VCP V00084

SUMMARY REPORT

SECOND QUARTERLY GROUNDWATER MONITORING EVENT

WEGMANS FOOD MARKET
601 AMHERST STREET
BUFFALO, NEW YORK

OCTOBER 1997

Prepared by:

URS Greiner, Inc.
Buffalo, New York

Prepared for:

Wegmans Food Markets, Inc.
1500 Brooks Avenue, Box 844
Rochester, New York

TABLE OF CONTENTS

LIST OF TABLES

ATTACHMENTS

1.0 INTRODUCTION

Wegmans recently completed remediation and demolition of an existing industrial facility at 601 Amherst Street in Buffalo, NY to allow construction of a new food market. The remediation was completed in accordance with the NYSDEC-approved Remedial Action Work Plan (CDM October, 1996). Additionally, the work plan requires monitoring of the three on-site groundwater monitoring wells (MW-5, MW-6, and MW-7R) every three months for a minimum period of one year with the first event occurring in the first quarter after completion of the remedial action (June 1997). The groundwater monitoring consists of checking for the visual presence of light non-aqueous phase liquids (LNAPL), field measurement of temperature, conductivity and pH, and sampling for the analysis of target compound list (TCL) volatiles and target analyte list (TAL) metals (total and dissolved/or soluble).

Wegmans contracted URS Greiner, Inc. (URSG) to perform the required groundwater monitoring. Field activities, measurements and analytical results from the second quarterly monitoring event are summarized in this report.

2.0 ONSITE ACTIVITIES

Monitoring well MW-6 was damaged during on-site construction activities and subsequently was replaced on August 26, 1997 by a new well, MW-6R. The boring log and well installation detail sheet are contained in Attachment A. MW-6R was developed (see Attachment B) by bailing and pumping to remove a total of 10 gallons of water. Additionally, in order to accommodate the final site grading, the PVC casings on monitoring wells MW-5 and MW-7R were lengthened (see Attachment A). The teflon bailer, which was installed during the previous sampling event, was damaged and therefore not replaced in MW-5 after the casing was lengthened by Marcor. Consequently, for purging and sampling of MW-5 and MW-6R, clear disposable teflon bailers were used during this event.

The second sampling event was completed by URSG on September 9, 1997. A copy of the field activities log is attached (Attachment C). Upon opening the protective casing, the headspace of each well was checked with a photoionization detector (PID) for the presence of volatile organic vapors and the reading recorded. The well was then checked for the presence of LNAPLs by lowering the clear teflon bailers into the top of the water column and then visually inspecting the extracted water. No

TABLE 1

SUMMARY OF MONITORING WELL MEASUREMENTS

Monitoring Well	MW-5	MW-6R**	MW-7R
PID Headspace (ppm)	5.5	2.2	1.2
Depth to bottom (ft.)	15.00*	13.55	23.6*
Depth to water (ft.)	13.00	10.80	12.9
Water depth (ft.)	2.00	2.75	10.7
Water volume (gal.)	0.34	0.47	1.82
Purge volume (gal.)	1.0	1.4	5.5
LNAPLs (visual)	none detected	none detected	none detected

TABLE 2

SUMMARY OF FIELD PARAMETER MEASUREMENTS

Monitoring Well		pH (Units)	Temperature (°C)	Conductivity (umhos/cm)
MW-5	Initial	6.73	16.7	1055
	End	6.88	16.7	1009
	Sample	6.85	16.5	1040
MW-6R**	Initial	7.03	18.6	1285
	End	6.99	16.8	1279
	Sample	6.94	16.0	1378
MW-7R	Initial	7.3	21.5	1196
	End	7.17	16.9	1265
	Sample	7.71	17.4	1283

* An extension was added to the overall length of wells MW-5 and MW-7R.

** MW-6 was replaced with MW-6R as a result of on-site construction activities.

NAPLs were detected. Water and well depth were measured, and the well volume determined. Table 1 summarizes these well measurements. Prior to sampling, the wells were purged by removing a minimum of three (3) well volumes of water. Temperature, conductivity and pH were measured at the start and end of purging (see Attachment D). Purge water was placed into a Department of Transportation (DOT) approved 55-gallon drum and staged on-site for future disposal. After the water levels in the purged wells recovered at least 90% of their pre-purge level, representative groundwater samples were collected and submitted to Columbia Analytical Services (CAS) Laboratory in Rochester, NY for analysis of TCL volatiles and total and dissolved TAL metals. Temperature, conductivity and pH measurements were taken again at the time of sampling. Table 2 summarizes these field parameters. Samples for dissolved metals were filtered through a 45-micron filter in the field prior to preservation. All sample containers were pre-preserved by CAS. Four groundwater samples (3 monitoring wells plus one field duplicate), and one trip blank were analyzed by CAS. The groundwater samples were analyzed for TCL volatiles by EPA Method 8260 and TAL metals by EPA Method 200 series. Chain of custody forms are contained in Attachment E.

3.0 ANALYTICAL DATA AND RESULTS

The deliverable data package received from CAS consisted of analytical results and volatile method blank results. Quality control data was limited to volatile surrogate recoveries. The data was reviewed for holding time compliance and a comparison of total to dissolved metals, and duplicate results. EPA Methods 6010 and 7000 series were requested for metals analysis, however, the laboratory used EPA 200 series methods. Whereas, there are some QC variations, the methods are essentially the same therefore usability of the data is not affected.

A summary of the detected parameters is presented in Table 3. The analytical data is presented in Attachment E. As indicated on Table 3, the only volatile organic compound detected was vinyl chloride, in MW-7R. For metals, arsenic, barium, calcium, iron, magnesium, manganese, potassium, sodium and zinc were detected in all samples. Aluminum and mercury were detected in all samples except MW-6R and MW-7R dissolved fractions. Chromium, copper and lead were detected in the total fraction only. Thallium was detected in MW-5 and MW-7R (total and dissolved). Beryllium was detected in MW-5 and MW-6R total fractions only. Antimony, cadmium, cobalt, nickel, silver and vanadium were detected in MW-6R, total fraction only.

TABLE 3
ANALYTICAL RESULTS SUMMARY OF DETECTED ANALYTES
WEGMANS AMHERST STREET SITE
MONITORING WELLS: SECOND QUARTERLY SAMPLING EVENT

Sample ID Fraction Compound Sample Date	STANDARD* (MG/L)	MW-5 TOTAL 09/09/97	MW-5 SOLUBLE 09/09/97	MW-6R TOTAL 09/09/97	MW-6R SOLUBLE 09/09/97	MW-6R DUP TOTAL 09/09/97	MW-6R DUP SOLUBLE 09/09/97	MW-7R TOTAL 09/09/97	MW-7R SOLUBLE 09/09/97	TRIP BLANK 09/09/97
VOLATILE (ppm)										
Vinyl chloride	0.002	- -		- -		- -		**0.014**		- -
METALS (ppm)										
Aluminum	na	19	0.36	99	- -	84	0.14	8.4	- -	
Antimony	na	- -	- -	0.090	- -	0.073	- -	- -	- -	
Arsenic	0.025	**0.078**	**0.035**	**0.26**	**0.040**	**0.24**	**0.040**	**0.052**	**0.038**	
Barium	1.0	0.31	0.18	**2.7**	0.31	**2.4**	0.29	0.47	0.29	
Beryllium	na	0.0057	- -	0.0088	- -	0.0070	- -	- -	- -	
Cadmium	0.01	- -	- -	**0.014**	- -	**0.011**	- -	- -	- -	
Calcium	na	241	152	318	196	317	192	196	176	
Chromium	0.05	0.035	- -	**0.21**	- -	**0.19**	- -	0.016	- -	
Cobalt	na	- -	- -	0.093	- -	0.078	- -	- -	- -	
Copper	0.2	0.13	- -	**1.8**	- -	**1.5**	- -	0.14	- -	
Iron	0.3	**27**	**1.0**	**160**	**2.1**	**140**	**2.0**	**19**	**0.35**	
Lead	0.025	**0.17**	- -	**3.1**	- -	**2.7**	- -	**0.25**	- -	
Magnesium	na	37	26	52	29	49	27	44	38	
Manganese	0.3	**1.6**	**0.64**	**3.4**	**0.97**	**3.2**	**1.0**	**0.60**	**0.53**	
Mercury	0.002	0.00068	0.00050	**0.0083**	- -	**0.0055**	- -	0.00079	- -	
Nickel	na	- -	- -	0.31	- -	0.25	- -	- -	- -	
Potassium	na	11	4.4	25	13	24	12	16	13	
Silver	0.05	- -	- -	**0.075**	- -	0.020	- -	- -	- -	
Sodium	20	**36**	**32**	**61**	**56**	**58**	**52**	**42**	**37**	
Thallium	na	0.012	0.015	- -	- -	- -	- -	0.015	0.015	
Vanadium	na	- -	- -	0.33	- -	0.27	- -	- -	- -	
Zinc	0.3	**0.48**	0.041	**7.6**	0.064	**6.1**	0.051	0.18	0.032	

Only detected results reported (in MG/L).

Not analyzed / analysis not required

- - Not detected

na Not applicable - No standard

BOLD Exceeds standard

* New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series (1.1.1) "AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES," Class GA Water Article 17 of the Environmental Conservation Law and 6NYCRR Part 703, October 22, 1993.

The concentration of the detected parameters subsequently were compared with the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) "Ambient Water Quality Standards and Guidance Values, Class GA Water, October 1993" (Table 3). Based on this assessment, the concentration of vinyl chloride (0.014 mg/L) in MW-7R exceeds the allowable concentration of 0.002mg/L for class GA water.

Additionally, with respect to the observed metals concentrations , MW-5 had exceedances for arsenic, iron, lead, manganese, sodium, and zinc in the total fraction, and arsenic, iron, manganese, and sodium in the dissolved fraction. MW-6R exceeded Class GA standards in the total fraction for arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, sodium and zinc, and arsenic, iron, manganese and sodium in the dissolved fraction. MW-7R had exceedances for arsenic, iron, lead, manganese, and sodium in the total fraction, and arsenic, iron, manganese and sodium in the dissolved fraction.

4.0 CONCLUSION

Based on the results of the analytical testing, the following conclusions can be reached.

- No volatile organic compounds were detected in any of the wells, with the exception of vinyl chloride in MW-7R, which exceeds the Class GA water standards.

- Total metals (unfiltered samples), consisting of arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, silver, sodium, and zinc were detected at concentrations which exceed the standards for class GA waters.

- Soluble metals (filtered samples), consisting of arsenic, iron, manganese and sodium were detected at concentrations which only slightly exceed the standards for class GA waters.

- The antimony, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, silver, vanadium, and to some extent, the aluminum, iron, mercury and zinc detected in the total metals analyses were not detected in the soluble metals analyses. It is likely that these metals are associated with sediment present in the samples, and are not indicative of soluble metals in the groundwater.

- Arsenic, magnesium, manganese, sodium and thallium were detected at very similar levels in both the total and soluble analyses. This would tend to indicate that these metals are actually dissolved in the groundwater.

Based on a comparison of analytical results from the second quarter with the first quarter results (Table 4), the following variations were noted:

- Vinyl chloride concentration for the second quarter decreased slightly in MW-7R.

- Antimony, beryllium, cadmium, cobalt, silver and vanadium were detected in MW-6R total metals analysis only, which previously were not detected in MW-6. It is likely that these metals are associated with the sediments present in the samples at the new well location.

- Beryllium was detected in MW-5 (total) and thallium was detected in MW-5 and MW-7R (total and dissolved) which were not found in the first quarter samples.

All the additional metals in the second quarter were detected at concentrations near the detection limit (PQLs) and may not be indicative of an increase in the presence of metals. For metals detected in both the first and second quarters, the concentrations are comparable. Overall, the results indicate no major changes in water quality.

TABLE 4
ANALYTICAL RESULTS SUMMARY OF DETECTED ANALYTES
WEGMANS AMHERST STREET SITE
MONITORING WELLS: FIRST QUARTERLY SAMPLING EVENT

Sample ID Fraction Compound Sample Date	STANDARD (MG/L)	MW-5 TOTAL 06/05/97	MW-5 SOLUBLE 06/05/97	MW-6 TOTAL 06/05/97	MW-6 SOLUBLE 06/05/97	MW-7R TOTAL 06/05/97	MW-7R SOLUBLE 06/05/97	MW-7R DUP TOTAL 06/05/97	MW-7R DUP SOLUBLE 06/05/97	DRUM TOTAL 06/05/97	TRIP BLANK 06/04/97
VOLATILE (ppm)											
Vinyl chloride	0.002	- -		- -		**0.022**		**0.024**		- -	- -
METALS (ppm)											
Aluminum	na	2.0	- -	1.2	- -	19	- -	17	- -		
Arsenic	0.025	- -	- -		- -	0.022	- -	0.022	- -		
Barium	1.0	0.12	0.10	0.20	0.18	0.47	0.29	0.46	0.28		
Calcium	na	134	132	163	164	173	164	174	165		
Chromium	0.05	- -	- -	- -	- -	0.045	- -	0.035	- -		
Copper	0.2	- -	- -	0.034	- -	**0.33**	- -	**0.31**	- -		
Iron	0.3	**2.2**	- -	**4.0**	**1.3**	**25**	**8.6**	**24**	**8.9**		
Lead	0.025	0.016	- -	**0.028**	- -	**0.48**	- -	**0.45**	- -		
Magnesium	na	21	20	18	18	39	35	39	35		
Manganese	0.3	**0.39**	**0.42**	**0.48**	**0.46**	**0.63**	**0.44**	**0.62**	**0.43**		
Mercury	0.002	- -	- -	- -	- -	0.00042	- -	- -	- -		
Potassium	na	5.7	5.0	7.0	7.1	15	12	15	12		
Sodium	20	**31**	**31**	**21**	**21**	**35**	**34**	**35**	**34**		
Zinc	0.3	0.14	0.11	**0.45**	**0.42**	0.27	0.018	0.26	0.019		

Only detected results reported.

Not analyzed / analysis not required

- - Not detected

na Not applicable - No standard

BOLD Exceeds standard

* New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series (1.1.1) "AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES," Class GA Water Article 17 of the Environmental Conservation Law and 6NYCRR Part 703, October 22, 1993.

ATTACHMENT A

WELL BORING LOG AND INSTALLATION DETAILS

URS
CONSULTANTS, INC.
282 Delaware Avenue
Buffalo, New York 14202
(716) 856-5636

DATE 8-26-97

DAILY CONSTRUCTION REPORT

DAY	S	M	T ✓	W	TH	F	S

WEATHER	Bright Sun	Clear →	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70 →	70-85	85 up
WIND	Still	Moder ✓	High	Report No.	
HUMIDITY	Dry	Moder ✓	Humid	NA	

CLIENT Wegmans Food Markets
CONTRACTOR MARCOR
URS PROJECT MANAGER R. Henschel
URS JOB No. 05354480.01

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
MARCOR	1-oper.	1-Helper	

VISITORS

Time	Representating	Representating	Remarks

EQUIPMENT AT THE SITE Drill Rig

CONSTRUCTION ACTIVITIES Arrived at Wegmans, Amherst St. ≈ 12:45 pm, met Darren of Foundation Design at trailer. Darren stated that MARCOR would be on site later, and he walked the site w/ geologist to show the locations of wells. Scope of work included :- Replace the damaged MW-6 by installing a new well (MW-6R) ≈ 15 ft deep.
- Raise the well of MW-5 and MW-7R to ≈ 2 ft above final grades. Wells are 2" PVC pipe. Temporary protection provided by 6" pvc pipe.

MARCOR arrived at ≈ 1:30 pm, started working on MW-6R. By ≈ 5:30 pm, all work completed. MARCOR & Geologist left site.

SHEET 1 OF 1

☐ X - designates info on backside of page

BY M. Hsieh TITLE Geologist

REVIEWED BY: _____ PROJECT ENGINEER

URS Greiner, Inc.

TEST BORING LOG

BORING NO.: MW-6R
SHEET: 1 OF 1
JOB NO.: 05354480.01
BORING LOCATION: See attached plan
GROUND ELEVATION: NA
DATE STARTED: 8-26-97
DATE FINISHED: 8-26-97
DRILLER: K. Hambley
GEOLOGIST: M. Hsieh
REVIEWED BY:

PROJECT: Wegmans, Amherst St.
CLIENT: Wegmans Food Markets
BORING CONTRACTOR: MARCOR
GROUNDWATER: NA

DATE	TIME	LEVEL	TYPE

	CAS.	SAMPLER	CORE	TUBE
TYPE		split spoon		
DIA.		2"		
WT.		140 lbs		
FALL		30"		

* POCKET PENETROMETER READING

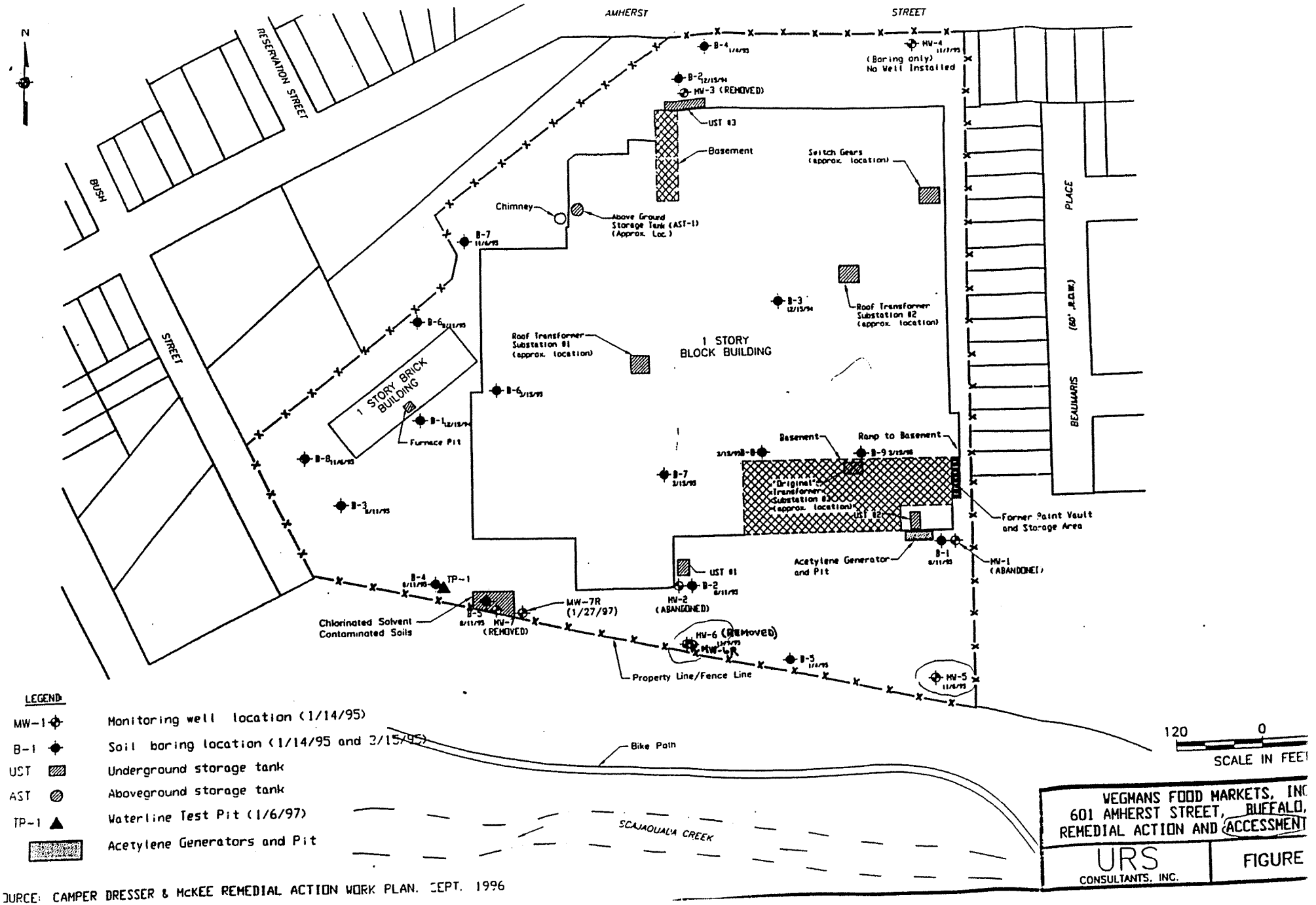
DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
2								Gravel backfills	GM	
		1	SS	7 5 / 6 2	25	Gray Yellow	Med. Dense	med/coarse sand and gravel	SM	• moist
5		2	SS	1 3 / 4 2	50		Loose			
7		3	SS	2 1 / 1 2	50	Gray	V. Loose	Coarse sand w/ trace to some coal and trace to some gravel	SM	• V. moist
		4	SS	2 3 / 1 1	5					• wet
10		5	SS	1 1 / 1 1	10					• wet
14		6	SS	1 3 / 1 1	40					• wet
15								Bottom of boring @ 15 ft.		
								Set 14~15 ft sand bedding		
								7~14 ft well screen		
								4~6 ft seal		
								0~4 ft grout		
20										
25										
30										
35										

Blows per 6"

1	2
3	4

COMMENTS: 4¼ HSA CME-75 Equivalent
PID set at 25 ppm, No Hits throughout

PROJECT NO.: 05354480.01
BORING NO.: MW-6R



SOURCE: CAMPER DRESSER & McKEE REMEDIAL ACTION WORK PLAN. SEPT. 1996

WEGMANS FOOD MARKETS, INC
601 AMHERST STREET, BUFFALO,
REMEDIAL ACTION AND ASSESSMENT

URS CONSULTANTS, INC.

FIGURE

ATTACHMENT B

WELL DEVELOPMENT LOG

WELL DEVELOPMENT LOG

URS
CONSULTANTS, INC.

PROJECT TITLE: Wegmans
PROJECT NO.: 35480-01
STAFF: Kevin S. Kearney
DATE: 9/9/97

START PURGE: 0900
END PURGE: 1000

WELL NO.: MW-6R

1. TOTAL CASING AND SCREEN LENGTH (FT.): 13.55'
2. CASING INTERNAL DIAMETER (IN.): 2"
3. WATER LEVEL BELOW TOP OF CASING (FT.): 10.80'
4. VOLUME OF WATER IN CASING (GAL.): _____
   #1-#3 x #2 (Gal./Ft.)

VOLUME OF 3 CASINGS: _____ GAL.

WELL ID.	VOL. (GAL./FT.)
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	10									
pH	7.15	7.00									
SPEC. COND. (µmhos)	1,300	1,280									
TURBIDITY (NTU)	>1000	46.5									
TEMPERATURE (°C)	18.9	16.9									
DISSOLVED OXYGEN (mg/L)	—	—									
Appearance	Turbid Light Brown	Clear									

COMMENTS: Bailed well with Stainless bailer, then pumped with Isco pump. Pumped a total of 10 gallons from this well.

ATTACHMENT C

FIELD ACTIVITIES LOG

DAILY CONSTRUCTION REPORT (cont)

PROJECT Wegmans REPORT No. —

JOB No. 35480-01 DATE 9/9/97

CONSTRUCTION ACTIVITIES (~~cont~~) weather: Partly sunny 70°F

Arrived onsite. 0830. Kevin S. Kearney

Did water levels and PID of the three wells

Started development of MW 6R removed 10 gallons. to develop this well.

Bailers were missing from MW 6R and MW 5 I went back to the office at lunch to get two teflon bailers for the sampling event.

Equipment used onsite

HNu PID unit — P101 Calibrated with 100ppm Isobutylene

pH Cal to 7.00, 4.00, 10.00 buffer

Cond Cal to 447 µhos 3,920 µhos.

TURb Cal to 0-10 ntu, 10-100 ntu 100-1000 ntu.

water level indicator: decon at each well.

parameters TAL - metals Total & Dissolved
TCL - VOA

Metals were filtered onsite using a 0.45 micro filter

Samples were picked up by Columbia Labs. at the office on 9/10/97.

SHEET 1 OF 1

BY Kevin S. Kearney TITLE Sr. Environmental Tech.

RECEIVED By: _____ PROJECT ENGINEER

#1

ATTACHMENT D

WELL PURGING LOGS

WELL PURGING LOG

URS CONSULTANTS, INC.

PROJECT TITLE: Wegmans
PROJECT NO.: 35480-01
STAFF: Kevin S. Kearney
DATE: 9/9/97 START PURGE: 1115
Sample time 1400 END PURGE: 1130

WELL NO.: MW 6R

1. TOTAL CASING AND SCREEN LENGTH (FT.): 13.55'
2. CASING INTERNAL DIAMETER (IN.): 2"
3. WATER LEVEL BELOW TOP OF CASING (FT.): 10.80'
4. VOLUME OF WATER IN CASING (GAL.): 0.47

#1-#3 x #2 (Gal./Ft.)

VOLUME OF 3 CASINGS: 1.41 GAL.

WELL ID.	VOL. (GAL./FT.)
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	1.5		Sample							
pH	7.03	6.99		6.94							
SPEC. COND. (µmhos)	1,285	1,279		1,378							
TURBIDITY (NTU)	71000	47.6		150							
TEMPERATURE (°C)	18.6	16.8		16.0							
DISSOLVED OXYGEN (mg/L)	—	—		—							
Appearance	Turbid Brown	Clear		light gray tint.							

COMMENTS: No teflon bailer was in this well.
(This well had the Duplicate QC sample.)
PID reading 2.2ppm No NAPLs Detected

WELL PURGING LOG

URS CONSULTANTS, INC.

PROJECT TITLE: Wegmans
PROJECT NO.: 35480-01
STAFF: Kevin S. Kearney
DATE: 9/9/97 START PURGE: 1148
Sample time 1445 END PURGE: 1200

WELL NO.: MW 7R

1. TOTAL CASING AND SCREEN LENGTH (FT.):	23.60'
2. CASING INTERNAL DIAMETER (IN.):	2"
3. WATER LEVEL BELOW TOP OF CASING (FT.):	12.90'
4. VOLUME OF WATER IN CASING (GAL.):	1.82

#1-#3 x #2 (Gal./Ft.)

VOLUME OF 3 CASINGS: 5.46 GAL.

WELL ID.	VOL. (GAL./FT.)
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	6		Sample							
pH	7.30	7.17		7.71							
SPEC. COND. (µmhos)	1,196	1,265		1,283							
TURBIDITY (NTU)	18.0	22.5		106							
TEMPERATURE (°C)	21.5	16.9		17.4							
DISSOLVED OXYGEN (mg/L)	—	—		—							
Appearance	Clear	clear		Clear							

COMMENTS: This well still had the teflon bailer. This well might have been extended in length. PID reading 1.2 ppm No NAPLs detected

WELL PURGING LOG

URS CONSULTANTS, INC.

PROJECT TITLE: Wegmans
PROJECT NO.: 35480-01
STAFF: Kevin S. Kearney
DATE: 9/9/97 START PURGE: 1050
Sample time 1330 END PURGE: 1100

WELL NO.: MW-5

1. TOTAL CASING AND SCREEN LENGTH (FT.):	15.00'
2. CASING INTERNAL DIAMETER (IN.):	2"
3. WATER LEVEL BELOW TOP OF CASING (FT.):	13.00
4. VOLUME OF WATER IN CASING (GAL.):	0.34

#1-#3 x #2 (Gal./Ft.)

VOLUME OF 3 CASINGS: 1.02 GAL.

WELL ID.	VOL. (GAL./FT.)
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	1		Sample							
pH	6.73	6.88		6.85							
SPEC. COND. (µmhos)	1,055	1,009		1,040							
TURBIDITY (NTU)	708	596		120							
TEMPERATURE (°C)	16.7	16.7		16.5							
DISSOLVED OXYGEN (mg/L)	—	—		—							
Appearance	Light Brown	clear		Light tan tint.							

COMMENTS: "Well was missing the teflon bailer."
Note: 3.60' extension was added to the overall length of this well.
PID reading. 5-5 ppm No NAPLs detected

ATTACHMENT E

ANALYTICAL REPORT

Including Chain-of-Custody

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

October 8, 1997

Mr. Robert Henschel
URS Greiner
282 Delaware Avenue
Buffalo, NY 14202

PROJECT:WEGMANS QUARTERLY WELLS
Submission #:9709000151

Dear Mr. Henschel

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal

1 Mustard St.• Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362
12699 Roll Rd. • Akron, NY 14001 • Tele:(716)542-1264 • Fax:(716)542-3353

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032		

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW5

Date Sampled :09/09/97 **Order #:**166765 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	19.3	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0781	MG/L	09/23/97	1.0
BARIUM	0.0200	0.309	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00566	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	241	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0346	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.130	MG/L	09/23/97	1.0
IRON	0.100	27.2	MG/L	09/23/97	1.0
LEAD	0.00500	0.168	MG/L	09/23/97	1.0
MAGNESIUM	0.500	37.0	MG/L	09/23/97	1.0
MANGANESE	0.0100	1.57	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000678	MG/L	09/24/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	10.7	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	36.1	MG/L	09/23/97	1.0
THALLIUM	0.0100	0.0120	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.477	MG/L	09/23/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW5 SOLUBLE

Date Sampled :09/09/97 **Order #:**166769 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.363	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0352	MG/L	09/23/97	1.0
BARIUM	0.0200	0.183	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	152	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.0200 U	MG/L	09/23/97	1.0
IRON	0.100	1.04	MG/L	09/23/97	1.0
LEAD	0.00500	0.00500 U	MG/L	09/23/97	1.0
MAGNESIUM	0.500	25.8	MG/L	09/23/97	1.0
MANGANESE	0.0100	0.638	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000502	MG/L	09/24/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	4.38	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	31.9	MG/L	09/23/97	1.0
THALLIUM	0.0100	0.0147	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.0411	MG/L	09/23/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 10/08/97

URS Greiner
Project Reference: WEGMANS QUARTERLY WELLS
Client Sample ID : WEG-MW5

Date Sampled : 09/09/97 **Order #:** 166765 **Sample Matrix:** WATER
Date Received: 09/10/97 **Submission #:** 9709000151 **Analytical Run** 20250

DATE ANALYZED : 09/16/97
ANALYTICAL DILUTION: 1.0

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW6

Date Sampled :09/09/97 **Order #:**166766 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	99.3	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0896	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.258	MG/L	09/23/97	1.0
BARIUM	0.0200	2.71	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00881	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.0137	MG/L	09/23/97	1.0
CALCIUM	0.500	318	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.209	MG/L	09/23/97	1.0
COBALT	0.0500	0.0934	MG/L	09/23/97	1.0
COPPER	0.0200	1.83	MG/L	09/23/97	1.0
IRON	0.100	160	MG/L	09/23/97	1.0
LEAD	0.00500	3.05	MG/L	09/23/97	1.0
MAGNESIUM	0.500	52.2	MG/L	09/23/97	1.0
MANGANESE	0.0100	3.40	MG/L	09/23/97	1.0
MERCURY	0.000300	0.00826	MG/L	09/24/97	1.0
NICKEL	0.0400	0.308	MG/L	09/23/97	1.0
POTASSIUM	2.00	24.8	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0745	MG/L	09/23/97	1.0
SODIUM	0.500	60.6	MG/L	10/06/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.332	MG/L	09/23/97	1.0
ZINC	0.0100	7.56	MG/L	10/06/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW6 SOLUBLE

Date Sampled :09/09/97 **Order #:**166770 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0398	MG/L	09/23/97	1.0
BARIUM	0.0200	0.314	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	196	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.0200 U	MG/L	09/23/97	1.0
IRON	0.100	2.09	MG/L	09/23/97	1.0
LEAD	0.00500	0.00500 U	MG/L	09/23/97	1.0
MAGNESIUM	0.500	28.7	MG/L	09/23/97	1.0
MANGANESE	0.0100	0.973	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	10/01/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	12.5	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	56.4	MG/L	10/06/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.0640	MG/L	09/23/97	1.0

URS Greiner
Project Reference: WEGMANS QUARTERLY WELLS
Client Sample ID : WEG-MW6

Date Sampled : 09/09/97 **Order #:** 166766 **Sample Matrix:** WATER
Date Received: 09/10/97 **Submission #:** 9709000151 **Analytical Run** 20250

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/16/97			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW6 DUP

Date Sampled :09/09/97 **Order #:**166767 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	84.2	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0726	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.241	MG/L	09/23/97	1.0
BARIUM	0.0200	2.38	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00704	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.0111	MG/L	09/23/97	1.0
CALCIUM	0.500	317	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.185	MG/L	09/23/97	1.0
COBALT	0.0500	0.0777	MG/L	09/23/97	1.0
COPPER	0.0200	1.54	MG/L	09/23/97	1.0
IRON	0.100	140	MG/L	09/23/97	1.0
LEAD	0.00500	2.65	MG/L	09/23/97	1.0
MAGNESIUM	0.500	49.2	MG/L	09/23/97	1.0
MANGANESE	0.0100	3.19	MG/L	09/23/97	1.0
MERCURY	0.000300	0.00545	MG/L	09/24/97	1.0
NICKEL	0.0400	0.250	MG/L	09/23/97	1.0
POTASSIUM	2.00	23.5	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0198	MG/L	09/23/97	1.0
SODIUM	0.500	57.8	MG/L	10/06/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.274	MG/L	09/23/97	1.0
ZINC	0.0100	6.05	MG/L	10/06/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW6 DUP SOLUBLE

Date Sampled :09/09/97 **Order #:**166771 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.140	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0402	MG/L	09/23/97	1.0
BARIUM	0.0200	0.287	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	192	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.0200 U	MG/L	09/23/97	1.0
IRON	0.100	2.03	MG/L	09/23/97	1.0
LEAD	0.00500	0.00500 U	MG/L	09/23/97	1.0
MAGNESIUM	0.500	27.1	MG/L	09/23/97	1.0
MANGANESE	0.0100	1.04	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	10/01/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	12.0	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	52.0	MG/L	10/06/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.0508	MG/L	09/23/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 10/08/97

URS Greiner
Project Reference: WEGMANS QUARTERLY WELLS
Client Sample ID : WEG-MW6 DUP

Date Sampled : 09/09/97 **Order #:** 166767 **Sample Matrix:** WATER
Date Received: 09/10/97 **Submission #:** 9709000151 **Analytical Run** 20250

DATE ANALYZED : 09/16/97
ANALYTICAL DILUTION: 1.0

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW7

Date Sampled :09/09/97 **Order #:**166768 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	8.41	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0523	MG/L	09/23/97	1.0
BARIUM	0.0200	0.468	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	196	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0164	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.139	MG/L	09/23/97	1.0
IRON	0.100	19.0	MG/L	09/23/97	1.0
LEAD	0.00500	0.251	MG/L	09/23/97	1.0
MAGNESIUM	0.500	43.8	MG/L	09/23/97	1.0
MANGANESE	0.0100	0.595	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000789	MG/L	09/24/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	16.3	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	42.2	MG/L	10/06/97	1.0
THALLIUM	0.0100	0.0154	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.184	MG/L	09/23/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/08/97

URS Greiner
Project Reference:WEGMANS QUARTERLY WELLS
Client Sample ID :WEG-MW7 SOLUBLE

Date Sampled :09/09/97 **Order #:**166772 **Sample Matrix:**WATER
Date Received:09/10/97 **Submission #:**9709000151

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	09/23/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	09/23/97	1.0
ARSENIC	0.0100	0.0381	MG/L	09/23/97	1.0
BARIUM	0.0200	0.292	MG/L	09/23/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
CALCIUM	0.500	176	MG/L	09/23/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	09/23/97	1.0
COBALT	0.0500	0.0500 U	MG/L	09/23/97	1.0
COPPER	0.0200	0.0200 U	MG/L	09/23/97	1.0
IRON	0.100	0.348	MG/L	09/23/97	1.0
LEAD	0.00500	0.00500 U	MG/L	09/23/97	1.0
MAGNESIUM	0.500	37.8	MG/L	09/23/97	1.0
MANGANESE	0.0100	0.533	MG/L	09/23/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	10/01/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	09/23/97	1.0
POTASSIUM	2.00	12.9	MG/L	10/06/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	09/23/97	1.0
SILVER	0.0100	0.0100 U	MG/L	09/23/97	1.0
SODIUM	0.500	37.2	MG/L	09/23/97	1.0
THALLIUM	0.0100	0.0151	MG/L	09/23/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	09/23/97	1.0
ZINC	0.0100	0.0324	MG/L	09/23/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 10/08/97

URS Greiner
Project Reference: WEGMANS QUARTERLY WELLS
Client Sample ID : WEG-MW7

Date Sampled : 09/09/97 **Order #:** 166768 **Sample Matrix:** WATER
Date Received: 09/10/97 **Submission #:** 9709000151 **Analytical Run** 20250

DATE ANALYZED : 09/16/97
ANALYTICAL DILUTION: 1.0

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	14	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 10/08/97

URS Greiner
Project Reference: WEGMANS QUARTERLY WELLS
Client Sample ID : TRIP BLANK

Date Sampled : 09/09/97 **Order #:** 166773 **Sample Matrix:** WATER
Date Received: 09/10/97 **Submission #:** 9709000151 **Analytical Run** 20250

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/16/97			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	100	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 10/08/97

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 168641 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 20250

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/16/97			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

97-9-151

CHAIN OF CUSTODY RECORD

URS CONSULTANTS, INC.

PROJECT NO. 35480-01

SITE NAME Wegmans

SAMPLERS (PRINT/SIGNATURE) Kevin S. Kearney / Kevin S. Kearney

LAB Columbia

COOLER 1 of 1

PAGE 1 of 1

DELIVERY SERVICE: Lab Pickup AIRBILL NO.: X

TESTS: TCL-VOA SW846-8260 (40ml Vial Pres HCl); TAL-METALS – Total SW846-6000/7000 (1L Plastic Pres HNO3); TAL-METALS – Diss SW846-6000/7000 (1L Plastic Pres HNO3)

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX	TOTAL NO.# OF CONTAINERS	TCL-VOA SW846-8260 (40ml Vial Pres HCl)	TAL-METALS – Total SW846-6000/7000 (1L Plastic Pres HNO3)	TAL-METALS – Diss SW846-6000/7000 (1L Plastic Pres HNO3)		REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO.# (IRPIMS ONLY)
MW-5	9/9/97	1330	Grab	WEG-MW5	WG	4	2	1	1	166765/166769	Low Volume In well.				
MW-6	9/9/97	1400	Grab	WEG-MW6	WG	4	2	1	1	166766/166770					
MW-6	9/9/97	1400	Grab	WEG-MW6 DUP	WG	4	2	1	1	166767/166771					
MW-7	9/9/97	1445	Grab	WEG-MW7	WG	4	2	1	1	166768/166772					
TRIP BLANK	9/8/97	—	—	WEG-TB	WQ	2	2	—	—	166773	Trip Blank				

MATRIX CODES
AA - AMBIENT AIR, SE - SEDIMENT, SH - HAZARDOUS SOLID WASTE, SL - SLUDGE, WP - DRINKING WATER, WW - WASTE WATER, WG - GROUND WATER, SO - SOIL, DC - DRILL CUTTINGS, WL - LEACHATE, GS - SOIL GAS, WC - DRILLING WATER, WO - OCEAN WATER, WS - SURFACE WATER, WQ - WATER FIELD QC, LH - HAZARDOUS LIQUID WASTE, LF - FLOATING/FREE PRODUCT ON GW TABLE

SAMPLE TYPE CODES
TB# - TRIP BLANK, SD# - MATRIX SPIKE DUPLICATE, RB# - RINSE BLANK, FR# - FIELD REPLICATE, N# - NORMAL ENVIRONMENTAL SAMPLE, MS# - MATRIX SPIKE (# - SEQUENTIAL NUMBER (FROM 1 TO 9) TO ACCOMMODATE MULTIPLE SAMPLES IN A SINGLE DAY)

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME
Kevin S. Kearney	9-10-97	10:00	Mike [illegible]	9-10-97	10:00

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY (SIGNATURE)	DATE	TIME
Mike [illegible]	9-10-97	2:45	Gardner	9/10/97	1445

SPECIAL INSTRUCTIONS
Diss. Metals were filtered onsite using 0.45 filter, and preserved directly after filtering. K.S.K.

Distribution: Original accompanies shipment, copy to coordinator field files

URSF-075C/1 OF 1/CofCR/GM

Temp = 4.9°C