VCP V00084

SUMMARY REPORT

THIRD QUARTERLY GROUNDWATER MONITORING EVENT

WEGMANS FOOD MARKET
601 AMHERST STREET
BUFFALO, NEW YORK

JANUARY 1998

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Prepared by:

URS Greiner, Inc.
Buffalo, New York

Prepared for:

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

Dec Site No. Voluntary Cleanup Program

Project Manager Last Name
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Name of Document:
Wegmans Food Markets
Third Qtr. G.W. monitoring Rpt.

Consulting firm/Agency/Author:
URS Greiner

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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 third quarterly monitoring event are summarized in this report.

2.0 ONSITE ACTIVITIES

Monitoring well MW-7R was damaged during on-site construction activities and subsequently was replaced by a Wegmans subcontractor with a new well on October 30, 1997. The new well is also identified as MW-7R and was installed in the immediate vicinity of the previous well. The new MW-7R was developed by URSG on December 8, 1997 (see Attachment A) by bailing and pumping to remove a total of 30 gallons of water.

The third sampling event was completed by URSG on December 9, 1997. A copy of the field activities log is attached (Attachment B). 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 upper portion of the water column to a depth where the bailers straddled the air/water interface, and then visually inspecting the extracted water. No 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

TABLE 1

SUMMARY OF MONITORING WELL MEASUREMENTS

Monitoring Well	MW-5	MW-6R**	MW-7R***
PID Headspace (ppm)	2.5	8.5	6.0
Depth to bottom (ft.)	15.00*	13.56	23.6
Depth to water (ft.)	13.01	10.87	12.95
Water depth (ft.)	2.02	2.71	10.65
Water volume (gal.)	0.34	0.46	1.81
Purge volume (gal.)	1.5	2	6
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	7.35	9.8	850
	End	7.29	8.5	1200
	Sample	7.32	9.2	985
MW-6R**	Initial	7.05	12.8	1250
	End	7.03	12.5	1280
	Sample	7.05	12.6	1260
MW-7R***	Initial	7.25	13.2	1360
	End	7.09	13.0	1270
	Sample	7.15	13.2	1290

* An extension was added to the overall length of wells MW-5 prior to the second quarter.

** MW-6 was replaced with MW-6R as a result of on-site construction activities prior to the second quarter.

*** MW-7R was replaced, for the second time, as a result of damage sustained during on-site construction activities prior to the third quarter.

volumes of water. Temperature, conductivity and pH were measured at the start and end of purging (see Attachment C). 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 D.

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 D. As indicated on Table 3, the only volatile organic compound detected was vinyl chloride, in MW-7R. For metals, barium, calcium, iron, magnesium, manganese, potassium, sodium and zinc were detected in all samples. Arsenic was detected in all samples except MW-5 dissolved fraction. Aluminum and lead were detected in the total fraction only. Copper was detected in MW-5, MW-6R and MW-7R total fractions and MW-5 dissolved fraction. Chromium was detected in MW-5 and MW-6R total fractions only. Mercury was detected in MW-6R, total fraction only.

The concentrations of the detected parameters subsequently were compared with the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) "Ambient Water Quality

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

Sample ID Fraction Compound Sample Date	STANDARD* (MG/L)	MW-5 TOTAL 12/09/97	MW-5 SOLUBLE 12/09/97	MW-6R TOTAL 12/09/97	MW-6R SOLUBLE 12/09/97	MW-7R TOTAL 12/09/97	MW-7R SOLUBLE 12/09/97	MW-7R DUP TOTAL 12/09/97	MW-7R DUP SOLUBLE 12/09/97	TRIP BLANK 12/09/97
VOLATILE (ppm)										
Vinyl chloride	0.002	- -		- -		**0.009**		**0.009**		- -
METALS (ppm)										
Aluminum	na	7.4	- -	12	- -	5.2	- -	3.2	- -	
Arsenic	0.025	0.015	- -	**0.047**	0.012	0.020	0.015	0.021	0.013	
Barium	1.0	0.20	0.14	0.78	0.32	0.45	0.36	0.40	0.34	
Calcium	na	236	204	217	193	208	208	204	200	
Chromium	0.05	0.01	- -	0.03	- -	- -	- -	- -	- -	
Copper	0.2	0.07	0.02	**0.35**	- -	0.03	- -	- -	- -	
Iron	0.3	**13**	0.20	**48**	**1.0**	**12**	**4.6**	**10**	**2.4**	
Lead	0.025	**0.051**	- -	**0.56**	- -	**0.14**	- -	**0.086**	- -	
Magnesium	na	34	29	41	37	49	47	47	45	
Manganese	0.3	**0.80**	**0.61**	**0.71**	**0.44**	**0.61**	**0.56**	**0.59**	**0.49**	
Mercury	0.002	- -	- -	0.001	- -	- -	- -	- -	- -	
Potassium	na	7.8	5.3	17	15	13	12	12	12	
Sodium	20	**39**	**39**	**114**	**108**	**60**	**60**	**59**	**59**	
Zinc	0.3	**0.39**	0.16	**0.92**	0.03	0.24	0.01	0.14	0.02	

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.

Standards and Guidance Values, Class GA Water, October 1993" (Table 3). Based on this assessment, the concentration of vinyl chloride (0.009 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 iron, lead, manganese, sodium, and zinc in the total fraction, and manganese, and sodium in the dissolved fraction. MW-6R exceeded Class GA standards in the total fraction for arsenic, copper, iron, lead, manganese, sodium and zinc, and iron, manganese and sodium in the dissolved fraction. MW-7R had exceedances for iron, lead, manganese, and sodium in the total fraction, and 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 only slightly exceeds the Class GA water standards.

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

- Soluble metals (filtered samples), consisting of iron and manganese were detected at concentrations which only slightly exceed the standards for class GA waters and sodium, which ranged from three to six times higher than the standard.

- The aluminum, chromium, lead, mercury and to some extent, the copper 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, barium, calcium, magnesium, manganese, potassium and, sodium 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 third quarter with the first and second quarter results (Tables 4, 5 and 6), the following variations were noted:

- Vinyl chloride concentration for the third quarter continued to decrease slightly in MW-7R.

- For MW-5 and MW-6/MW-6R, the concentration of total metals in the third quarter showed a decline from the second quarter, although not as low as detected in the first quarter. The only exception was sodium which showed an increase.

- For MW-7 the concentration of total metals was lowest of the three quarters, except for magnesium and sodium which increased slightly.

- The results for soluble metals were mixed, with sodium showing the most notable increase. Otherwise, the concentrations are fairly constant over the last three quarters.

- Several metals which were detected for the first time in the second quarter, were not detected in the third quarter. MW-5 lost beryllium, mercury and thallium, MW-6/MW-6R lost antimony, beryllium, cadmium, cobalt nickel, silver and vanadium, and MW-7R lost thallium.

Fewer metals were detected in the third quarter as compared to the second quarter. Additionally, the third quarter results are more consistent with the first quarter results. For metals detected in the first, second, and third quarters, the concentrations are comparable with the exception of sodium, which increased. The increase of sodium, and to some extent magnesium in groundwater may be seasonal, attributable to the use of salt for road de-icing. Overall, the results indicate no major changes in water quality.

TABLE 4
ANALYTICAL RESULTS COMPARISON OF DETECTED ANALYTES
MONITORING WELL MW-5
WEGMANS AMHERST STREET SITE

Sample ID Fraction Compound Sample Date	MW-5 TOTAL 06/05/97	MW-5 TOTAL 09/09/97	MW-5 TOTAL 12/09/97	MW-5 SOLUBLE 06/05/97	MW-5 SOLUBLE 09/09/97	MW-5 SOLUBLE 12/09/97
	1st Quarter	2nd Quarter	3rd Quarter	1st Quarter	2nd Quarter	3rd Quarter
METALS (ppm)						
Aluminum	2.0	19	7.4	- -	0.36	- -
Arsenic	- -	0.078	0.015	- -	0.035	- -
Barium	0.12	0.31	0.20	0.095	0.18	0.14
Beryllium	- -	0.0057	- -	- -	- -	- -
Calcium	134	241	236	132	152	204
Chromium	- -	0.035	0.011	- -	- -	- -
Copper	- -	0.13	0.067	- -	- -	0.022
Iron	2.2	27	13	- -	1.0	0.20
Lead	0.016	0.17	0.051	- -	- -	- -
Magnesium	21	37	34	20	26	29
Manganese	0.39	1.6	0.80	0.42	0.64	0.61
Mercury	- -	0.00068	- -	- -	0.00050	- -
Potassium	5.7	11	7.8	5.0	4.4	5.3
Sodium	31	36	39	31	32	39
Thallium	- -	0.012	- -	- -	0.015	- -
Zinc	0.14	0.48	0.39	0.11	0.041	0.16

Only detected results reported (in MG/L).

- - Not detected

TABLE 5
ANALYTICAL RESULTS COMPARISON OF DETECTED ANALYTES
MONITORING WELL MW-6/MW-6R
WEGMANS AMHERST STREET SITE

Sample ID Fraction Compound Sample Date	MW-6 TOTAL 06/05/97	MW-6R TOTAL 09/09/97	MW-6R DUP TOTAL 09/09/97	MW-6R TOTAL 12/09/97	MW-6 SOLUBLE 06/05/97	MW-6R SOLUBLE 09/09/97	MW-6R DUP SOLUBLE 09/09/97	MW-6R SOLUBLE 12/09/97
	1st Quarter	2nd Quarter	2nd Quarter	3rd Quarter	1st Quarter	2nd Quarter	2nd Quarter	3rd Quarter
METALS (ppm)								
Aluminum	1.2	99	84	12	- -	- -	0.14	- -
Antimony	- -	0.090	0.073	- -	- -	- -	- -	- -
Arsenic	- -	0.26	0.24	0.047	- -	0.040	0.040	0.012
Barium	0.20	2.7	2.4	0.78	0.18	0.31	0.29	0.32
Beryllium	- -	0.0088	0.0070	- -	- -	- -	- -	- -
Cadmium	- -	0.014	0.011	- -	- -	- -	- -	- -
Calcium	163	318	317	217	164	196	192	193
Chromium	- -	0.21	0.19	0.030	- -	- -	- -	- -
Cobalt	- -	0.093	0.078	- -	- -	- -	- -	- -
Copper	0.034	1.8	1.5	0.35	- -	- -	- -	- -
Iron	4.0	160	140	48	1.3	2.1	2.0	1.0
Lead	0.028	3.1	2.7	0.56	- -	- -	- -	- -
Magnesium	18	52	49	41	18	29	27	37
Manganese	0.48	3.4	3.2	0.71	0.46	0.97	1.0	0.44
Mercury	- -	0.0083	0.0055	0.0011	- -	- -	- -	- -
Nickel	- -	0.31	0.25	- -	- -	- -	- -	- -
Potassium	7.0	25	24	17	7.1	13	12	15
Silver	- -	0.075	0.020	- -	- -	- -	- -	- -
Sodium	21	61	58	114	21	56	52	108
Vanadium	- -	0.33	0.27	- -	- -	- -	- -	- -
Zinc	0.45	7.6	6.1	0.92	0.42	0.064	0.051	0.032

Only detected results reported (in MG/L).

- - Not detected

TABLE 6
ANALYTICAL RESULTS COMPARISON OF DETECTED ANALYTES
MONITORING WELL MW-7R
WEGMANS AMHERST STREET SITE

Sample ID Fraction Compound Sample Date	MW-7R TOTAL 06/05/97	MW-7R DUP TOTAL 06/05/97	MW-7R TOTAL 09/09/97	MW-7R TOTAL 12/09/97	MW-7R DUP TOTAL 12/09/97	MW-7R SOLUBLE 06/05/97	MW-7R DUP SOLUBLE 06/05/97	MW-7R SOLUBLE 09/09/97	MW-7R SOLUBLE 12/09/97	MW-7R DUP SOLUBLE 12/09/97
VOLATILE (ppm)	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	3rd Quarter	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	3rd Quarter
Vinyl chloride	0.022	0.024	0.014	0.0091	0.009					
METALS (ppm)										
Aluminum	19	17	8.4	5.2	3.2	--	--	--	--	--
Arsenic	0.022	0.022	0.052	0.020	0.021	--	--	0.038	0.015	0.013
Barium	0.47	0.46	0.47	0.45	0.40	0.29	0.28	0.29	0.36	0.34
Calcium	173	174	196	208	204	164	165	176	208	200
Chromium	0.045	0.035	0.016	--	--	--	--	--	--	--
Copper	0.33	0.31	0.14	0.027	--	--	--	--	--	--
Iron	25	24	19	12	10	8.6	8.9	0.35	4.6	2.4
Lead	0.48	0.45	0.25	0.14	0.086	--	--	--	--	--
Magnesium	39	39	44	49	47	35	35	38	47	45
Manganese	0.63	0.62	0.60	0.61	0.59	0.44	0.43	0.53	0.56	0.49
Mercury	0.00042	--	0.00079	--	--	--	--	--	--	--
Potassium	15	15	16	13	12	12	12	13	12	12
Sodium	35	35	42	60	59	34	34	37	60	59
Thallium	--	--	0.015	--	--	--	--	0.015	--	--
Zinc	0.27	0.26	0.18	0.24	0.14	0.018	0.019	0.032	0.012	0.020

Only detected results reported (in MG/L).

Not analyzed / analysis not required

-- Not detected

ATTACHMENT A

WELL DEVELOPMENT LOG

WELL DEVELOPMENT LOG

URS Greiner

PROJECT TITLE: Wegmans WELL NO.: MW 7R

PROJECT NO.: 05-35480-01

STAFF: Kevin Kearney

DATE(S): 12/8/97

			WELL ID.	VOL. (GAL./FT.)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	23.60'	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	12.95'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	10.65'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	2"	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.81	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x X)	=	—	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	30	8"	2.60

OR

$V = 0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	30									
pH	7.28	7.20									
SPEC. COND. (µmhos)	1,850	1,920									
TURBIDITY (NTU)	>1000	122									
TEMPERATURE (° C)	10.5	10.0									
Appearance	Turbid Brown	light tan tint									

COMMENTS: Used Whale submersible pump with stainless bailer for well development.

ATTACHMENT B

FIELD ACTIVITIES LOG

Wegmans 12/8/97 K.S.K

Instrument Calibration

pH meter URS # 165

Standard	Reading
7.00	7.03
4.01	4.05
10.00	10.08

Conductivity Meter URS # 131	standard	Reading
	447 µhos	480 µhos

water level

[redacted]

Whale pump

Wegmans 05-35480-01

12/8/97 weather: overcast 40°F

Arrived onsite 1800 offsite 1545

Well Development of 7R

	Init	30
pH	7.28	7.20
Cond	1,850	1,920
Temp °c	10.5	10.8
Turb	>1000	122
Appearance	turbid Brown	light tan tint.

MW 7R IS DEVELOPED.

Used Whale submersible pump and stainless bailer for well development

MW 7R

DTW 12.95'

DTB 23.60'

Well volume 1.81 gallons.

Start 1320

End 1530

Wegmans 12/9/97 K.S.K

weather: Partly sunny, 40°F

Instrument Celibration

pH meter	URS #165
Standard	Reading
7.01	7.03
4.00	4.06
10.00	10.05

Conductivity Meter URS #131

Standard	Reading
447 µghos	450 µghos

HNU (PID)

Standard — Reading

100 ppm Isobutylene — 62 ppm Benzene

Span Setting 9.80

Onsite 103°

offsite 150°

(Dedicated bailer used to sample MW 7R
Disposable HDPE bailers used to sample
MW-6R & MW-5)

Wegmans 12/9/97

PURGE & SAMPLE

PURGE

Location	pH	Temp	Cond	Turb	App.	Volume
MW 5 start	7.35	9.8	850	68	light tan	Int
MW 5 End	7.29	8.5	1,200	>1000	Turbid Brown	15 gallons
MW 7R start	7.25	13.2	1,360	13.5	clear	Int.
MW 7R End	7.09	13.0	1,290	106	light tan tint	6 gallons
MW 6R start	7.05	12.8	1,250	42	clear	Int.
MW 6R End	7.03	12.5	1,280	>1000	Turbid Brown	2 gallons

SAMPLE

	pH	Temp	Cond	Turb	App	Volume
MW 5	7.32	9.2	985	75	light tan tint	SAMPLE
MW 6R	7.05	12.6	1,260	127	Clear tan tint	SAMPLE
MW 7R	7.15	13.2	1,290	265	clear	Sample

MW 7R had a dulicate sample done on this well.

A Trip blank was sent with samples.

PID - Headspace	
MW 5	2.5 ppm
MW 6R	8.5 ppm
MW 7R	6.0 ppm

ATTACHMENT C

WELL PURGING LOGS

WELL PURGING LOG

URS Greiner

PROJECT TITLE: Wegmans WELL NO.: MW-5

PROJECT NO.: 35480-01

STAFF: Kevin Kearney

DATE(S): 12/9/97

			WELL ID.	VOL. (GAL./FT.)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	15.00'	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	12.98'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	2.02'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	2"	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.34	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	1.02	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	1.5	8"	2.60

OR

$V = 0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	Init	1.5		Sample							
pH	7.35	7.29		7.32							
SPEC. COND. (µmhos)	850	1,200		985							
TURBIDITY	68	>1000		75							
TEMPERATURE (° C)	9.8	8.5		9.2							
Appearance	light tan tint	Turbid Brown		light tan tint							

COMMENTS: Sample time: 1335

Sample Depth to water: 13.01'

(No NAPLs Detected.)

PID 2.5 ppm

WELL PURGING LOG

URS Greiner

PROJECT TITLE: Weymans WELL NO.: MW-6R

PROJECT NO.: 35480-01

STAFF: Kevin Kearney

DATE(S): 12/9/97

			WELL ID.	VOL. (GAL./FT.)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	13.56'	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	10.85'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	2.71'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	2"	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.46	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	1.38	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	2	8"	2.60

OR

$V = 0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	Int	2		Sample							
pH	7.05	7.03		7.05							
SPEC. COND. (µmhos)	1,250	1,280		1,260							
TURBIDITY	42	>1000		127							
TEMPERATURE (° C)	12.8	12.5		12.6							
Appearance	Clear	Turbid Brown		Clear tan tint.							

COMMENTS: Sample time: 1400

Sample Depth to water: 10.87'

(NO NAPLS DETECTED.)

PID 8.5ppm

WELL PURGING LOG

URS Greiner

PROJECT TITLE: Wegmans WELL NO.: MW-7R

PROJECT NO.: 35480-01

STAFF: Kevin Kearney

DATE(S): 12/9/97

			WELL ID.	VOL. (GAL/FT.)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	23.60'	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	12.95'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	10.65'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	2"	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.81	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	5.43	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	6	8"	2.60

OR

$V = 0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	Int	6		Simple							
pH	7.25	7.09		7.15							
SPEC. COND. (µmhos)	1,360	1,270		1,290							
TURBIDITY	135	106		26.5							
TEMPERATURE (° C)	13.2	13.0		13.2							
Appearance	Clear	light ~~tan~~ tint		clear							

COMMENTS: Sample time: 1420
Sample Depth to water: 12.96'
(No NAPLs Detected.)

PID 6.0 ppm

ATTACHMENT D

ANALYTICAL REPORT

Including Chain-of-Custody

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

December 29, 1997

RECEIVED
URS Greiner Inc.
DEC 30 1997
JOB#_____

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

PROJECT:WEGMANS, AMHERST ST.
Submission #:9712000191

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: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW5

Date Sampled :12/09/97 **Order #:**182436 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	7.40	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0148	MG/L	12/16/97	1.0
BARIUM	0.0200	0.200	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	236	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0106	MG/L	12/18/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0670	MG/L	12/17/97	1.0
IRON	0.100	12.5	MG/L	12/17/97	1.0
LEAD	0.00500	0.0507	MG/L	12/16/97	1.0
MAGNESIUM	0.500	33.9	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.801	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	7.80	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	39.4	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.391	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW5 soluble

Date Sampled :12/09/97 **Order #:**182441 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0100 U	MG/L	12/16/97	1.0
BARIUM	0.0200	0.136	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	204	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0221	MG/L	12/17/97	1.0
IRON	0.100	0.199	MG/L	12/17/97	1.0
LEAD	0.00500	0.00500 U	MG/L	12/16/97	1.0
MAGNESIUM	0.500	28.9	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.605	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	5.34	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	38.6	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.161	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

URS Greiner
Project Reference: WEGMANS, AMHERST ST.
Client Sample ID : WEG MW5

Date Sampled : 12/09/97 **Order #:** 182436 **Sample Matrix:** WATER
Date Received: 12/10/97 **Submission #:** 9712000191 **Analytical Run** 22449

DATE ANALYZED : 12/16/97
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 %)	99	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	112	%

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW6

Date Sampled :12/09/97 **Order #:**182437 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	12.2	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0469	MG/L	12/16/97	1.0
BARIUM	0.0200	0.780	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	217	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0295	MG/L	12/18/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.345	MG/L	12/17/97	1.0
IRON	0.100	47.5	MG/L	12/17/97	1.0
LEAD	0.00500	0.561	MG/L	12/16/97	1.0
MAGNESIUM	0.500	40.6	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.710	MG/L	12/16/97	1.0
MERCURY	0.000300	0.00105	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	17.2	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	114	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.919	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW6 soluble

Date Sampled :12/09/97 **Order #:**182442 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0116	MG/L	12/16/97	1.0
BARIUM	0.0200	0.321	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	193	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0200 U	MG/L	12/17/97	1.0
IRON	0.100	1.01	MG/L	12/17/97	1.0
LEAD	0.00500	0.00500 U	MG/L	12/16/97	1.0
MAGNESIUM	0.500	37.0	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.438	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	15.3	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	108	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.0316	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

URS Greiner
Project Reference: WEGMANS, AMHERST ST.
Client Sample ID : WEG MW6

Date Sampled : 12/09/97 **Order #:** 182437 **Sample Matrix:** WATER
Date Received: 12/10/97 **Submission #:** 9712000191 **Analytical Run** 22449

DATE ANALYZED : 12/16/97
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 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW7

Date Sampled :12/09/97 **Order #:**182438 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	5.23	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0197	MG/L	12/16/97	1.0
BARIUM	0.0200	0.445	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	208	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0269	MG/L	12/17/97	1.0
IRON	0.100	11.7	MG/L	12/17/97	1.0
LEAD	0.00500	0.138	MG/L	12/16/97	1.0
MAGNESIUM	0.500	49.0	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.611	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	12.6	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	59.8	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.242	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW7 soluble

Date Sampled :12/09/97 **Order #:**182443 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0147	MG/L	12/16/97	1.0
BARIUM	0.0200	0.363	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	208	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0200 U	MG/L	12/17/97	1.0
IRON	0.100	4.63	MG/L	12/17/97	1.0
LEAD	0.00500	0.00500 U	MG/L	12/16/97	1.0
MAGNESIUM	0.500	46.9	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.560	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	12.3	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	59.9	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.0115	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

URS Greiner
Project Reference: WEGMANS, AMHERST ST.
Client Sample ID : WEG MW7

Date Sampled : 12/09/97 **Order #:** 182438 **Sample Matrix:** WATER
Date Received: 12/10/97 **Submission #:** 9712000191 **Analytical Run** 22449

DATE ANALYZED : 12/16/97
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	9.1	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 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	112	%

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW7DUP

Date Sampled :12/09/97 **Order #:**182439 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	3.24	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0205	MG/L	12/16/97	1.0
BARIUM	0.0200	0.402	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	204	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0200 U	MG/L	12/17/97	1.0
IRON	0.100	10.2	MG/L	12/17/97	1.0
LEAD	0.00500	0.0861	MG/L	12/16/97	1.0
MAGNESIUM	0.500	46.7	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.585	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	11.8	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	58.6	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.139	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 12/29/97

URS Greiner
Project Reference:WEGMANS, AMHERST ST.
Client Sample ID :WEG MW7DUP soluble

Date Sampled :12/09/97 **Order #:**182444 **Sample Matrix:**WATER
Date Received:12/10/97 **Submission #:**9712000191

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	0.100	0.100 U	MG/L	12/16/97	1.0
ANTIMONY	0.0600	0.0600 U	MG/L	12/16/97	1.0
ARSENIC	0.0100	0.0126	MG/L	12/16/97	1.0
BARIUM	0.0200	0.341	MG/L	12/16/97	1.0
BERYLLIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CADMIUM	0.00500	0.00500 U	MG/L	12/16/97	1.0
CALCIUM	0.500	200	MG/L	12/17/97	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
COBALT	0.0500	0.0500 U	MG/L	12/16/97	1.0
COPPER	0.0200	0.0200 U	MG/L	12/17/97	1.0
IRON	0.100	2.43	MG/L	12/17/97	1.0
LEAD	0.00500	0.00500 U	MG/L	12/16/97	1.0
MAGNESIUM	0.500	45.4	MG/L	12/16/97	1.0
MANGANESE	0.0100	0.493	MG/L	12/16/97	1.0
MERCURY	0.000300	0.000300 U	MG/L	12/23/97	1.0
NICKEL	0.0400	0.0400 U	MG/L	12/16/97	1.0
POTASSIUM	2.00	11.5	MG/L	12/18/97	1.0
SELENIUM	0.00500	0.00500 U	MG/L	12/22/97	1.0
SILVER	0.0100	0.0100 U	MG/L	12/16/97	1.0
SODIUM	0.500	58.9	MG/L	12/17/97	1.0
THALLIUM	0.0100	0.0100 U	MG/L	12/16/97	1.0
VANADIUM	0.0500	0.0500 U	MG/L	12/16/97	1.0
ZINC	0.0100	0.0202	MG/L	12/16/97	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

URS Greiner
Project Reference: WEGMANS, AMHERST ST.
Client Sample ID : WEG MW7DUP

Date Sampled : 12/09/97 **Order #:** 182439 **Sample Matrix:** WATER
Date Received: 12/10/97 **Submission #:** 9712000191 **Analytical Run** 22449

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/16/97			
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	9.0	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 %)	104	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	115	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

URS Greiner
Project Reference: WEGMANS, AMHERST ST.
Client Sample ID : TRIP BLANK

Date Sampled : 12/09/97 **Order #:** 182440 **Sample Matrix:** WATER
Date Received: 12/10/97 **Submission #:** 9712000191 **Analytical Run** 22449

DATE ANALYZED : 12/16/97
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 %)	101	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	111	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 12/29/97

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 183651 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 22449

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/16/97			
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 %)	104	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	108	%

CHAIN OF CUSTODY RECORD

URS CONSULTANTS, INC.

PROJECT NO. 35480.01

SITE NAME Wegmans. Amherst St.

SAMPLERS (PRINT/SIGNATURE) Kevin Kearney / Kevin Kearney

DELIVERY SERVICE: Lab Pickup AIRBILL NO.: X

LAB Columbia

COOLER 1 of 1

PAGE 1 of 1

TESTS: TCL-VOA SW 846-8260; TAL-Metals-Total SW 846-6010/7000; TAL-metals-Diss SW 846-6010/7000

BOTTLE TYPE AND PRESERVATIVE

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX	TOTAL NO.# OF CONTAINERS	40ml-vial Pres HCl	1L Plastic Pres HNO3	1L Plastic Pres HNO3		REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO.# (IRPIMS ONLY)
MW-5	12/9/97	1335	Grab	WEG-MW5	WG	4	2	1	1	182436/182441					
MW-6	12/9/97	1400	Grab	WEG-MW6	WG	4	2	1	1	182437/442					
MW-7	12/9/97	1420	Grab	WEG-MW7	WG	4	2	1	1	182438/443					
MW-7	12/9/97	1420	Grab	WEG-MW7DUP	WG	4	2	1	1	182431/444	Duplicate				
TRIP Blank	12/9/97	—	—	WEG-TB	WQ	2	2	—	—	182440					

✱ (MW-7 rows)

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 Kearney	12/9/97		x [signature]		

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY (SIGNATURE)	DATE	TIME
x [signature]	12/10/97	11:30	Mike [signature]	12-10-97	11:30

SPECIAL INSTRUCTIONS
✱ Bottles labelled as MW-7R & MW7 Rdup
97-12-191
[initials] 12/11/97

Distribution: Original accompanies shipment, copy to coordinator field files

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

Mike [signature] / 12-10-97 2:30 Rec'd: [signature] CAS 12/10/97 @1430 Temp = 4.2°C