Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Taych, Ph.D.
Nicole Brown

FROM SPECTRUM ANALYTICAL (TUE)11 8 2005 18:30/ST. 18:22/NO. 5510232466 P 10

SA 36785 (P) MA

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DIST #1
10 WALNUT ST
PALMER MA
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA 01069
P.O. No.: SP005130 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST.
Location: PALMER State: MA
Sampler(s): D MATKA

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=REFRIG 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		Analyses: 502.2 w/MTBE							
36785-01	RW-7	11/7/05	930AM	G	GW	2/4	2					✓							
-02	RW-8	11/7/05	920AM	G	GW	2/4	2					✓							
-03	GRAVEL PACK WELL #2	11/7/05	950AM	G	DW	2/4	2					✓							

QA Reporting Notes: (check if needed)
State specific reporting standards
If applicable, please list below.
☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

☒ Fax results when available to (413) 283 2241 JAMES AMMANN
☐ E-mail to MIKE SCHERER DEP/SPFD
EDD Format CLEANHARBORS MRALLEN 781 794 1760

Condition upon receipt: ☒ Iced ☐ Ambient ☐ °C 6

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	11/7/05	10 AM
[signature]	[signature]	11/7/05	108

SAB6384 (M)

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DIST. #1
10 WALNUT ST
PALMER MA 01069
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA 01069
PW#5015 3604 (P)
P.O. No.: SP05122 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: PALMER State: MA
Sampler(s): DMAJKA

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= REFRIG 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		5022 w/MTBE								QA Reporting Notes: (check if needed)
B6384-01	RW-7	10/28/05	915AM	G	GW	2/9	2					✓								
02	RW-8	10/28/05	920AM	G	GW	2/9	2					✓								
03	GALAXY WELL #1	10/28/05	940AM	G	DW	2/9	2					✓								
04	GRAVEL PACK WELL #2	10/28/05	945AM	G	DW	2/9	2					✓								

State specific reporting standards
If applicable, please list below.

☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

☒ Fax results when available to (413) 283 2241 JAMES AMMANN
☐ E-mail to MIKE SCHERER DEP/SPFD
EDD Format CLEAN HARBORS MR ALLEN 781 794 1760

Condition upon receipt: ☒ Iced ☐ Ambient ☒ C 10

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	10/28/05	1130 AM
[signature]	[signature]	10/28/05	1220

Report Date:
27-Oct-05 16:12

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA36242-01	RW-7	Ground Water	26-Oct-05 09:05	26-Oct-05 12:15
SA36242-02	RW-8	Ground Water	26-Oct-05 09:10	26-Oct-05 12:15
SA36242-03	Gravel Pack Well #2	Ground Water	26-Oct-05 09:15	26-Oct-05 12:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the qualit requirements for each method. All applicable NELAC requirements have been met. Please note that this report contains 8 pages of analytical data p This report may not be reproduced, except in full, without writt

Please Note: Data contained within this report has undergone primary validation but may be subject to change pending final validation and QC review.

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

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Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA36242-01	13434	Ground Water	26-Oct-05 09:05	26-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	26-Oct-05	27-Oct-05	5101641	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	3.3	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA36242-01	13434	Ground Water	26-Oct-05 09:05	26-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	26-Oct-05	27-Oct-05	5101641	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.6	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.0*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*110*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA36242-02	13434	Ground Water	26-Oct-05 09:10	26-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	26-Oct-05	27-Oct-05	5101641	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	3.5	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	17.7	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA36242-02	13434	Ground Water	26-Oct-05 09:10	26-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	26-Oct-05	27-Oct-05	5101641	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	0.7	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	1.0	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.0*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

5A36242

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DIST
10 WALNUT ST
PALMER MA 01069
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA
P.O. No.: SP005121 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: PALMER State: MA
Sampler(s): DAVID MATKA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= REFRIG 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	502.2 w/MTBE							
A36242-01	RW-7	10/26/05	905AM	G	GW	2/9	2				✓							
-02	RW-8	10/26/05	910AM	G	GW	2/9	2				✓							
-03	GRAVEL PACK WELL #2	10/26/05	915AM	G	DW	2/9	2				✓							

Analyses:

QA Reporting Notes: (check if needed)

State specific reporting standards *If applicable, please list below.*

☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

☒ Fax results when available to (JAMES AMMANN 413 253 2241)
MIKE SCHERER DEP/SPFD
☐ E-mail to _____
EDD Format CLEAN HARBORS MA ALLEN 781 794 1790

Condition upon receipt: ☒ Iced ☐ Ambient ☒ °C 4

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	10/26/05	10 30 AM
[signature]	Mary DeMaio	10/26/05	1215

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

Report Date:
26-Oct-05 12:09

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer - MA
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA36101-01	RW-7	Ground Water	24-Oct-05 08:30	24-Oct-05 13:00
SA36101-02	RW-8	Ground Water	24-Oct-05 08:40	24-Oct-05 13:00
SA36101-03	Gravel Pack Well #2	Drinking Water	24-Oct-05 08:55	24-Oct-05 13:00
SA36101-04	Galaxy Well #1	Drinking Water	24-Oct-05 09:10	24-Oct-05 13:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s).
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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA36101-01	13434	Ground Water	24-Oct-05 08:30	24-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	25-Oct-05	25-Oct-05	5101519	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	2.5	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA36101-01	13434	Ground Water	24-Oct-05 08:30	24-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	25-Oct-05	25-Oct-05	5101519	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.5	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99.8*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*106*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA36101-02	13434	Ground Water	24-Oct-05 08:40	24-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	25-Oct-05	25-Oct-05	5101519	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.7	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	12.7	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	0.5	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	78.7	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA36101-02	13434	Ground Water	24-Oct-05 08:40	24-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	25-Oct-05	25-Oct-05	5101519	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	2.5	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.1	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	3.2	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	1.3	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*93.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99.8*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*107*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by;
Hanibal C. Taych, Ph.D.
Nicole Brown

SA36101

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DISTRICT
10 WALNUT ST
PALMER MA
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER
10 WALNUT ST
PALMER MA
P.O. No.: 8000 5120 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: PALMER State: MA
Sampler(s): DAVID MAJKA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= REFRIG 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

QA Reporting Notes: (check if needed)
State specific reporting standards *If applicable, please list below.*
☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	522.2/NITRATE
36101-01	RW-7	10/24/05	830AM	G	GW	2/9	2				✓
02	RW-8	10/24/05	840AM	G	GW	2/9	2				✓
03	GRAVEL PACK WELL #2	10/24/05	855AM	G	DW	2/9	2				✓
04	GALAXY WELL #1	10/24/05	910AM	G	DW	2/9	2				✓

☒ Fax results when available to (JAMES AMMANN 1413 2732241)
☐ E-mail to MIKE SCHERER DEP/SPFD
EDD Format CLEAN HARBORS MRALLEN 781 794 1760

Condition upon receipt: ☒ Iced ☐ Ambient 2°C 10

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	10/24/05	1200pm
[signature]	[signature]	10/24/05	1300

(WED) 10 26 2005 12:42/ST. 12:34/NO. 5510232900 P 12
FROM SPECTRUM ANALYTICAL

Report Date:
21-Oct-05 16:43

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA35984-01	RW-7	Ground Water	20-Oct-05 11:50	20-Oct-05 14:49
SA35984-02	RW-8	Ground Water	20-Oct-05 11:45	20-Oct-05 14:49
SA35984-03	Gravel Pack Well #2	Drinking Water	20-Oct-05 12:00	20-Oct-05 14:49

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requireme
Please note that this report contains 8 pages of analytical data plu
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Please Note: Data contained within this report has undergone primary validation but may be subject to change pending final validation and QC review.

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Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA35984-01	13434	Ground Water	20-Oct-05 11:50	20-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	20-Oct-05	21-Oct-05	5101267	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	2.0	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA35984-01	13434	Ground Water	20-Oct-05 11:50	20-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	20-Oct-05	21-Oct-05	5101267	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.6	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*93.0*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*97.6*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*106*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA35984-02	13434	Ground Water	20-Oct-05 11:45	20-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	20-Oct-05	21-Oct-05	5101267	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon 12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	10.3	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	60.0	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA35984-02	13434	Ground Water	20-Oct-05 11:45	20-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	20-Oct-05	21-Oct-05	5101267	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	2.1	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.9	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	2.8	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	1.2	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*92.4*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*97.2*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*107*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 35984 (H) (M)

SPECTRUM ANALYTICAL, INC.
Featuring
HANDRAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 10/21/05
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DISTRICT
10 WALNUT ST
PALMER MA
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER DIST.
10 WALNUT ST
PALMER MA
P.O. No.: SP005115 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: ____ State: ____
Sampler(s): DAVE MAJKA

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= REFRIG 10=____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=____ X2=____ X3=____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		Analyses: 5022 W/MTBE								Notes:
35984-01	RW-7	10/20/05	1150AM	G	GW	2/9	2					✓								
-02	RW-8	10/20/05	1145AM	G	GW	2/9	2					✓								
-03	GRAVEL PACK WELL#2	10/20/05	1200PM	G	DW	2/9	2					✓								

JAMES AMMANN 1-413 283 2241
MIKE SCHORER DEP / SPFD

☒ Fax results when available to (____) ____
☐ E-mail results when available to ____
Condition upon Receipt: ☒ Iced ☐ Ambient ☒ 15 °C
CLEAN HARBORS MA ALLEN
781 794 1790

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	10/20/05	1015pm
[signature]	[signature]	10/20/05	1449

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

Report Date:
19-Oct-05 11:12

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA35175-01	RW-7	Ground Water	04-Oct-05 08:15	04-Oct-05 12:03
SA35175-02	RW-8	Ground Water	04-Oct-05 08:20	04-Oct-05 12:03

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met
Please note that this report contains 6 pages of analytical data plus Chain of Custody documen(s).
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New York # 11393/11840
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USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA35175-01	13434	Ground Water	04-Oct-05 08:15	04-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	07-Oct-05	08-Oct-05	5100479	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	2.4	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA35175-01	13434	Ground Water	04-Oct-05 08:15	04-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	07-Oct-05	08-Oct-05	5100479	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.6	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.4*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*110*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*107*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA35175-02	13434	Ground Water	04-Oct-05 08:20	04-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	07-Oct-05	08-Oct-05	5100479	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.7	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	13.0	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	0.9	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	91.8	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA35175-02	13434	Ground Water	04-Oct-05 08:20	04-Oct-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	07-Oct-05	08-Oct-05	5100479	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	2.8	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.4	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	3.6	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	1.6	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*93.0*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

QC-1 Analyte out of acceptance range.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure The method blank is used to document contamination resulting from the analytical process

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 351750 5 MM

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Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DISTRICT
10 WALNUT ST
PALMER MA
Project Mgr.: J. AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA
P.O. No.: SP005102 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST.
Location: PALMER State: MA
Sampler(s): DMAJKA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= REFRIG 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	5022 w/MTBE							Notes:
351750 1	RW-7	10/4/05	815AM	G	GW	2/9	2				✓							
↓ 02	RW-8	10/4/05	820AM	G	GW	2/9	2				✓							

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	10/4/05	1203

JAMMANN 1-413-283-2241
☒ Fax results when available to (____)
MIKE SCHERER DEP SPFD
☐ E-mail results when available to
CLEAN HARBORS MRALLEN 781 794 1760
Condition upon Receipt: ☒ Iced ☐ Ambient ☐ 6 °C

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA34233-01	13434	Ground Water	13-Sep-05 08:15	13-Sep-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	19-Sep-05	19-Sep-05	5091190	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	3.6	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA34233-01	13434	Ground Water	13-Sep-05 08:15	13-Sep-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	19-Sep-05	19-Sep-05	5091190	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.5	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*92.4*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*106*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA34233-02	13434	Ground Water	13-Sep-05 08:20	13-Sep-05

CAS No	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	19-Sep-05	19-Sep-05	5091190	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.6	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	14.1	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	0.6	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	76.0	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA34233-02	13434	Ground Water	13-Sep-05 08:20	13-Sep-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	19-Sep-05	19-Sep-05	5091190	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	2.7	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.1	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	3.4	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	1.6	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*92.8*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*106*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL - Below Reporting Limit

X# 34233

CHAIN OF CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.
Featuring
HANNIBAL TECHNOLOGY

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Page ____ of ____

Report To: JAMES AMMANN
PALMER WATER DISTRICT
10 WALNUT ST
PALMER MA
Project Mgr.: J AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA
PH 413 283 2241
P.O. No.: 5000594 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: _____ State: _____
Sampler(s): DMAJKA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= REFRIG 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	SDWA 524.2 w/MTBE							Notes:
342331	RW-7	9/13/05	815AM	G	GW	2/9	2				✓							
↓-02	RW-8	9/13/05	820AM	G	GW	2/9	2				✓							

Relinquished by:	Received by:	Date:	Time:
David M[illegible]	Manuel Melendez	9/13/05	1410

☒ Fax results when available to (413) 283 2241 JAMMANN MIKE SCHERER DEP/SPFD
☐ E-mail results when available to CLEGHORN@MA 78/794 FAXO
Condition upon Receipt: ☒ Iced ☐ Ambient 14 °C

Report Date:
15-Aug-05 11:19

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA31732-01	RW-7	Ground Water	01-Aug-05 08:45	01-Aug-05 15:14
SA31732-02	RW-8	Ground Water	01-Aug-05 08:55	01-Aug-05 15:14

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 6 pages of analytical data plus Chain of Custody document(s).
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New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

Authorized by:

Hanibal G. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA31732-01	13434	Ground Water	01-Aug-05 08:45	01-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	02-Aug-05	02-Aug-05	5080138	CH	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.5	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	11.4	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA31732-01	13434	Ground Water	01-Aug-05 08:45	01-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	02-Aug-05	02-Aug-05	5080138	CH	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.8	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.4*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*105*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL – Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA31732-02	13434	Ground Water	01-Aug-05 08:55	01-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	02-Aug-05	02-Aug-05	5080138	CH	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.7	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	16.7	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	70.7	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA31732-02	13434	Ground Water	01-Aug-05 08:55	01-Aug-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	02-Aug-05	02-Aug-05	5080138	CH	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	2.7	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.0	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	3.6	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*102*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*104*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure The method blank is used to document contamination resulting from the analytical process

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples These compounds are spiked into all blanks, standards, and

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor

SA 31732 (10)

SPECTRUM ANALYTICAL, INC.
Featuring
HANIRAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Page 1 of 1

Report To: JAMES AMMANN
PALMER WATER DISTRICT #1
10 WALNUT ST
PALMER MA 01069
Project Mgr.: JAMES AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA 01069
P.O. No.: 3000581 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST.
Location: _____ State: _____
Sampler(s): DMAJKA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= REFRIG 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic			502.2/MTBE							Notes:
3673201	RW-7	8/1/05	845AM		GW	2/9	2						✓							
AD																				
6 - 02	RW-8	8/1/05	855AM		GW	2/9	2						✓							
AD																				
AD																				
AD																				
AD																				
AD																				
AD																				
AD																				
AD																				

JAMES AMMANN 413 283 2241
MIKE SCHERER
☒ Fax results when available to (____) PED/SPFD
CLEAN HARBORS MR ALLEN
☐ E-mail results when available to 781 794 1760

Condition upon Receipt: ☒ Iced ☐ Ambient ☒ 6 °C

Relinquished by:	Received by:	Date:	Time:
David Mj		8/1/05	915AM
	Hanu Mykendy	8/1/05	1514

FROM SPECTRUM ANALYTICAL

Report Date:
29-Jul-05 12:16

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA31252-01	RW-7	Ground Water	18-Jul-05 09:10	18-Jul-05 12:40
SA31252-02	RW-8	Ground Water	18-Jul-05 09:09	18-Jul-05 12:40

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 6 pages of analytical data plus Chain of Custody document(s).
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Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA31252-01	13434	Ground Water	18-Jul-05 09:10	18-Jul-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method Volatiles							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	22-Jul-05	23-Jul-05	5071372	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.7	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	14.4	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA31252-01	13434	Ground Water	18-Jul-05 09:10	18-Jul-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method Volatiles							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	22-Jul-05	23-Jul-05	5071372	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.0	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*103*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*108*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA31252-02	13434	Ground Water	18-Jul-05 09:09	18-Jul-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method Volatiles							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	22-Jul-05	23-Jul-05	5071372	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	14.5	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	65.1	0.5 µg/l	1	"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA31252-02	13434	Ground Water	18-Jul-05 09:09	18-Jul-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method Volatiles							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	22-Jul-05	23-Jul-05	5071372	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	3.1	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	0.6	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	3.8	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*94.2*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*103*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*109*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA31252 (m)

SPECTRUM ANALYTICAL

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☑ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval; min. 24 hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwised instructed.

Report To: JAMES AMMANN
PALMER WATER DISTRICT
10 WALNUT ST
PALMER MA
Project Mgr.: J. AMMANN

Invoice To: PALMER WATER DIST.
10 WALNUT ST
PALMER MA
P.O. No.: SP00570 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST
Location: _____ State: _____
Sampler(s): _____

1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=MeOH 7= REFRIG

DW=Drinking Water GW=Ground Water WW=Waste Water
SO=Soil SL=Sludge O=Oil X1=_____ X2=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	pH	# Of VOA Vials	# Of Amber Glass	# Of Clear Glass	# Of Plastic		502.2 L/MTBE								Notes:
SA31252-D AB	RW-7	7/18/05	910AM	G	GW	2/7		2					✓								
AB																					
AB 02	RW-8	7/18/05	909AM	G	GW	2/7		2					✓								
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					

Additional Instructions: FAX RESULTS
J. AMMANN 1-413-283-2241
MIKE SCHERER DEP/SPFD
CLEAN HARBORS MR ALLEN 781-794-1760

☐ Fax results when available to (____) 15°

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	7/18/05	10:15AM
[signature]	[signature]	7/18/05	12:40

Report Date:
17-Jun-05 09:06

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Palmer Water District
10 Walnut Street
Palmer, MA 01069
Attn: Jim Ammann

Project: Palmer Water Dist
Project #: 13434

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA29276-01	RW-7	Ground Water	08-Jun-05 08:30	10-Jun-05 11:19
SA29276-02	RW-8	Ground Water	08-Jun-05 08:40	10-Jun-05 11:19

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 6 pages of analytical data plus Chain of Custody document(s).
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Maine # MA138
New Hampshire # 2538/2972
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

ACCREDITED IN ACCORDANCE WITH

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA29276-01	13434	Ground Water	08-Jun-05 08:30	10-Jun-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	13-Jun-05	14-Jun-05	5060790	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	0.6	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	31.7	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-7 SA29276-01	13434	Ground Water	08-Jun-05 08:30	10-Jun-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	13-Jun-05	14-Jun-05	5060790	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	1.2	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*96.6*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99.6*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*102*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*99.2*	*70-130 %*		"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 SA29276-02	13434	Ground Water	08-Jun-05 08:40	10-Jun-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
67-64-1	Acetone	BRL	10.0 µg/l	1	EPA 524.2	13-Jun-05	14-Jun-05	5060790	RLJ	
107-13-1	Acrylonitrile	BRL	1.0 µg/l	1	"	"	"	"	"	
71-43-2	Benzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-86-1	Bromobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-25-2	Bromoform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-83-9	Bromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL	10.0 µg/l	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-15-0	Carbon disulfide	BRL	0.5 µg/l	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL	0.5 µg/l	1	"	"	"	"	"	
108-90-7	Chlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-00-3	Chloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
67-66-3	Chloroform	BRL	0.5 µg/l	1	"	"	"	"	"	
74-87-3	Chloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	BRL	0.5 µg/l	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL	0.5 µg/l	1	"	"	"	"	"	
74-95-3	Dibromomethane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL	0.5 µg/l	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	14.7	0.5 µg/l	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL	0.5 µg/l	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	0.5 µg/l	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL	10.0 µg/l	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL	0.5 µg/l	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	52.0	0.5 µg/l	1	"	"	"	"	"	

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* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
RW-8 3A29276-02	13434	Ground Water	08-Jun-05 08:40	10-Jun-05

CAS No.	Analyte(s)	Result	*RDL/Units	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst	Flag
Volatile Organic Compounds										
524.2 Purgeable Organic Compounds			Prepared by method SW846 5030 Water MS							
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL	10.0 µg/l	1	EPA 524.2	13-Jun-05	14-Jun-05	5060790	RLJ	
75-09-2	Methylene chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL	0.5 µg/l	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
100-42-5	Styrene	BRL	0.5 µg/l	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	3.3	0.5 µg/l	1	"	"	"	"	"	
108-88-3	Toluene	BRL	0.5 µg/l	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL	0.5 µg/l	1	"	"	"	"	"	
79-01-6	Trichloroethene	4.0	0.5 µg/l	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL	0.5 µg/l	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL	0.5 µg/l	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL	0.5 µg/l	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL	0.5 µg/l	1	"	"	"	"	"	
1330-20-7	m,p-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL	0.5 µg/l	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL	10.0 µg/l	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	1.0	0.5 µg/l	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL	0.5 µg/l	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL	10.0 µg/l	1	"	"	"	"	"	
Surrogate recoveries:										
460-00-4	*4-Bromofluorobenzene*	*96.8*	*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99.8*	*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*101*	*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*100*	*70-130 %*		"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 29276

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☑ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: JAMES AMMANN
PALMER WATER DIST #1
10 WALNUT ST PALMER MA.
Project Mgr.: J. AMMANN

Invoice To: PALMER WATER DIST
10 WALNUT ST
PALMER MA.
P.O. No.: 900561 RQN: 3179

Project No.: 13434
Site Name: PALMER WATER DIST.
Location: _____ State: _____
Sampler(s): DAVID MATICA

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= RUSH 10= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		502.2 w/MTBE							Notes:
29276-01	RW-7	6/8/05	830AM	G	GW	2/9	2					✓							
AC																			
AC -02	RW-8	6/8/05	840AM	G	GW	2/9	2					✓							
AC																			
AC																			
AC																			
AC																			
AC																			
AC																			
AC																			

Relinquished by:	Received by:	Date:	Time:
David Matica	[illegible signature]	6/8/05	1119

JAMES AMMANN
☑ Fax results when available to (413) 283-2241
MIKE SCHERR DEP/SDED
☐ E-mail results when available to
CLEAN HARBORS MEACON
Condition upon Receipt: ☐ Iced ☐ Ambient ☐ ___°C
781 794 1790