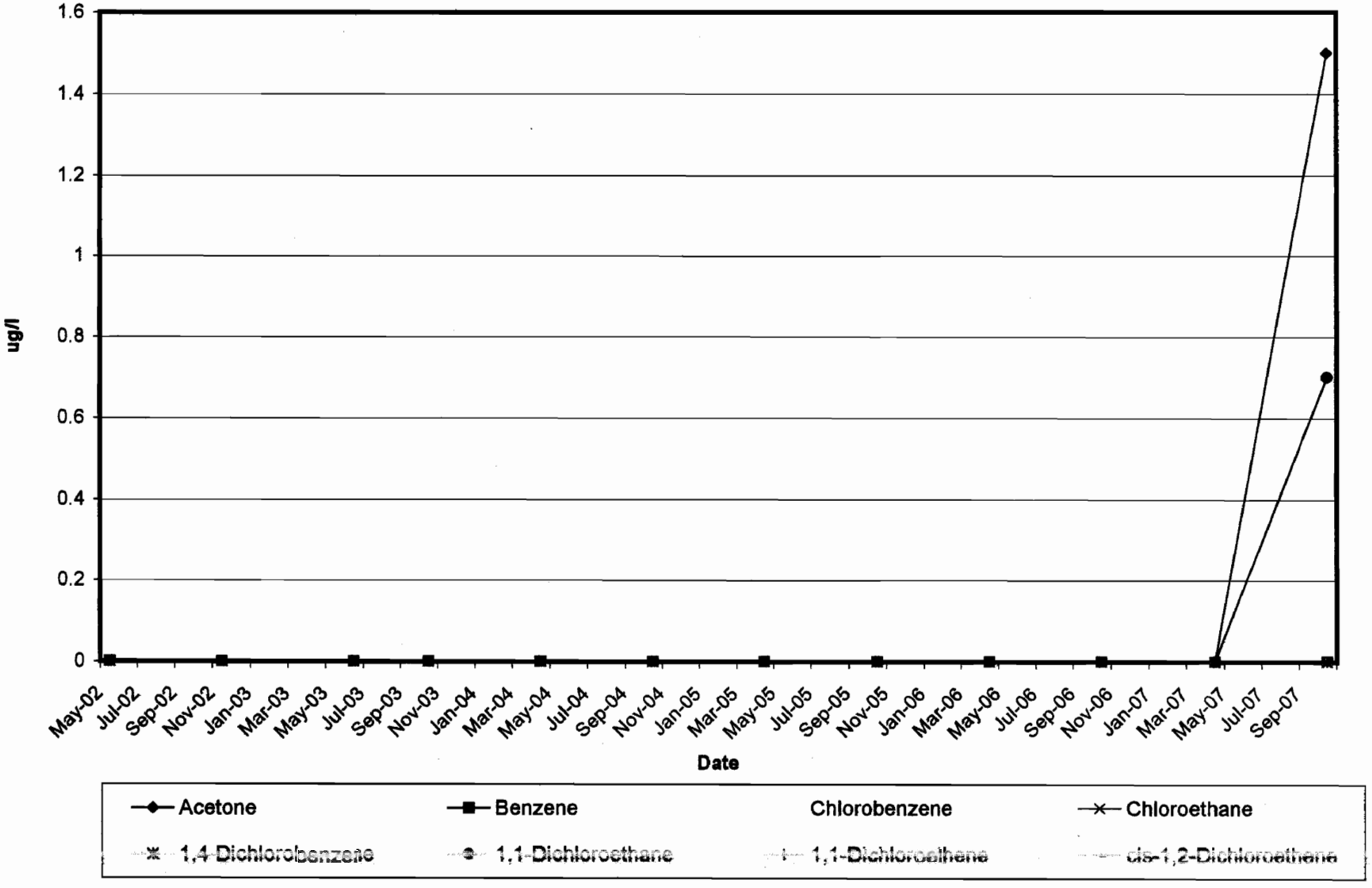
Davidson County Holly Grove Landfill

MW-16



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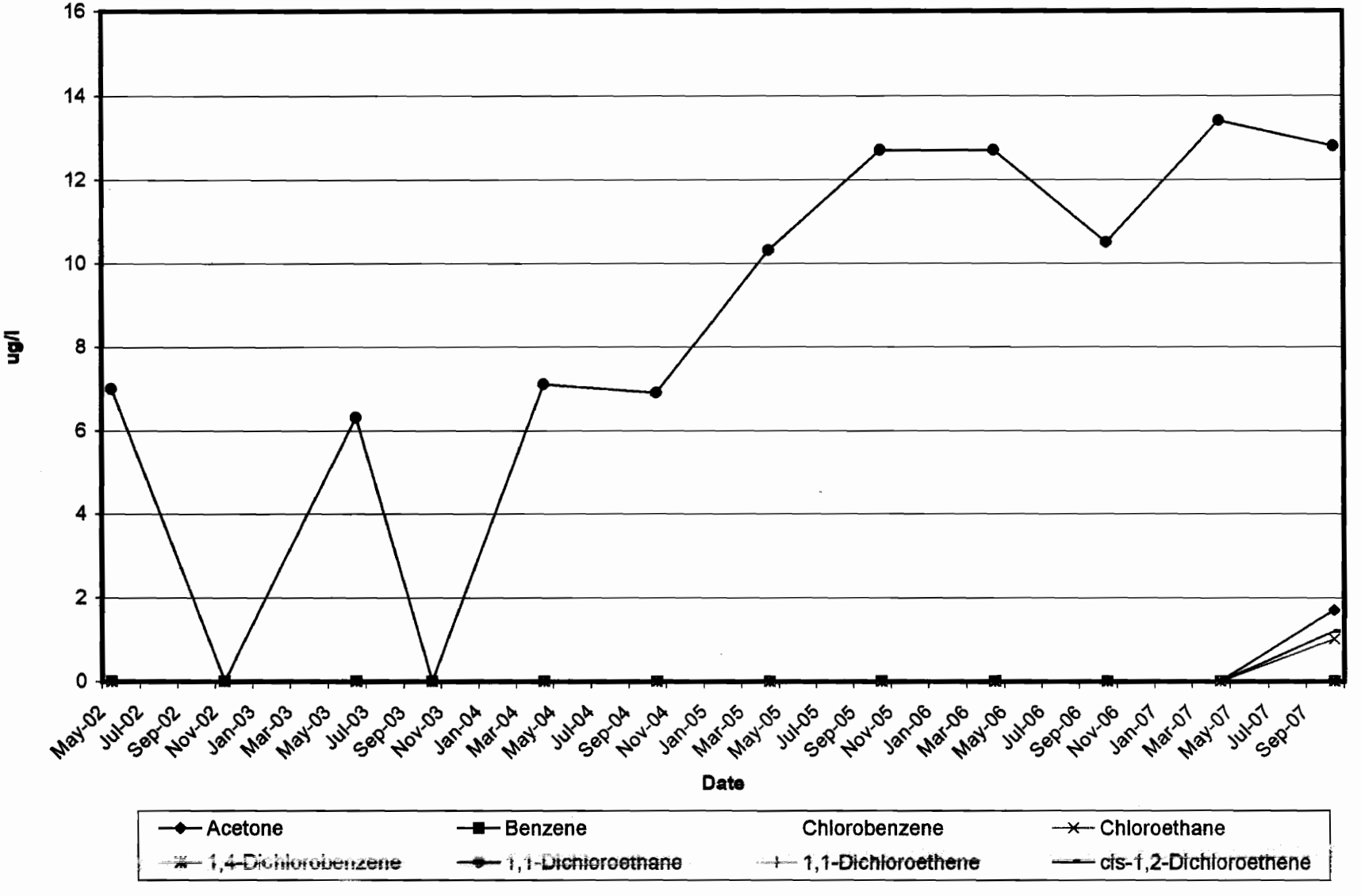
Davidson County Holly Grove Landfill

MW-17



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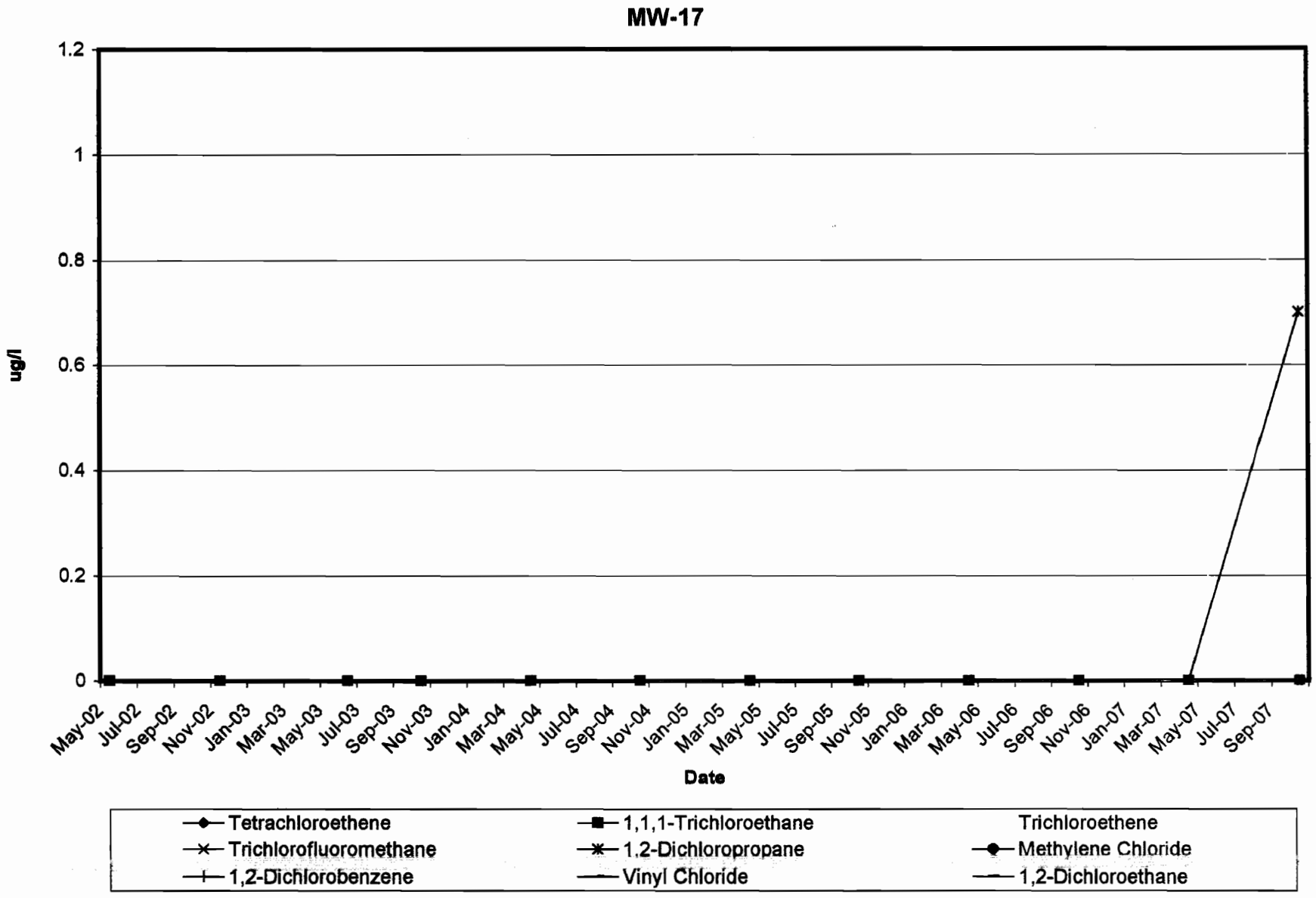

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