The electronic version of this file/report should have the file name:

Type of document . Site Number . Year-Month . File *Year-Year* or Report name . pdf

_____.pdf

example: *letter . Year-Month . File Year-Year . pdf*

Report. HW. 905004.1992.01.01. pdf

_____.pdf

example: *report . Site Number . Year-Month . Report Name . pdf*

Project Site numbers will be proceeded by the following:

Municipal Brownfields - B
Superfund - HW
Spills - SP
ERP - E
VCP - V
BCP - C

MALCOLM PIRNIE

GROUND WATER QUALITY MONITORING REPORT FOR JULY 27-28, 1992 MONITORING EVENT AT PALMER STREET LANDFILL

MOENCH TANNING COMPANY
DIVISION OF BROWN GROUP, INC.
GOWANDA, NEW YORK

SEPTEMBER 1992

MALCOLM PIRNIE, INC.

S-3515 Abbott Road
P. O. Box 1938
Buffalo, New York 14219

MALCOLM PIRNIE

PALMER STREET
THIRD QUARTER GROUND WATER MONITORING REPORT
TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

MALCOLM PIRNIE

1.0 INTRODUCTION

1.1 Background

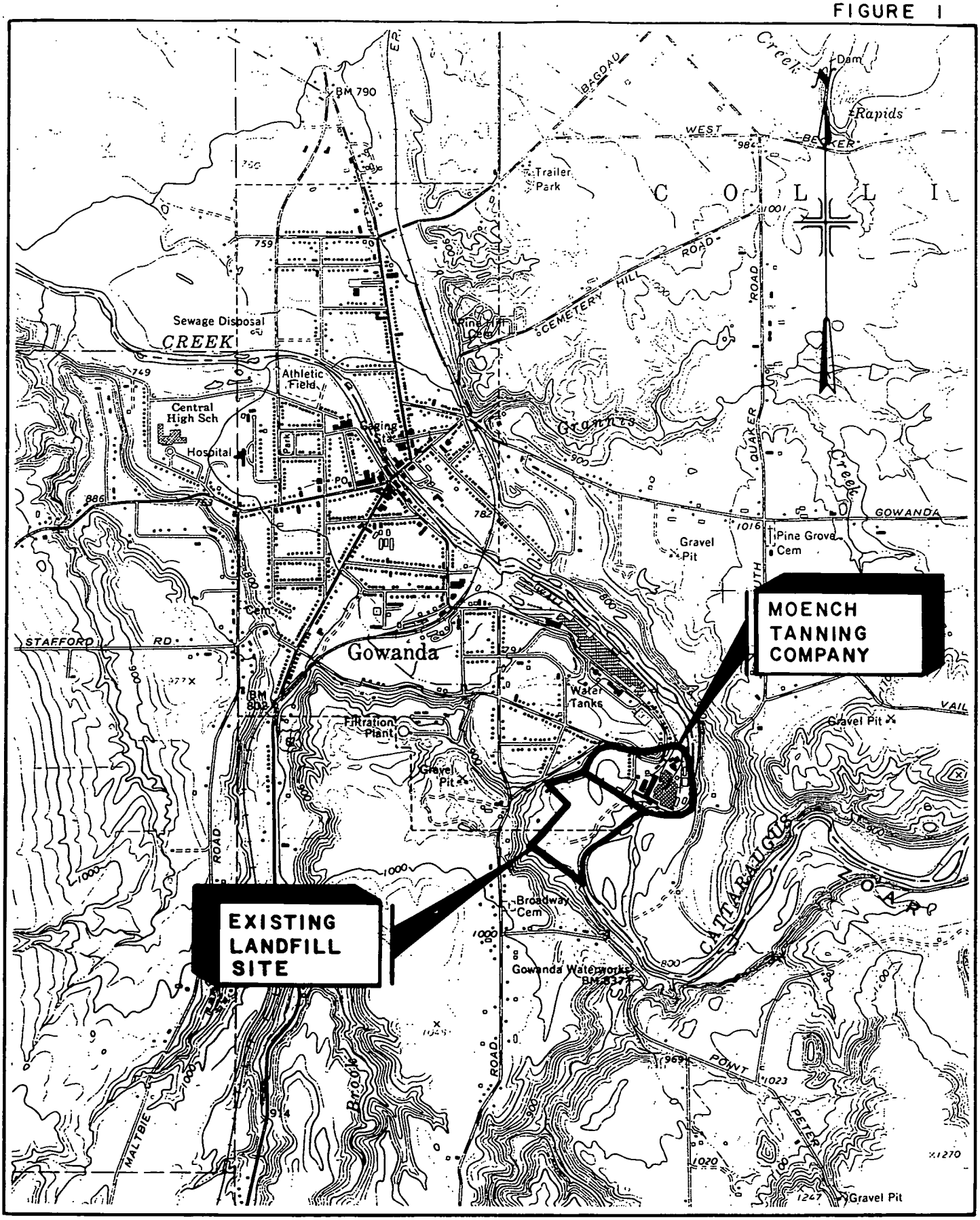
The Moench Tanning Company, a division of Brown Group, Inc. is located near the southeast corner of the Village of Gowanda, Cattaraugus County, New York (Figure 1). The Palmer Street Landfill, which was operated by Moench Tanning from 1900 through July 1983, lies immediately southwest of the tannery complex on an approximately 25-acre parcel of land. A variety of wastes generated by Moench Tanning were disposed of at the Palmer Street Landfill site. These wastes included sole leather extract, rendering waste, spray booth clean-up waste, waste finish, waste hair/leather scraps, wastewater treatment plant sludge, and occasional construction debris.

Moench Tanning has closed the Palmer Street Landfill. Accordingly, quarterly "Phase I" ground and surface water monitoring, which is defined in the Closure/Post-Closure Plan (Ref. 1), is being performed until such time as a long-term post-closure monitoring program is developed and implemented.

1.2 Purpose and Scope

Samples associated with the third of four (4) rounds of water quality monitoring for the 1992 calendar year were collected on July 27 through July 28, 1992. The purpose of this report is to provide a summary of the data generated for the Palmer Street Landfill site during the third quarterly monitoring event.

FIGURE 1



PALMER STREET LANDFILL

SITE LOCATION

MALCOLM PIRNIE

MOE-21

MOENCH TANNING COMPANY

APRIL 1992

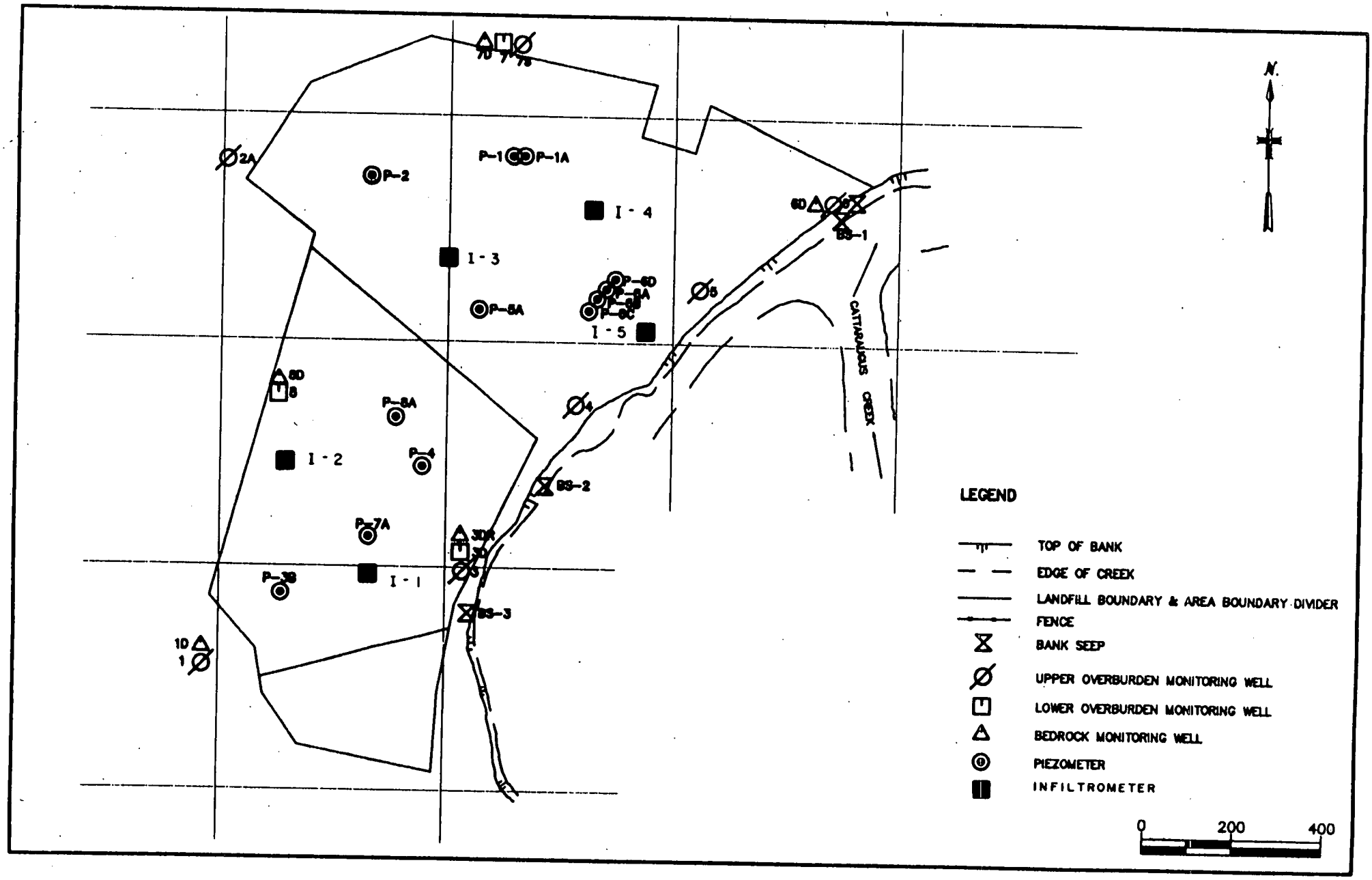
2.0 MONITORING SYSTEM

Ten (10) ground water monitoring wells at the Palmer Street Landfill are monitored in accordance with "Phase I" requirements for the site. These wells are designated as follows:

Shallow Overburden	Deep Overburden	Bedrock
MW-1	MW-3D	MW-3DR
MW-3	MW-7	MW-7D
MW-5		MW-8D
MW-6		
MW-7S		

Monitoring well MW-1 is the hydraulically upgradient well screened within the shallow overburden zone. Monitoring well MW-7D is the apparent hydraulically upgradient well screened within the bedrock (see Section 6.0). MW-3D, and MW-7 are screened in apparent discontinuous sand lenses within the glacial till (i.e., deep overburden). Consequently, no designation of upgradient/downgradient wells has been made. Monitoring well construction details are given in the report entitled "Palmer Street Landfill, Supplemental Hydrogeologic Investigation" (Ref. 2).

In addition to the wells, NYSDEC also requires the monitoring of two (2) bank seeps designated as BS-1 and BS-3, respectively. To evaluate cover performance, water levels from five (5) infiltrometers are also monitored. Locations of all monitoring points are shown on Figure 2.



MALCOLM PIRNIE

MOE - 23

PALMER STREET LANDFILL

MONITORING LOCATIONS

MOENCH TANNING COMPANY JULY 1992

FIGURE 2

3.0 MONITORING METHODS

3.1 Ground Water Monitoring

Samples collected during the third quarterly monitoring event were collected by Malcolm Pirnie, Inc. personnel and analyzed by General Testing Corporation and the Malcolm Pirnie, Inc. laboratory in accordance with the Sampling Plan/Quality Assurance Plan for the Palmer Street Landfill (Ref. 3). Laboratory analyses were performed in accordance with USEPA SW-846, 3rd Edition (Ref. 4). The monitoring parameters are listed in Table 1. Samples were collected from each of the twelve (12) monitoring locations identified in Section 2.0.

Prior to sampling, static water level elevations were measured in the monitoring wells and the wells were purged (see Table 2). Ground water elevations were also measured in the piezometers, infiltrometers, and well points on site. These measurements are included with the monitoring well water level data listed in Table 2.

Field samples were collected and measured for the field parameters identified in Table 1. A summary of field measurements is presented in Table 3. Field data sheets for this monitoring event are provided in Appendix A.

3.2 Infiltrometer Monitoring

Five infiltrometers have been installed beneath the landfill cap to be used in the assessment of the permeability and transmissibility of the cap. During each quarterly event water levels in the infiltrometers are measured and the amount of water infiltrating the cap is calculated.

During this quarterly event, water was present in infiltrometers I-1, I-2, and I-5. The calculated infiltration rates are presented on Table 4. As shown in the table, the rate of infiltration is less than the design infiltration rate of 1×10^{-7} cm/sec for each of the infiltrometers with the exception of I-5. A schematic showing the design and dimensions of the infiltrometers is presented in Attachment B.

MALCOLM PIRNIE

TABLE 1

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
JULY 27-28, 1992 MONITORING EVENT

MONITORING PARAMETERS

CONTAMINANTS OF INTEREST[1]

Volatile Organic Compounds[2]
Methyl Ethyl Ketone
Total and Soluble Arsenic[3]
Total and Soluble Barium[3]
Total and Soluble Chromium[3]
Total and Soluble Lead[3]

FIELD PARAMETERS[4]

pH
Specific Conductivity
Turbidity
Temperature
Odor
Sample Appearance

NOTES:

1) Analyzed quarterly at MW-1, MW-3, MW-3DR, MW-5, MW-6, MW-7S, MW-7D, MW-8D, BS-1, and BS-2. Analyzed once annually at MW-3D, and MW-7.
2) Volatile organic compounds are those compounds determined by USEPA SW-846, 3rd Edition, Methods 8010 and 8020.
3) Samples for soluble metals analysis were filtered in the field immediately upon sample collection.
4) Measured quarterly at all monitoring points at the time of sample collection.

MALCOLM PIRNIE

TABLE 2

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
JULY 27-28, 1992 MONITORING EVENT

GROUND WATER ELEVATIONS[1]

Location	Riser Elevation[2]	Total Well Depth[3]	STATIC WATER	
			Depth[3]	Elevation[2]
MW-1	826.04	31.79	6.61	819.43
MW-3	810.81	20.90	17.38	793.43
MW-3D	810.73	67.66	31.28	779.45
MW-3DR	810.47	102.70	32.36	778.11
MW-5	805.35	26.59	21.55	783.80
MW-6	800.48	19.12	16.25	784.23
MW-7S	800.38	14.81	8.06	792.32
MW-7	800.50	30.85	7.20	793.30
MW-7D	800.39	42.17	8.15	792.24
MW-8D	821.89	127.50	45.48	776.41
P-1	811.85	21.53	16.88	794.97
P-1A	811.91	17.84	15.82	796.09
P-2	811.94	20.27	14.95	796.99
P-3B	822.07	17.85	6.68	815.39
P-4	813.54	20.22	17.32	796.22
P-5A	805.89	—	**	—
P-6	801.77	—	**	—
P-7A	816.92	24.31	22.36	794.56
P-8A	809.00	17.52	16.87	792.13
WP-1	822.16	12.30	10.07	812.09
WP-2	802.36	—	*	—
WP-3	800.51	—	*	—
WP-4	806.31	15.02	13.89	792.42
WP-5	805.14	—	*	—
Staff Gauge	796.41	—	*	—

NOTES:
(1) Unless otherwise noted, water level readings were measured on July 27, 1992.
(2) Measured in Feet; distance above sea level.
(3) Measured in Feet; distance below top of riser.
* Well point/staff gauge destroyed.
** Piezometer inaccessible; buried under fill or destroyed.
MW = Monitoring Well P = Piezometer WP = Well Point

MALCOLM PIRNIE

TABLE 3

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
JULY 27-28, 1992 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity (NTU)	Sample Appearance	Sample Odor
MW-1*[2]	07/28/92	11:34 a.m.	15.8	7.95	359	57	Clear	None
MW-3*	07/27/92	11:13 a.m.	15	7.10	2160	27	Clear	None
MW-3D**	07/27/92	12:06 p.m.	14.5	10.10	369	95	Turbid	None
MW-3DR***	07/27/92	12:30 p.m.	14.9	8.15	481	11	Clear	None
MW-5*	07/27/92	2:20 p.m.	16.1	7.04	4099	>100	Turbid	Organic
MW-6*	07/27/92	2:09 p.m.	16	6.70	2803	48	Blackish	Organic
MW-7**	07/28/92	1:39 p.m.	16.3	8.08	575	70	Clear	None
MW-7S*	07/28/92	11:01 a.m.	16.7	7.19	2898	35	Clear	None
MW-7D***[3]	07/28/92	2:20 p.m.	15.4	8.15	576	>100	Turbid	None
MW-8D***	07/28/92	1:10 p.m.	15.2	8.81	368	>100	Turbid	None
BS-1	07/27/92	2:55 p.m.	19.4	7.61	612	9	Clear	None
BS-3	07/27/92	11:29 a.m.	20.5	7.14	1145	55	Clear	None

NOTES:
(1) Conductivity readings corrected to 25°C.
(2) MW-1 is hydraulically upgradient shallow overburden well.
(3) MW-7D is apparent hydraulically upgradient bedrock well.

* Shallow Overburden Well
** Deep Overburden Well
*** Bedrock Well
BS Bank Seep

MALCOLM PIRNIE

TABLE 4

INFILTROMETER MEASUREMENTS
PALMER STREET LANDFILL

Infiltrometer	Static Water Level 5/12/92 (ft)	Depth of Water Column (ft)	Static Water Level 7/27/92	Depth of Water Column (ft)	Δ Depth (ft)	# Days Between Readings (#)	Infiltration Rate gal/day/ft^2	Infiltration Rate (cm/sec)	Approxi-mate Total Rainfall This Period (ft)	Infiltration (%)
1	8.30	0.80	8.39	0.71	0.09	76	0.0006	2.8×10^{-8}	1.01	0.61
2	8.77	0.23	8.73	0.27	0.04	76	0.0003	1.4×10^{-8}	1.01	0.30
3	dry	-	dry	-	<0.01	76	$<7.0 \times 10^{-5}$	$<3.3 \times 10^{-9}$	1.01	<0.07
4	dry	-	dry	-	<0.01	76	$<7.0 \times 10^{-5}$	$<3.3 \times 10^{-9}$	1.01	<0.07
5	8.05	1.04	8.35	0.74	0.30	76	0.0035	1.6×10^{-7}	1.01	3.5
							Avg. $<9.0 \times 10^{-4}$	Avg. $<4.2 \times 10^{-8}$		

4.0 GROUND WATER QUALITY MONITORING RESULTS

The ground water and surface water quality results for the second quarter monitoring period at the Palmer Street Landfill are presented in Table 5. The associated laboratory data is provided in Appendix C. It should be noted that Table 5 includes only those parameters which were detected above analytical detection limits at a minimum of one location. Comparison of the second quarter monitoring data to the NYSDEC Class "GA" Ground Water Quality Standards/Guidance Values is also presented in Table 5.

Both the soil and waste at the Palmer Street Landfill contain significant levels of the metals-of-interest absorbed to the soil or waste particles (Ref. 5). Therefore, the sediment (or turbidity) content of any ground or surface water quality samples will directly impact the total metal concentration of the samples. The turbidity content of the ground water samples collected at the site is extremely variable and relatively high because the soil and waste fill both contain high percentages of fine-grained particles. As NYSDEC has previously agreed, in order to avoid misinterpretation of water quality data, total metals will only be used as an indication of the potential for ground water quality problems. Determinations as to the status of compliance with ground water quality standards or evaluations of ground water quality impacts will continue to be based on soluble metal concentrations.

From the analytical data provided in Table 5, the soluble barium concentration detected in samples collected from MW-3, MW-3DR, MW-6 and MW-7S exceeded the Class "GA" standard for barium. The soluble arsenic and soluble chromium concentrations detected in the sample collected from MW-3DR exceeded the Class "GA" standards for these elements. In addition, the pH of the samples collected from MW-3D and MW-8D were slightly greater (i.e., more basic) than the Class "GA" standard. The benzene and total xylenes concentration detected in the sample collected from MW-5 exceeded the Class "GA" Standards for these compounds, respectively. There were no exceedances of the Class "GA" standards at any other monitoring locations.

Revised

4.0 GROUND WATER QUALITY MONITORING RESULTS

The ground water and surface water quality results for the second quarter monitoring period at the Palmer Street Landfill are presented in Table 5. The associated laboratory data is provided in Appendix C. It should be noted that Table 5 includes only those parameters which were detected above analytical detection limits at a minimum of one location. Comparison of the second quarter monitoring data to the NYSDEC Class "GA" Ground Water Quality Standards/Guidance Values is also presented in Table 5.

Both the soil and waste at the Palmer Street Landfill contain significant levels of the metals-of-interest absorbed to the soil or waste particles (Ref. 5). Therefore, the sediment (or turbidity) content of any ground or surface water quality samples will directly impact the total metal concentration of the samples. The turbidity content of the ground water samples collected at the site is extremely variable and relatively high because the soil and waste fill both contain high percentages of fine-grained particles. As NYSDEC has previously agreed, in order to avoid misinterpretation of water quality data, total metals will only be used as an indication of the potential for ground water quality problems. Determinations as to the status of compliance with ground water quality standards or evaluations of ground water quality impacts will continue to be based on soluble metal concentrations.

From the analytical data provided in Table 5, the soluble barium concentration detected in samples collected from MW-3, MW-3DR, MW-6 and MW-7S exceeded the Class "GA" standard for barium. The soluble arsenic concentration detected in the sample collected from MW-3DR exceeded the Class "GA" standard for arsenic. In addition, the pH of the samples collected from MW-3D and MW-8D were slightly greater (i.e., more basic) than the Class "GA" standard. The benzene and total xylenes concentration detected in the sample collected from MW-5 exceeded the Class "GA" Standards for these compounds, respectively. There were no exceedances of the Class "GA" standards at any other monitoring locations.

Revised

MALCOLM PIRNIE

TABLE 5

SUMMARY OF ANALYTICAL RESULTS
MOENCH TANNING COMPANY
PALMER STREET LANDFILL
JULY 27-28, 1992 MONITORING EVENT[1]

Parameter	Quantitation Limit	MW-1	MW-3	MW-3D	MW-3DR	MW-5	MW-6	MW-7	MW-7S	Equip. Blank	Class "GA" Std.[2]
Metals (mg/l):											
Arsenic - Total	0.005	0.014	0.008	0.007	0.046	0.034	0.025	0.006	0.006	ND	0.025
Arsenic - Soluble	0.005	0.010	0.007	0.007	0.043	0.021	0.014	0.005	0.006	ND	–
Barium - Total	0.05	0.59	0.98	0.16	2.9	0.99	1.49	0.38	1.07	0.58	1.0
Barium - Soluble	0.05	0.63	1.02	0.05	2.9	0.87	1.89	0.30	1.12	ND	–
Chromium - Total	0.005	ND	0.011	0.013	0.255	0.137	0.016	ND	0.023	ND	0.05
Chromium - Soluble	0.005	ND	0.007	ND	0.244	0.046	0.007	ND	0.021	ND	–
Lead - Total	0.005	0.006	0.006	0.006	0.076	0.025	0.013	0.005	0.006	ND	0.025
Lead - Soluble	0.005	ND	0.014	ND	0.010	ND	ND	0.017	ND	ND	–
Volatiles (ug/l):											
Benzene	2.0	ND	ND	ND	ND	4.2	ND	ND	ND	ND	0.7
Xylenes (total)	2.0	ND	ND	ND	ND	15	ND	ND	ND	ND	5
Methylene Chloride	1.0	ND	ND	1.08	ND	ND	ND	ND	ND	ND	5
Chloroethane	2.0	ND	ND	ND	ND	ND	8.5	ND	ND	ND	-
1,1,1-Trichloroethane	1.0	ND	ND	ND	ND	ND	ND	1.4	ND	ND	5
Tetrachloroethene	1.0	ND	ND	ND	ND	ND	ND	1.5	ND	ND	5
Other: (S.U.)											6.5 - 8.5
pH	-	7.95	7.10	10.1	8.15	7.04	6.70	8.08	7.19	—	

Revised

TABLE 5 (Continued)

SUMMARY OF ANALYTICAL RESULTS
MOENCH TANNING COMPANY
PALMER STREET LANDFILL
JULY 27-28, 1992 MONITORING EVENT[1]

Parameter	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-3	Trip Blank[3]	Class "GA" Std.[2]
Metals (mg/l):							
Arsenic - Total	0.005	ND	0.014	ND	0.007		0.025
Arsenic - Soluble	0.005	ND	ND	ND	ND		–
Barium - Total	0.05	0.49	2.0	0.98	1.7		1.0
Barium - Soluble	0.05	0.38	0.73	0.97	0.58		–
Chromium - Total	0.005	0.009	0.017	ND	0.012		0.05
Chromium - Soluble	0.005	ND	ND	ND	0.006		–
Lead - Total	0.005	0.006	0.088	ND	0.008		0.025
Lead - Soluble	0.005	ND	0.010	ND	ND		–
Volatiles (ug/l):							
Benzene	2.0	ND	ND	ND	ND	ND	0.7
Xylenes (total)	2.0	ND	ND	ND	ND	ND	5
Methylene Chloride	1.0	ND	ND	ND	ND	ND	5
Chloroethane	2.0	ND	ND	ND	ND	ND	-
1,1,1-Trichloroethane	1.0	ND	ND	ND	ND	ND	5
Tetrachloroethene	1.0	ND	ND	ND	ND	ND	5
Other:							
pH	–	8.15	8.81	7.61	7.14	-	6.5 - 8.5

NOTES:
ND = Not Detected
(1) Only those parameters found at a concentration above laboratory detection limits at a minimum of one location are shown.
(2) NYSDEC Class "GA" Ground Water Quality Standards, 6NYCRR Part 703, Revised November 1991.
(3) Trip blanks were analyzed for only volatile organic compounds.

Revised

5.0 GROUND WATER FLOW

A water table isopotential map for the shallow or upgradient ground water flow system was prepared for the Palmer Street Landfill and was presented in the January 27, 1992 Ground Water Quality Monitoring Report (Ref. 6). Ground water elevations measured on 01/27/92 were used in preparing the map. The map indicates that shallow ground water flow is primarily to the east toward Cattaraugus Creek, with some additional discharges to a topographic low located along the northern side of the landfill west of wellpoint WP-4. The topographic low is drained by a storm water sewer which crosses the Tannery Complex and ultimately discharges to Cattaraugus Creek (Reference 2).

Water level data for the July 27-28, 1992 monitoring period are generally consistent with the January 27, 1992 water level data, and ground water flow is assumed to be in the same general direction as previously reported.

MALCOLM PIRNIE

6.0 REFERENCES

1. Palmer Street Landfill Closure/Post-Closure Plan (EPA ID. NYD002126910), prepared by Malcolm Pirnie, Inc., revised February 1989.

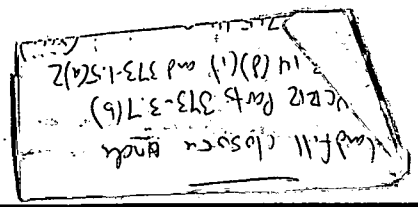
2. Palmer Street Landfill, Supplemental Hydrogeologic Investigation, prepared by Malcolm Pirnie, Inc., January 1989.

3. Sampling Plan/Quality Assurance Plan for Ground Water Monitoring - Palmer Street Landfill. Prepared by Malcolm Pirnie, Inc., August 1989.

4. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, USEPA Office of Solid Waste and Emergency Response, November 1986.

5. Palmer Street Landfill, Evaluation of Alternative Cover Systems, prepared by Malcolm Pirnie, Inc., January 1989.

6. Ground Water Quality Monitoring Report for January 27, 1992 Monitoring Event at Palmer Street Landfill, prepared by Malcolm Pirnie, Inc., April 1992.



MALCOLM PIRNIE

APPENDIX A

FIELD DATA SHEETS
FOR
JULY 27-28, 1992 MONITORING EVENTS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING LOCATION NO.: MW-1
JOB NO.: 0605232-145 LAB SAMPLE NO.: #1

WELL DATA: DATE: 7-28-92 TIME: 0737
Casing Diameter (inches): 2 Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE Screen Material: PVC
Static Water Level Below TOR (ft.): 6.65 Bottom Depth (ft.) 31.72
Elevation Top of Well Riser: 826.04 Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7-28-92 TIME: Start: 0840 Finish: 0910
Method: TEFLON BAILER Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 3 Was well purged dry? Yes ___ No X
Standing Volume (GAL.) 4.3 Was Well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 13

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ___
Field Personnel: D. MALUCCI

SAMPLING DATA: DATE: 7-28-92 TIME: Start: 1134 Finish: 1157
Method: TEFLON BAILER Sampler: D. MALUCCI & ZYNDA
Present Water Level (ft.): 6.75 Air Temperature (F°): 70
Depth of Sample (ft.): 6.75 Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 TIME: Start: 1140 Finish: 1145
Filtered: Yes X No ___ Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 X NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: X Turbid: ___ Color: ___
Contains Sediment ___ Odor: ___ Other: ___
Temperature (°C): 16.5 / 15.11 pH 7.92 / 7.98 Specific Conductivity (µmhos/cm): 310 / 295
Turbidity (NTU): 57 / 58 Other: ___

REMARKS: ___

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.H. 1992

PROJECT NO.: 0605 232-145

STAFF: D MAZUCCI G. ZYNDA

DATE: 7/28/92

WELL NO.: MW-1

1	TOTAL CASING AND SCREEN LENGTH (ft.)	31.72
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	6.65
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 4.5$ gal.

WELL I.D.	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)									
	4.5	8	13	17						
PH	8.22	7.99	7.96							
CONDUCTIVITY	290	270	280							
TEMP.	13.6	13.6	12.7							
TURBIDITY	TURBID >100	>100	>100							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-3
JOB NO.: 0605232-145 — LAB SAMPLE NO.: #2

WELL DATA: DATE: 7-27-92 — TIME: 0948
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 17.38 — Bottom Depth (ft.) 20.85
Elevation Top of Well Riser: 810.81 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7-27-92 — TIME: Start: 9:01 Finish: 9:22
Method: TEFLON BAILER — Pumping Rate (gal/min): —
Well Volumes Purged ($\pi r^2 h/231$): 3 — Was well purged dry? Yes ___ No ✓
Standing Volume (GAL.) 0.6 — Was well purged below sand pack? Yes NA No ___
Volume Purged (GAL.) ~~6~~ 1.8

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes ✓ No ___
Field Personnel: GDZ

SAMPLING DATA: DATE: 7-27-92 — TIME: Start: 11:13 Finish: 1125
Method: TEFLON BAILER — Sampler: DMM
Present Water Level (ft.): 17.38 — Air Temperature (F°): 75
Depth of Sample (ft.): 17.38 — Weather Conditions: Sunny
Is sampling equipment dedicated to sample location: Yes ✓ No ___
Source and type of water used in field for QC purposes: GT AND MTE ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7/27/92 — TIME: Start: 1130 Finish: 1135
Filtered: Yes ✓ No ___ — Cool to 4°C: ✓
Preservative: H_2SO_4 ___ HNO_3 ✓ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA: ~~Cloudy~~/~~Cloudy~~/Cloudy
Appearance: Clear: ___ Turbid: ___ — Color: ___
Contains Sediment ___ — Odor: ___ Other: ___
Temperature (°C): 12.7/11.7/11.8 pH 7.03/7.04/6.98 — Specific Conductivity (µmhos/cm): ~~1600~~/1600/1550/1450
Turbidity (NTU): 51/48/50 — Other: ___

* NO GROUND MEASUREMENT

REMARKS: pH: 7.10 / ✓
Temperature: 15.0 / ✓
Conductivity: ~~1800~~ ~~1680~~ / ✓
Turbidity: 27 / ✓
Clear /

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MACUCI G. ZYWOA

DATE: 7/22/92

WELL NO.: MW-3

1	TOTAL CASING AND SCREEN LENGTH (ft.)	20.85
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	17.38
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) =$ 0.6 gal.

WELL I.D.	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	1.2	1.8							
pH	7.03	7.04	6.98							
CONDUCTIVITY	1600	1530	1450							
TEMP.	12.7	11.7	11.8							
TURBIDITY	57	48	50							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING LOCATION NO.: MW- 3D ✱
JOB NO.: 0605232-145 LAB SAMPLE NO.: #3

WELL DATA: DATE: 7/27/92 TIME: 0846
Casing Diameter (inches): 2 Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE Screen Material: PVC
Static Water Level Below TOR (ft.): 31.28 Bottom Depth (ft.) 67.91
Elevation Top of Well Riser: 810.73 Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7-27-92 TIME: Start: 09:48 Finish: 11:12
Method: TEFLON BAILER Pumping Rate (gal/min): —
Well Volumes Purged ($\pi r^2 h / 231$): 1.5 Was well purged dry? Yes ✓ No
Standing Volume (GAL.) 6.2 Was well purged below sand pack? Yes NA No
Volume Purged (GAL.) 9.3

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes ✱ No
Field Personnel: GDZ

SAMPLING DATA: DATE: 7-27-92 TIME: Start: 12:06 Finish: 12:20
Method: TEFLON BAILER Sampler: GDZ
Present Water Level (ft.): 63.62 Air Temperature (F°): 75
Depth of Sample (ft.): 63.62 Weather Conditions: Sunny
Is sampling equipment dedicated to sample location: Yes ✱ No
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-27-92 TIME: Start: 1215 Finish: 1219
Filtered: Yes ✱ No Cool to 4°C: ✱
Preservative: H_2SO_4 ____ HNO_3 ✱ NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA: TURBID/
Appearance: Clear: ____ Turbid: ____ Color: ____
Containing Sediment ____ Odor: ____ Other: ____
Temperature (°C): 15.4 / 13.5 pH 10.02 / 10.18 Specific Conductivity (µmhos/cm): 310 / 300
Turbidity (NTU): ~~95~~ 95 / 88

REMARKS: ✱ WELL MONITORED ANNUALLY pH: 10.02 / 10.18
Conductivity: 310 / 300
Temp.: 15.4 / 13.5
Turbidity: 95 / 88
Turbid / Turbid

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MACUCI / G. ZYNDA

DATE: 7-21-92

WELL NO.: MW-3D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	67.91
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	31.28
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 6.3 gal.

WELL I.D.	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)									
	6.3									
pH	9.56									
CONDUCTIVITY	325									
TEMP.	11.9									
TURBIDITY	>100									

COMMENTS: WELL PURGED TO DRYNESS - SLOW RECHARGE EXHIBITED

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MORENCH TANNING — LOCATION NO.: MW-3 DR
JOB NO.: 0605232-145 — LAB SAMPLE NO.: 15, 16

WELL DATA: DATE: 2-27-92 — TIME: 0851
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 32.36 — Bottom Depth (ft.) 103.06
Elevation Top of Well Riser: 810.47 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 2-27-92 — TIME: Start: 09:25 Finish: 11:07
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h / 231$): 3 — Was well purged dry? Yes ~~X~~ No ~~X~~
Standing Volume (GAL.) ~~12~~ — Was well purged below sand pack? Yes NA No ___
Volume Purged (GAL.) ~~36~~ 36

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ___
Field Personnel: GDZ

SAMPLING DATA: DATE: 2-27-92 — TIME: Start: ~~11:48~~ 11:48 Finish: 12:36
Method: TEFLON BAILER — Sampler: DM
Present Water Level (ft.): 35.12 — Air Temperature (F°): 75
Depth of Sample (ft.): 35.12 — Weather Conditions: Sunny
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 2-27-92 — TIME: Start: 1230 Finish: 1235
Filtered: Yes ___ No ___ — Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA: Cloudy/Clear/Clear
Appearance: Clear: ___ Turbid: ___ — Color: ___
Contains Sediment ___ — Odor: ___ Other: ___
Temperature (°C): 12.0/13.2/13.1 — pH 8.11/8.20/8.10 — Specific Conductivity (umhos/cm): 400/385/~~385~~ 385
Turbidity (NTU): 28/25/1.7 — Other: ___

REMARKS: TOOK: 15 - MSD, 16 - MS

SAMPLE MEASUREMENTS
pH: 8.15 / 8.15
temperature: 15.9 / 13.9
Conductivity: 415 / 385
turbidity: 11 / 9
Clear / Clear

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D MACUCI / E. ZYNDA

DATE: 2/27/92

WELL NO.: MW-3D/R

1	TOTAL CASING AND SCREEN LENGTH (ft.)	103.06
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	32.36
4	VOLUME OF WATER IN CASING (gal.)	

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

$V = 0.0408 (2^2 \times (1 - 3) = 12$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	12	24	36							
PH	8.11	8.20	8.10							
CONDUCTIVITY	400	385	385							
TEMP.	12	13.2	13.1							
TURBIDITY	28	25	17							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-5
JOB NO.: 0605232-145 — LAB SAMPLE NO.: #5

WELL DATA: DATE: 7-27-92 — TIME: 1345
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 21.55 — Bottom Depth (ft.) 25.6
Elevation Top of Well Riser: 805.35 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7-27-92 — TIME: Start: 1342 Finish: 1400
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 3 — Was well purged dry? Yes ____ No X
Standing Volume (GAL.) 0.7 — Was well purged below sand pack? Yes X No ____
Volume Purged (GAL.) 2.5

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ____
Field Personnel: D. MACUCI

SAMPLING DATA: DATE: 7-27-92 — TIME: Start: 1428 Finish: 1434
Method: TEFLON BAILER — Sampler: GDZ / DMM
Present Water Level (ft.): 22.00 X — Air Temperature (F°): 75
Depth of Sample (ft.): — — Weather Conditions: Cloudy
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: GANNETT TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-27-92 — TIME: Start: 1436 Finish: 1443
Filtered: Yes X No ____ — Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 X NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA: Turbid / Turbid
Appearance: Clear: ____ Turbid: ____ — Color: ____
Contains Sediment ____ — Odor: ____ Other: ____
Temperature (°C): 15.8 / 16.4 — pH 7.02 / 7.06 — Specific Conductivity (µmhos/cm): ~~3500~~ 3510 / 3450
Turbidity (NTU): >100 / >100 — Other: ____

REMARKS: X ESTIMATED

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MACKAY / G. LYNDA

DATE: 2-27-92

WELL NO.: MW-5

1	TOTAL CASING AND SCREEN LENGTH (ft.)	25.60
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	21.55
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 0.7$ gal.

WELL I.D.	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)									
	0.7	2.5	3.5							
pH	7.01	7.01	7.01							
CONDUCTIVITY	3190	3450	3450							
TEMP.	14	13.1	13.7							
TURBIDITY	>100	>100	>100							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-6
JOB NO.: 0605232-145 — LAB SAMPLE NO.: #6

WELL DATA: DATE: 7/27/92 — TIME: 1343
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 16.25 — Bottom Depth (ft.) 19.13
Elevation Top of Well Riser: 800.48 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7/27/92 — TIME: Start: 1344 — Finish: 1402
Method: TEFLON BAILER — Pumping Rate (gal/min): —
Well Volumes Purged ($\pi r^2 h/231$): 3 — Was well purged dry? Yes ____ No NA
Standing Volume (GAL.) 0.5 — Was well purged below sand pack? Yes ____ No ____
Volume Purged (GAL.) 1.5

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ____
Field Personnel: D. MACUCC,

SAMPLING DATA: DATE: 7-27-92 — TIME: Start: 1409 — Finish: 1421
Method: TEFLON BAILER — Sampler: GD2 DMM
Present Water Level (ft.): 16.30 — Air Temperature (F°): 75
Depth of Sample (ft.): 16.30 — Weather Conditions: Cloudy
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-27-92 — TIME: Start: 1430 — Finish: 1433
Filtered: Yes X No ____ — Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 X NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA: Blackish / Blackish
Appearance: Clear: X Turbid: ____ — Color: ____
Contains Sediment ____ — Odor: ____ Other: ____
Temperature (°C): 16.3/15.7 — pH 6.68/6.72 — Specific Conductivity (mhos/cm): 2400/2350
Turbidity (NTU): 48/52 — Other: ____

REMARKS: ____

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D MACUGA / E ZYNDA

DATE: 2-27-92

WELL NO.: MW-6

1	TOTAL CASING AND SCREEN LENGTH (ft.)	19.13
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	16.25
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = .65 gal.

WELL I.D.	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)									
	0.5	1.0	1.5							
pH	6.70	6.70	6.71							
CONDUCTIVITY	2500 ~~7850~~	2400 ~~7850~~	2400 ~~7850~~							
TEMP.	15.6	14.5	14.7							
TURBIDITY	cloudy Black 30	cloudy 24	Black 26							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-7 ✱
JOB NO.: 0605232-145 — LAB SAMPLE NO.: ✱7

WELL DATA: DATE: 7-28-92 — TIME: 0830
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): 22.5 - 27.5 — Screen Material: PVC
Static Water Level Below TOR (ft.): 8.20 — Bottom Depth (ft.) 30.28
Elevation Top of Well Riser: 800.50 — Datum Ground Surface:
Elevation Top of Screen: 750.00

PURGING DATA: DATE: 7-28-92 — TIME: Start: 1002 Finish: 1026
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi R^2 H/231$): 1 — Was well purged dry? Yes ✱ No ___
Standing Volume (GAL.) 3.8 — Was well purged below sand pack? Yes ✱ No ___
Volume Purged (GAL.) 4

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes ✱ No ___
Field Personnel: D. Mauck

SAMPLING DATA: DATE: 7-28-92 — TIME: Start: 1339 Finish: 1426
Method: TEFLON BAILER — Sampler: D. Mauck / G. ZYNDA
Present Water Level (ft.): 27.99 — Air Temperature (F°): 70
Depth of Sample (ft.): 27.99 — Weather Conditions: Cloudy
Is sampling equipment dedicated to sample location: Yes ✱ No ___
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 — TIME: Start: 1750 Finish: 1754
Filtered: Yes ✱ No ___ — Cool to 4°C: ✱
Preservative: H_2SO_4 ___ HNO_3 ✱ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: ✱ Turbid: ___ — Color: ___
Contains Sediment ___ — Odor: ___ or Other: ___
Temperature (°C): 16.3 / pH 8.09 / — Specific Conductivity (µmhos/cm): 490 /
Turbidity (NTU): 70 / — Other: ___
COULD NOT GET 2ND MEASUREMENT - WELL WENT DRY

REMARKS: ✱ MONITORING WELL SAMPLED ANNUALLY

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605-232-145

STAFF: D. MACRI / G. ZYNDA

DATE: 2/28/92

WELL NO.: MW-7

1	TOTAL CASING AND SCREEN LENGTH (ft.)	30.78
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	8.20
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 3.8 gal.

WELL I.D.	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)									
	4									
PH	8.00									
CONDUCTIVITY	472									
TEMP.	13									
TURBIDITY	>100									

COMMENTS:

WELL PURGED TO DRYNESS - WELL EXHIBITED VERY SLOW RECHARGE

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-7S
JOB NO.: 0605232-145 — LAB SAMPLE NO.: # 8

WELL DATA: DATE: 7/28/92 — TIME: 0930
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): 2-12 — Screen Material: PVC
Static Water Level Below TOR (ft.): 8.06 — Bottom Depth (ft.) 14.85
Elevation Top of Well Riser: 800.39 — Datum Ground Surface:
Elevation Top of Screen: 790.50

PURGING DATA: DATE: 7/28/92 — TIME: Start: 1000 Finish: 1033
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 3 — Was well purged dry? Yes ____ No X
Standing Volume (GAL.) 1.2 — Was well purged below sand pack? Yes ____ No OK
Volume Purged (GAL.) 3.6

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ____
Field Personnel: D. MALUCC.

SAMPLING DATA: DATE: 7-28-92 — TIME: Start: 1101 Finish: 1119
Method: TEFLON BAILER — Sampler: D. MALUCC. / E. LYNN
Present Water Level (ft.): 8.60 — Air Temperature (F°): 70
Depth of Sample (ft.): 8.60 — Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 — TIME: Start: 1119 Finish: 1123
Filtered: Yes X No ____ — Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 X NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: yellowish / Turbid: ____ — Color: ____
Contains Sediment ____ — Odor: ____ or Other: ____
Temperature (°C): 16.2 / 17.2 — pH 7.19 / 7.19 — Specific Conductivity (μmhos/cm): 2450 / 2520
Turbidity (NTU): 35 / 36 — Other: ____

REMARKS:

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: GDZ

DATE: 7-28-92

WELL NO.: MW-7S

1	TOTAL CASING AND SCREEN LENGTH (ft.)	14.85
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	8.06
4	VOLUME OF WATER IN CASING (gal.)	

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

$V = 0.0408 (2^2 \times (1 - 3) = 1.2$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	1.2	2.4	3.6							
PH	7.19	7.22	7.18							
CONDUCTIVITY	2350	2400	2500							
TEMP.	15.7	15.5	16.0							
TURBIDITY	cloudy 53	cloudy 49	cloudy 33							

COMMENTS: yellowish

DMM12049.F2

Rev. 01/10/90

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-7D
JOB NO.: 0605232-145 — LAB SAMPLE NO.: #9

WELL DATA: DATE: 7/29/92 — TIME: 0933
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): 34-39 — Screen Material: PVC
Static Water Level Below TOR (ft.): 8.15 — Bottom Depth (ft.) 42.15
Elevation Top of Well Riser: 850.39 — Datum Ground Surface:
Elevation Top of Screen: 763.50

PURGING DATA: DATE: 7-28-92 — TIME: Start: 0938 Finish: 1140
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi R^2 H/231$): 3 — Was well purged dry? Yes ___ No X
Standing Volume (GAL.) 5.8 — Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 18

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ___
Field Personnel: D. Malucci

SAMPLING DATA: DATE: 7-28-92 — TIME: Start: 1410 Finish: 1433
Method: TEFLON BAILER — Sampler: D. MALUCCI / E. ZYNDA
Present Water Level (ft.): 15.51 — Air Temperature (F°): 70
Depth of Sample (ft.): 15.51 — Weather Conditions: sunny
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 — TIME: Start: 1350 Finish: 1355
Filtered: Yes X No ___ — Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 X NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: X Turbid: ___ Color: ___
Contains Sediment ___ Odor: ___ Other: ___
Temperature (°C): 16.3 / 15.4 — pH 8.15 / 8.14 — Specific Conductivity (μmhos/cm): 435 / 536
Turbidity (NTU): 185 — Other: ___

REMARKS: ___

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605-232-145

STAFF: D. MACUCCI / G. ZYNAA

DATE: 7-28-92

WELL NO.: MW-7D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	42.15
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	8.15
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 5.8$ gal.

WELL I.D.	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)									
	6	12	18							
PH	8.07	8.09	8.15							
CONDUCTIVITY	550	550	580							
TEMP.	14.2	13.0	13.5							
TURBIDITY	TURBID GRAY >100	TURBID GRAY >100	TURBID GRAY >100							

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING TYPE OF SAMPLE: GROUND WATER

CLIENT: MOENCH TANNING LOCATION NO.: MW-8D

JOB NO.: 0605 232-145 LAB SAMPLE NO.: #10

WELL DATA: DATE: _____ TIME: _____

Casing Diameter (inches): 2 Casing Material: PVC

Screened Interval (ft BGS): NOT AVAILABLE Screen Material: PVC

Static Water Level Below TOR (ft.): 75.43 Bottom Depth (ft.) 127.45

Elevation Top of Well Riser: 821.89 Datum Ground Surface: _____

Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 7-28-92 TIME: Start: 0831 Finish: 1020

Method: TEFLON BAILER Pumping Rate (gal/min): _____

Well Volumes Purged ($\pi R^2 H/231$): 3 Was well purged dry? Yes ____ No *

Standing Volume (GAL.) 13.9 ~~45.43~~ Was well purged below sand pack? Yes N/A No *

Volume Purged (GAL.) 42

Is purging equipment dedicated to sample location?
Yes * No ____

Field Personnel: GDZ

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

SAMPLING DATA: DATE: 7-28-92 TIME: Start: 13:10 Finish: 13:20

Method: TEFLON BAILER Sampler: GDZ DMM

Present Water Level (ft.): ~~45.43~~ 55.58 Air Temperature (F°): 70

Depth of Sample (ft.): 55.58 Weather Conditions: Cloudy

Is sampling equipment dedicated to sample location: Yes * No ____

Source and type of water used in field for QC purposes: GENERAL TESTING ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 TIME: Start: 1325 Finish: 1328

Filtered: Yes * No ____ Cool to 4°C: *

Preservative: H_2SO_4 ____ HNO_3 ____ NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA: TURBID GRAY / TURBID GRAY

Appearance: Clear: ____ Turbid: ____ Color: ____

Contains Sediment ____ Odor: ____ Other: ____

Temperature (°C): 15.0 / 15.3 pH 8.75 / 8.86 Specific Conductivity (µmhos/cm): 300 / 305

Turbidity (NTU): ~~900~~ >100 / >100 Other: ____

REMARKS: _____

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 3RD QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: GDZ

DATE: 2-25-92

WELL NO.: MW-8D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	127.45
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	45.43
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 13.9 gal.

WELL I.D.	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)									
	14	28	42							
PH	9.50	8.91	8.88							
CONDUCTIVITY	250	310	305							
TEMP.	13.9	16.0	14.2							
TURBIDITY	Turbid >100	Turbid >100	Turbid >100	[illegible]						

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING
TYPE OF SAMPLE: SURFACE GROUND WATER
CLIENT: MOENCH TANNING
LOCATION NO.: BS-1 BANK SEEP.
JOB NO.: 0605232-145
LAB SAMPLE NO.: #11

WELL DATA: DATE: _____ TIME: _____

Casing Diameter (inches): NOT APPLICABLE
Casing Material: NOT APPLICABLE
Screened Interval (ft BGS): _____
Screen Material: _____
Static Water Level Below TOR (ft.): _____
Bottom Depth (ft.) _____
Elevation Top of Well Riser: _____
Datum Ground Surface: _____
Elevation Top of Screen: _____

PURGING DATA: DATE: _____ TIME: Start: _____ Finish: _____

Method: NOT APPLICABLE (N/A)
Pumping Rate (gal/min): (N/A)
Well Volumes Purged ($\pi r^2 h/231$): (N/A)
Was well purged dry? Yes ____ No (N/A)
Standing Volume (GAL.) (N/A)
Was Well purged below sand pack? Yes ____ No ____
Volume Purged (GAL.) (N/A)

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ____

Field Personnel: D. MACUCI / E. ZYNDA

SAMPLING DATA: DATE: 7-27-92 TIME: Start: 1455 Finish: 1519

Method: SURFACE WATER GRAB
Sampler: GDZ/DMM
Present Water Level (ft.): N/A
Air Temperature (F°): 75
Depth of Sample (ft.): _____
Weather Conditions: Cloudy
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: GENERAL TESTING ENV. LABORATORY

PRESERVATION DATA: DATE: 7-27-92 TIME: Start: 1520 Finish: 1523

Filtered: Yes X No ____
Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 X NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: ✓ Turbid: ____
Color: ____
Contains Sediment ____
Odor: ____ Other: ____
Temperature (°C): 19.4 pH 7.61
Specific Conductivity (μmhos/cm): 550
Turbidity (NTU): 9
Other: ____

REMARKS: _____

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING TYPE OF SAMPLE: SURFACE GROUND WATER

CLIENT: MOENCH TANNING LOCATION NO.: BS-3 BANK SEEP

JOB NO.: 0605232-145 LAB SAMPLE NO.: # 12

WELL DATA: DATE: _____ TIME: _____

Casing Diameter (inches): NOT APPLICABLE Casing Material: NOT APPLICABLE

Screened Interval (ft BGS): _____ Screen Material: _____

Static Water Level Below TOR (ft.): _____ Bottom Depth (ft.) _____

Elevation Top of Well Riser: _____ Datum Ground Surface: _____

Elevation Top of Screen: _____

PURGING DATA: DATE: 2-27-92 TIME: Start: 1129 Finish: _____

Method: NOT APPLICABLE (N/A) Pumping Rate (gal/min): (N/A)

Well Volumes Purged ($\pi R^2 H/231$): (N/A) Was well purged dry? Yes ____ No (N/A)

Standing Volume (GAL.) (N/A) Was Well purged below sand pack? Yes ____ No ____

Volume Purged (GAL.) (N/A)

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ____

Field Personnel: _____

SAMPLING DATA: DATE: 2-27-92 TIME: Start: 1129 Finish: 11:40

Method: SURFACE WATER GRAB Sampler: D. MALCOLM

Present Water Level (ft.): N/A Air Temperature (F°): 25

Depth of Sample (ft.): _____ Weather Conditions: SUNNY

Is sampling equipment dedicated to sample location: Yes X No ____

Source and type of water used in field for QC purposes: GENERAL TESTING ENV. LABORATORY

PRESERVATION DATA: DATE: _____ TIME: Start: 1142 11:42 Finish: 1149 11:49

Filtered: Yes X No ____ Cool to 4°C: X

Preservative: H_2SO_4 ____ HNO_3 ____ NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: ____ Turbid: √C loudy Color: _____

Contains Sediment _____ Odor: _____ Other: _____

Temperature (°C): 20.5 pH 7.14 Specific Conductivity (µmhos/cm): 1050

Turbidity (NTU): 55 Other: _____

REMARKS: _____

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 3RD QT. G.W. MONITORING
TYPE OF SAMPLE: QA / QC GROUND WATER
CLIENT: MOENCH TANNING
LOCATION NO.: EQUIPMENT BLANK
JOB NO.: 0605232-145
LAB SAMPLE NO.: # 13

WELL DATA: DATE: TIME:
Casing Diameter (inches): NOT APPLICABLE
Casing Material: NOT APPLICABLE
Screened Interval (ft BGS):
Screen Material:
Static Water Level Below TOR (ft.):
Bottom Depth (ft.)
Elevation Top of Well Riser:
Datum Ground Surface:
Elevation Top of Screen:

PURGING DATA: DATE: TIME: Start: Finish:
Method: NOT APPLICABLE (N/A)
Pumping Rate (gal/min): (N/A)
Well Volumes Purged ($\pi R^2 H / 231$): (N/A)
Was well purged dry? Yes No (N/A)
Standing Volume (GAL.) (N/A)
Volume Purged (GAL.) (N/A)
Was Well purged below sand pack? Yes ___ No ___

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No
Field Personnel:

SAMPLING DATA: DATE: 7-28-92 TIME: Start: 1042 Finish: 1052
Method: TEFLON BAILER
Sampler: D. MAWELL
Present Water Level (ft.): (N/A)
Air Temperature (F°): 70
Depth of Sample (ft.):
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No
Source and type of water used in field for QC purposes: GENERAL TEST ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: 7-28-92 TIME: Start: 1054 Finish: 1054
Filtered: Yes X No
Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 X NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: X Turbid: ___ Color:
Contains Sediment ___ Odor: ___ Other:
Temperature (°C): X pH X
Specific Conductivity (µmhos/cm):
Turbidity (NTU): X Other:

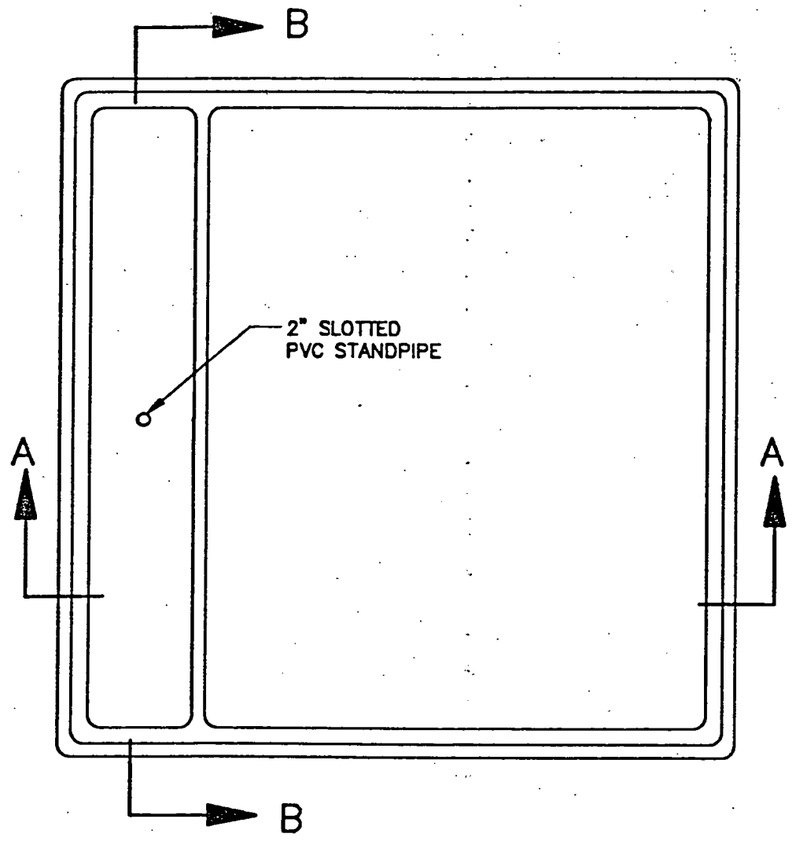
REMARKS: X NOT APPLICABLE

SAMPLED WELL MW-7S

MALCOLM PIRNIE

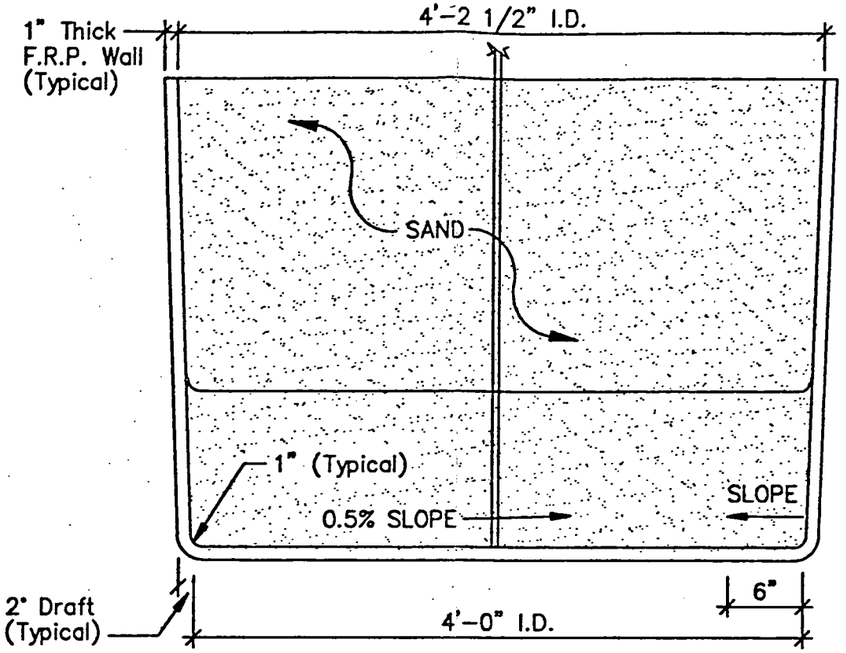
APPENDIX B

INFILTROMETER DESIGN

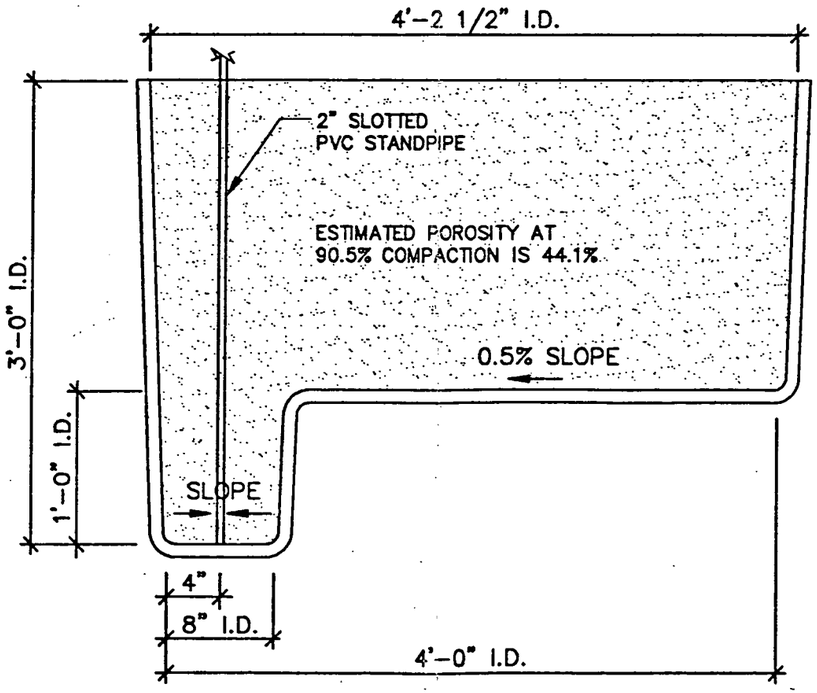


PLAN

SECTION B–B



SECTION A–A



TYPICAL INFILTROMETER BY HEY'S ENTERPRISES
AS INSTALLED AT PALMER STREET LANDFILL

INFILTROMETER

MOENCH TANNING COMPANY 3/20/90

MTC–23–INF

...of 13 on-site wells.

Landfill closure under 6NYCRR Parts 373-3.7(b) 373-3.14(d)(1) and 373-1.5(a)2 and 40CFR 265.111, 265.310-270.14(b)(13)(iii)

MALCOLM PIRNIE

APPENDIX C

ANALYTICAL REPORT
FOR
JULY 27-28, 1992 MONITORING EVENT

MALCOLM PIRNIE

Malcolm Pirnie Laboratory
707 Old Saw Mill River Road
Tarrytown, NY 10591
Phone: (914) 345-8230
Fax: (914) 345-8741

TECHNICAL REPORT

MOENCH TANNING

Approved by: _____

Project Number : 0605-211-623

Date : 11-11-1992

MALCOLM PIRNIE ENVIRONMENTAL LABORATORY

CERTIFICATIONS

- New York State Department of Health:
  ELAP # 10202 Water, Wastewater, Solid and Hazardous Waste
- New Jersey Department of Environmental Protection:
  LAB ID# 73171
  Water, Wastewater (including solid and hazardous waste)
- Connecticut Department of Health Services:
  LAB ID# PH-0536 Water and Wastewater
- US ARMY CORPS OF ENGINEERS - Missouri River Division - HTRW Validation

ANALYTICAL REFERENCES

The Malcolm Pirnie Environmental Laboratory utilizes a variety of methods and procedures based on the analytical references listed below.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 3/83 Revision.

Test Methods for Evaluating Solids Waste-Physical/Chemical Methods, SW-846, 3rd Edition. Office of Solid Waste and Emergency repairs, USEPA, Washington, D.C., 1986.

USEPA Contract Laboratory Program, Statement of Work for Organics Analysis, USEPA, OLM01.5.

USEPA Contract Laboratory Program, Statement of Work for Inorganics Analysis, USEPA, ILM01.0.

Standard Methods for the Examination of Water and Wastewater, 16 Edition, APHA, Washington D.C., 1985.

Annual Book of ASTM Standards, Part 31 - Water. American Society for Testing and Materials, Philadelphia, PA, 1981.

Methods for Organic Chemisal Analysis of Municipal and Industrial Wastewater, Appendix A, CFR Part 136, Federal Register, Vol. 49, No. 209, 1984.

SAMPLE SUMMARY SORTED BY LAB ID

12:01:15 11 NOV 1992

CLIENT IDENTIFICATION	LAB ID	DATE SAMPLED
MW-1	92-02910-N	07/27/92
MW-3	92-02911-N	07/27/92
MW-3D	92-02912-N	07/27/92
MW3DR MSD	92-02913-D	07/27/92
MW3DR MS/MSD	92-02913-N	07/27/92
MW3DR MS	92-02913-S	07/27/92
MW-5	92-02916-N	07/27/92
MW6	92-02917-N	07/27/92
MW7	92-02918-N	07/27/92
MW7S	92-02919-N	07/27/92
MW7D	92-02920-N	07/27/92
MW8D	92-02921-N	07/27/92
BS1	92-02922-N	07/27/92
BS3	92-02923-N	07/27/92
EQUIPMENT BLANK	92-02924-N	07/27/92

MALCOLM PIRNIE, INC. ENVIRONMENTAL LABORATORY
707 SAWMILL RIVER ROAD TARRYTOWN, NY 10591 (914) 345-5930

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02910-N	MW-1	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0143	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.586	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	<0.005	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	10/28/92	ML	PB-FURN	Lead (Furnace)	0.0062	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0102	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.630	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02910-N	MW-1	07/27/92	10/28/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02911-N	MW-3	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0078	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.975	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.0115	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	10/28/92	ML	PB-FURN	Lead (Furnace)	0.0057	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0068	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	1.02	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	0.0071	mg/L
0605-211-623	92-02911-N	MW-3	07/27/92	10/28/92	ML	PB-FILT	Lead (Dissolved)	0.0137	mg/L

0605-211-623	92-02912-N	MW-3D	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0073	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.156	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.0127	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	10/28/92	ML	PB-FURN	Lead (Furnace)	0.006	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0067	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02912-N	MW-3D	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.053	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02912-N	MW-3D	07/27/92	10/28/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0461	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	2.89	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.255	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/27/92	ML	PB-FURN	Lead (Furnace)	0.062	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0434	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	2.89	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	0.244	mg/L
0605-211-623	92-02913-D	MW3DR MSD	07/27/92	08/27/92	ML	PB-FILT	Lead (Dissolved)	0.0509	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.685	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	<0.005	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/27/92	ML	PB-FURN	Lead (Furnace)	0.0764	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.736	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02913-N	MW3DR MS/MSD	07/27/92	08/27/92	ML	PB-FILT	Lead (Dissolved)	0.0103	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0511	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	2.55	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.213	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/27/92	ML	PB-FURN	Lead (Furnace)	0.0916	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0577	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	2.65	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	0.223	mg/L
0605-211-623	92-02913-S	MW3DR MS	07/27/92	08/27/92	ML	PB-FILT	Lead (Dissolved)	0.0584	mg/L

0605-211-623	92-02916-N	MW-5	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0344	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.987	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.137	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	10/28/92	ML	PB-FURN	Lead (Furnace)	0.0254	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0213	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.874	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	0.0459	mg/L
0605-211-623	92-02916-N	MW-5	07/27/92	10/28/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02917-N	MW6	07/27/92	08/17/92	ML	AS-FURN	Arsenic (Furnace)	0.0248	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	1.49	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	08/21/92	ML	CR-FURN	Chromium (Furnace)	0.0158	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	10/28/92	ML	PB-FURN	Lead (Furnace)	0.013	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	08/17/92	ML	AS-FILT	Arsenic-filtered	0.0138	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02917-N	MW6	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	1.89	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	08/21/92	ML	CR-FILT	Chromium (Dissolved)	0.0067	mg/L
0605-211-623	92-02917-N	MW6	07/27/92	10/28/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	0.0057	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.378	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	<0.005	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	0.0053	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	0.0054	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.304	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02918-N	MW7	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	0.0172	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	0.0058	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	1.07	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	0.0226	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	0.0055	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	0.0055	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	1.12	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	0.0213	mg/L
0605-211-623	92-02919-N	MW7S	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02920-N	MW7D	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.490	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	0.0087	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	0.0062	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.375	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02920-N	MW7D	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02921-N	MW8D	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	0.0139	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	1.95	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	0.0174	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	0.0879	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.731	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02921-N	MW8D	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02922-N	BS1	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.983	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	<0.005	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	<0.005	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: REVISION ONE

MOENCH TANNING

Contact: GINA OLIVERIO, BUFF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-211-623	92-02922-N	BS1	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.974	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02922-N	BS1	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02923-N	BS3	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	0.0066	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	1.66	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	0.0121	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	0.0078	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	0.579	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	0.0055	mg/L
0605-211-623	92-02923-N	BS3	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/19/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/17/92	DMK	BA ICAP	Barium by ICAP	0.581	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/25/92	ML	CR-FURN	Chromium (Furnace)	<0.005	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	11/01/92	ML	PB-FURN	Lead (Furnace)	<0.005	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/19/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/17/92	DMK	BA ICAP F	Barium ICAP FILT	<0.05	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	08/25/92	ML	CR-FILT	Chromium (Dissolved)	<0.005	mg/L
0605-211-623	92-02924-N	EQUIPMENT BLANK	07/27/92	11/01/92	ML	PB-FILT	Lead (Dissolved)	<0.005	mg/L

MALCOLM PIRNIE, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.: 0605211 | SITE NAME:

SAMPLERS (SIGNATURE): [signature] [signature]

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL + TAL + CN + Hardness							REMARKS
1	7/14/92	1339		X	MW-7 (#7)	2	2	✓						2918
2		1101		X	MW-7S (#8)	2	2	✓						2919
3		1140		X	MW-7D (#9)	2	2	✓						2920
4		1134		X	MW-1 (#1)	2	2	✓						92-2910
5		1310		X	MW-8D (#10)	2	2							2921
6		1041		X	EQUIPMENT BLANK (#13)	2	2							2924
														T + S METALS TO INCLUDE:
					TOTAL	12	12							ARSENIC, BARIUM, CHROMIUM AND LEAD
														NOTE: SOLUBLE METALS FILTERED + PRESERVED IN FIELD.

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
[signature]	7/15/92 0930	[signature] 7/15 0930
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):

Distribution: Original accompanies shipment, copy to coordinator field files

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
DATE/TIME:	REMARKS:	ANALYSIS AS PER LAB CONTRACT. AS REF. TO VIAS

ANALYSIS BY CENTRAL T.

MALCOLM PIRNIE, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.: 0605211-145

SITE NAME:

SAMPLERS (SIGNATURE): Dean Malone

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	[illegible]	[illegible]					REMARKS
1	7/2?/92	1113		X	MW-3 #(3)	2	2	✓					2911
2	↓	1206		X	MW-3D #(2)	2	2						2912
3		1145		X	MW-3DR #(4)	2	2	✓					2913
4		1142		X	MW-3DR MS #(10)	2	2						2914
5		1148		X	MW-3DR MSD #(1?)	2	2						2915 TOTAL AND SOLUBLE
6		1428		X	MW-5 #(5)	2	2	✓					2916 METALS TO INCLUDE:
7	7/2?/92	1409		X	MW-6 #(6)	2	2	✓					2917 ARSENIC, BARIUM, CHROMIUM
8	7/2?/92	1125		X	BS-3 #(12)	2	2	✓					LEAD 2923
9	7/2?/92	1455		X	BS-1 #(11)	2	2	✓					2922
													NOTE
					TOTAL	18	18						FILTERED + PRESERVED
													IN FIELD

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
Dean Malone	7/?/92 [illegible]	D Johnson 7/31 1030			

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):

RELINQUISHED BY (SIGNATURE):	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE/TIME:	REMARKS:
				NUMBERS REPRESENT LAB ID #'S BY GENERAL TESTING LAB. (ie #2, #3 etc.)

Distribution: Original accompanies shipment, copy to coordinator field files

General Testing Corporation

A Full Service Environmental Laboratory

August 19, 1992

Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Re: Palmer Street Facility

Dear Ms. Oliverio:

Enclosed please find General Testing Corporation's analytical report on samples taken by your personnel on July 27, 1992. All data has been reviewed prior to report submittal. If you have any questions please contact me at (716) 454-3760.

Thank you once again for allowing General Testing the opportunity to provide this services.

Sincerely:
GENERAL TESTING CORPORATION

Sue Lochner
Client Representative Manager

Enc.

710 Exchange Street • Rochester, NY 14608 • Tele: (716) 454-3760 • Fax: (716) 454-1245
85 Trinity Place • Hackensack, NJ 07601 • Tele: (201) 488-5242 • Fax: (201) 488-6386
435 Lawrence Bell Drive • Amherst, NY 14608 • Tele: (716) 634-0454 • Fax: (716) 634-9019

General Testing Corporation

GTC REPORT # R92/3204

REPORT INDEX

General Testing Corporation

GTC REPORT # R92/3204

SECTION A

ANALYTICAL DATA

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data herein

Units: AS SPECIFIED

Analytical Methodology Obtained From:

( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.

(X) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.

( ) Other:

General Testing Corporation

Effective 10/1/91

GTC LIST OF 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 and reanalysis could not be performed.

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 analytes only)

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

- Also used to qualify Organics QC data outside limits. (Only used on the QC summary sheets)

M - Duplication injection precision not met (GFA only).

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

X - As specified in the case narrative.

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3	MW-3D	MW-3DR	MW-5	MW-6	BS-3	BS-1	TRIP BLANK
Date Collected:	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92
Time Collected:	11:13	12:06	11:48	14:28	14:09	11:29	14:55	--
Date Analyzed:	7/30/92	7/30/92	7/30/92	7/31/92	7/31/92	7/31/92	7/31/92	7/31/92
Chloromethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	8.5	2.0 U	2.0 U	2.0 U
Methylene Chloride	1.0 U	1.0 B	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene-Trans	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene (Cis)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloroethylvinyl Ether	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	2.0 U	2.0 U	2.0 U	4.2	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Xylene (o,m,p)	2.0 U	2.0 U	2.0 U	15	2.0 U	2.0 U	2.0 U	2.0 U
Total Volatiles	ND	1.0	ND	19.2	8.5	ND	ND	ND

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3	MW-3D	MW-3DR	MW-5	MW-6	BS-3	BS-1	TRIP BLANK
Date Collected:	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92
Time Collected:	11:13	12:06	11:48	14:28	14:09	11:29	14:55	--
SURROGATE STANDARD RECOVERIES								
% Recovery								
Bromochloromethane (Acceptance Limits: 60-138%)	85	76	83	77	93	71	68	97
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	89	81	77	72	91	72	63	96
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	90	77	82	70	90	76	70	90

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Perry
Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-009	-010	-011	-012	-013	-014	-015
Location:	MW-7	MW-7S	MW-7D	MW-1	MW-8D	EQUIPMENT BLANK	TRIP BLANK
Date Collected:	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92
Time Collected:	--	--	--	--	--	--	--
Date Analyzed:	7/31/92	7/31/92	7/31/92	7/31/92	7/31/92	8/01/92	8/01/92
Chloromethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene-Trans	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene (Cis)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloroethylvinyl Ether	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Xylene (o,m,p)	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Volatiles	2.9	ND	ND	ND	ND	ND	ND

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-009	-010	-011	-012	-013	-014	-015
Location:	MW-7	MW-7S	MW-7D	MW-1	MW-8D	EQUIPMENT BLANK	TRIP BLANK
Date Collected:	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92
Time Collected:	--	--	--	--	--	--	--
SURROGATE STANDARD RECOVERIES							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-138%)	87	90	81	77	81	83	75
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	96	95	84	74	77	88	67
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	83	89	79	70	77	87	64

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Perry
Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8015 ANALYTICAL UNITS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3	MW-3D	MW-3DR	MW-5	MW-6	BS-3	BS-1	TRIP BLANK
Date Collected:	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92	07/27/92
Time Collected:	11:13	12:06	11:48	14:28	14:09	11:29	14:55	--
Date Analyzed:	07/31/92	07/31/92	07/31/92	07/31/92	07/31/92	07/31/92	07/31/92	07/31/92
Methyl Ethyl Ketone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Surrogate Standard Recoveries:								
Tetrahydrofuran (Acceptance Limits: 50-150%)	74	84	83	76	102	88	80	74

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Peng

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8015 ANALYTICAL UNITS - ug/l

Sample:	-009	-010	-011	-012	-013	-014	-015
Location:	MW-7	MW-7S	MW-7D	MW-1	MW-8D	EQUIPMENT BLANK	TRIP BLANK
Date Collected:	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92	07/28/92
Time Collected:	--	--	--	--	--	--	--
Date Analyzed:	08/03/92	08/03/92	08/03/92	08/03/92	08/03/92	08/03/92	08/03/92
Methyl Ethyl Ketone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Surrogate Standard Recoveries:							
Tetrahydrofuran (Acceptance Limits: 50-150%)	68	75	69	69	82	79	72

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Perry
Laboratory Director

General Testing Corporation

GTC REPORT # R92/3204

SECTION B

LABORATORY QUALITY CONTROL DATA

Presented in this section is Quality Control Associated with the data provided in Section A of this report.

Quality Control Explanations:

(1) RUN QUALITY CONTROL - Selected QC data from the analytical run in which your sample(s) were involved.

(2) JOB SPECIFIC QUALITY CONTROL - QC data specific to your set of samples.

(3) DUPLICATES - Replicate analyses of a given sample used to monitor precision. Relative Percent Difference is calculated as the difference divided by the average, times 100.

(4) MATRIX SPIKES - Addition of a known amount of analyte to a sample. Recovery is calculated by subtracting original value attributable to the sample from the combined value. The difference is then divided by the amount added to calculate percent recovery. Poor recoveries may indicate analytical interference due to the matrix of the sample. Any other samples of this matrix may also have been affected, high or low as indicated by the percent recovery.

(5) LABORATORY CONTAMINANTS - Laboratory de-ionized water used to monitor for contamination during analysis.

(6) BLANK SPIKES - Same as item #4 but analyte is added to laboratory de-ionized water. This indicates the accuracy of analysis.

(7) REFERENCE CHECK SAMPLES - Samples from an outside source having a known concentration of analyte. Used as a measure of analytical accuracy.

When possible, all components of the above listed QC protocol are performed during an analytical run. The resulting data is compared to historical records when evaluating the quality of analytical runs. The data provided in your report has passed our Quality Assurance review.

Quality Control Notes:

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-016						
Location:	Lab Meth Blank						
Date Collected:	--						
Time Collected:	--						
Date Analyzed:	07/30/92						
Chloromethane	5.0 U						
Bromomethane	5.0 U						
Vinyl Chloride	2.0 U						
Chloroethane	2.0 U						
Methylene Chloride	1.2						
Trichlorofluoromethane	1.0 U						
1,1-Dichloroethene	1.0 U						
1,1-Dichloroethane	1.0 U						
trans-1,2-Dichloroethene	1.0 U						
cis-1,2-Dichloroethene	1.0 U						
Chloroform	1.0 U						
1,2-Dichloroethane	1.0 U						
1,1,1-Trichloroethane	1.0 U						
Carbon Tetrachloride	1.0 U						
Bromodichloromethane	1.0 U						
1,2-Dichloropropane	1.0 U						
1,3-Dichloropropene-Trans	2.0 U						
Trichloroethene	1.0 U						
1,3-Dichloropropene (Cis)	1.0 U						
Dibromochloromethane	2.0 U						
1,1,2-Trichloroethane	2.0 U						
2-Chloroethylvinyl Ether	2.0 U						
Bromoform	2.0 U						
1,1,2,2-Tetrachloroethane	2.0 U						
Tetrachloroethene	1.0 U						
Chlorobenzene	2.0 U						
1,3-Dichlorobenzene	2.0 U						
1,2-Dichlorobenzene	2.0 U						
1,4-Dichlorobenzene	2.0 U						
Benzene	2.0 U						
Toluene	2.0 U						
Ethylbenzene	2.0 U						
Total Xylene (o,m,p)	2.0 U						
Total Volatiles	1.2						

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-016
Location:	Lab Meth Blank
Date Collected:	--
Time Collected:	--

SURROGATE STANDARD RECOVERIES	
% Recovery	
Bromochloromethane (Acceptance Limits: 60-138%)	98
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	103
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	88

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Peng

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 18 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-020						
Location:	LAB METH BLANK						
Date Collected:	--						
Time Collected:	--						
Date Analyzed:	7/31/92						
Chloromethane	5.0 U						
Bromomethane	5.0 U						
Vinyl Chloride	2.0 U						
Chloroethane	2.0 U						
Methylene Chloride	1.0 U						
Trichlorofluoromethane	1.0 U						
1,1-Dichloroethene	1.0 U						
1,1-Dichloroethane	1.0 U						
trans-1,2-Dichloroethene	1.0 U						
cis-1,2-Dichloroethene	1.0 U						
Chloroform	1.0 U						
1,2-Dichloroethane	1.0 U						
1,1,1-Trichloroethane	1.0 U						
Carbon Tetrachloride	1.0 U						
Bromodichloromethane	1.0 U						
1,2-Dichloropropane	1.0 U						
1,3-Dichloropropene-Trans	2.0 U						
Trichloroethene	1.0 U						
1,3-Dichloropropene (Cis)	1.0 U						
Dibromochloromethane	2.0 U						
1,1,2-Trichloroethane	2.0 U						
2-Chloroethylvinyl Ether	2.0 U						
Bromoform	2.0 U						
1,1,2,2-Tetrachloroethane	2.0 U						
Tetrachloroethene	1.0 U						
Chlorobenzene	2.0 U						
1,3-Dichlorobenzene	2.0 U						
1,2-Dichlorobenzene	2.0 U						
1,4-Dichlorobenzene	2.0 U						
Benzene	2.0 U						
Toluene	2.0 U						
Ethylbenzene	2.0 U						
Total Xylene (o,m,p)	2.0 U						
Total Volatiles	ND						

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 18 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-020						
Location:	LAB METH BLANK						
Date Collected:	--						
Time Collected:	--						
SURROGATE STANDARD RECOVERIES							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-138%)	89						
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	93						
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	102						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Perry

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. : R92/03204 -003

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	61.0	0.0	53.3	87	28-167
Trichloroethene	52.0	0.0	42.5	82	35-146
Benzene	52.5	0.0	43.9	84	39-150
Toluene	50.5	0.0	39.9	79	46-148
Chlorobenzene	57.5	0.0	62.2	108	38-150

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	61.0	54.6	89	2	30	28-167
Trichloroethene	52.0	46.6	90	9	30	35-146
Benzene	52.5	46.5	89	6	30	39-150
Toluene	50.5	42.9	85	7	30	46-148
Chlorobenzene	57.5	63.0	110	1	30	38-150

Columns to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

FORM III VOA-1
NYSDEC B-85

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Job No: R92/03204

Date: 18 AUG., 1992

	REFERENCE CHECK		
EPA METHOD 8010/8020	TRUE VALUE	% RECOVERY	ACCEPTANCE LIMITS (%)
Date Analyzed: 7/30/92			
Chloromethane	20	58	D - 193
Bromomethane	40	104	D - 144
Vinyl Chloride	20	63	28 - 163
Chloroethane	--	--	46 - 137
Methylene Chloride	20	69	25 - 162
Trichlorofluoromethane	20	72	21 - 156
1,1-Dichloroethene	20	61	28 - 167
1,1-Dichloroethane	20	65	47 - 132
cis-1,2-Dichloroethene	20	103	27 - 165
1,1-Dichloroethane	20	65	47 - 132
Chloroform	20	88	49 - 133
1,2-Dichloroethane	20	94	51 - 147
1,1,1-Trichloroethane	20	70	41 - 138
Carbon Tetrachloride	20	100	43 - 143
Bromodichloromethane	20	92	42 - 172
1,2-Dichloropropane	20	79	44 - 156
1,3-Dichloropropene-Tran	20	83	22 - 178
Trichloroethene	20	99	35 - 146
1,3-Dichloropropene(Cis)	20	84	22 - 178
Dibromochloromethane	20	84	24 - 191
1,1,2-Trichloroethane	20	71	39 - 136
2-Chloroethylvinyl Ether	20	--	14 - 186
Bromoform	20	68	13 - 159
1,1,2,2-Tetrachloroethane	20	87	8 - 184
Tetrachloroethene	20	106	26 - 162
Chlorobenzene	40	110	38 - 150
1,3-Dichlorobenzene	40	81	7 - 187
1,2-Dichlorobenzene	40	75	D - 208
1,4-Dichlorobenzene	40	81	42 - 143
Benzene	20	96	39 - 150
Toluene	20	94	46 - 148
Ethylbenzene	20	84	32 - 160
Total Xylene (o,m,p)	60	103	59 - 127

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/03204 Date: AUG. 13 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer Street Facility

Collected : 07/27-28/92 P.O. #:

ANALYSIS * BY GC METHOD 8015 ANALYTICAL UNITS - ug/l

Sample:	-017	-018
Location:	LAB METH. BLANK	LAB METH. BLANK
Date Collected:	--	--
Time Collected:	--	--
Date Analyzed:	07/31/92	08/03/92
Methyl Ethyl Ketone	5.0 U	5.0 U
Surrogate Standard Recoveries:		
Tetrahydrofuran (Acceptance Limits: 50-150%)	104	76

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Peng

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. : R92/03204 -003

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
Methyl Ethyl Ketone	28.0	0.0	34.2	122	50-150

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl Ethyl Ketone	28.0	31.5	112	8	30	50-150

Columns to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III VOA-1
NYSDEC B-85

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Job No: R92/03204

Date: 14 AUG., 1992

SAMPLE: -019

REFERENCE CHECK

EPA 8015 ANALYSIS	TRUE VALUE	% RECOVERY	ACCEPTANCE LIMITS (%)
Date Analyzed: 08/03/92			
Methyl Ethyl Ketone	20	130	50 - 150

Michael K. Perry

Lab Director

General Testing Corporation

GTC REPORT # R92/3204

SECTION C

FIELD DOCUMENTATION

Presented in this section is all support documentation requested.

Documentation Provided:

(X) Chain of Custody Forms

( ) Analytical Request Forms

( ) Shipping Receipts

( ) Laboratory Receipt Log

( ) Other:

R-92/3204

MALCOLM PIRNIE, INC.

CHAIN OF CUSTODY RECORD

MK/L

PROJECT NO.: 0605-232-145 (DOA)

SITE NAME: PALMER ST.

SAMPLERS (SIGNATURE): Donna Malan

	STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8010 / 8020						REMARKS
001	1	7/21/92	1113		X	MW-3 (#2)	4	4						WATER
002	2		1206		X	MW-3D #3	4	4						"
003	3		1148		X	MW-3DR (#4)	4	4						
	4		1148		X	MW-3DR (MS) (#16)	4	4						
	5		1148		X	MW-3DR (MSD) (#15)	4	4						"
004	6		1428		X	MW-5 (#5)	4	4						
005	7		1409		X	MW-6 (#6)	4	4						
006	8		1129		X	BS-3 (#13)	4	4						4 SEPA VOLATILES
007	9		1455		X	BS-1 (#11)	4	4						8010, 8020 + MEK
008	10				—	TRIP BLANK (#14)	2	2						(8015)
						TOTAL	38	38						

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
Donna Malan	7/23/92 1600	K Sylvester			
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE/TIME	REMARKS	
	7/29/92 1400	Tom Hartung		LAB ANALYSIS ... FIELD CHART ...	

Distribution: Original accompanies shipment, copy to coordinator field files

R92/3204

MALCOLM PIRNIE, INC.

CHAIN OF CUSTODY RECORD

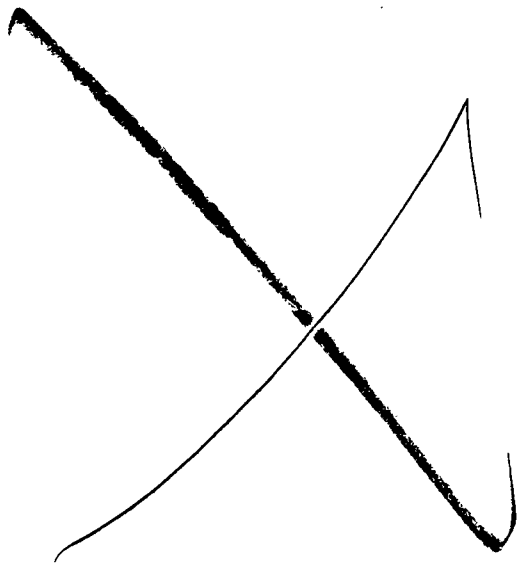
PROJECT NO.: 0605232 | SITE NAME: PALMER ST.

SAMPLERS (SIGNATURE): Dennis Malecar

	STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOA 8010, 8020 (+8015 MeCl)							REMARKS
009	1	7/28/92			X	MW-7 (#7)	4	4							
010	2	↓			X	MW-7S (#8)	4	4							
011	3				X	MW-7D (#9)	4	4							
012	4				X	MW-1 (#1)	4	4							
013	5				X	MW-8D (#10)	4	4							
014	6				X	EQUIPMENT BLANK (#13)	4	4							
015						TRIP BLANK (#14)	2	2							
						TOTAL	26	26							VOLATILE ORGANICS 8010, 8020 + MeCl (8015)

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
Dennis Malecar	7/28/92 1105	K Spencer			
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE/TIME:	REMARKS: ANALYSIS AS PER MAT. LAB CONTRACT	
	7/29/92 1400	Tom Hosking			

Distribution: Original accompanies shipment, copy to coordinator field files



MALCOLM PIRNIE

GROUND WATER QUALITY MONITORING REPORT FOR OCTOBER 26-27, 1992 MONITORING EVENT AT PALMER STREET LANDFILL

MOENCH TANNING COMPANY
DIVISION OF BROWN GROUP, INC.
GOWANDA, NEW YORK

DECEMBER 1992

MALCOLM PIRNIE, INC.

S-3515 Abbott Road
P. O. Box 1938
Buffalo, New York 14219

MALCOLM PIRNIE

PALMER STREET
FOURTH QUARTER GROUND WATER MONITORING REPORT
TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

MALCOLM PIRNIE

1.0 INTRODUCTION

1.1 Background

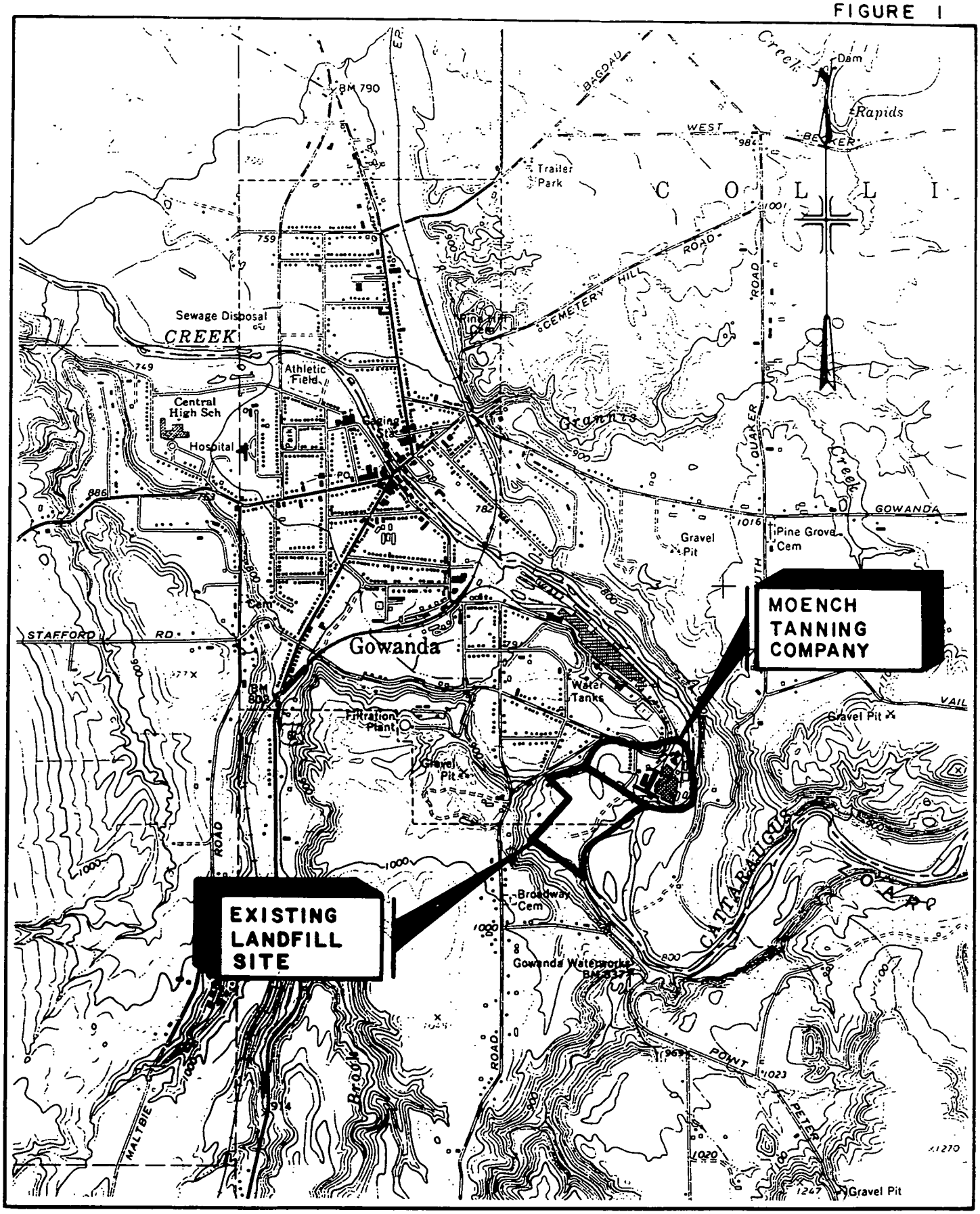
The Moench Tanning Company, a division of Brown Group, Inc. is located near the southeast corner of the Village of Gowanda, Cattaraugus County, New York (Figure 1). The Palmer Street Landfill, which was operated by Moench Tanning from 1900 through July 1983, lies immediately southwest of the tannery complex on an approximately 25-acre parcel of land. A variety of wastes generated by Moench Tanning were disposed of at the Palmer Street Landfill site. These wastes included sole leather extract, rendering waste, spray booth clean-up waste, waste finish, waste hair/leather scraps, wastewater treatment plant sludge, and occasional construction debris.

Moench Tanning has closed the Palmer Street Landfill. Accordingly, quarterly "Phase I" ground and surface water monitoring, which is defined in the Closure/Post-Closure Plan (Ref. 1), is being performed until such time as a long-term post-closure monitoring program is developed and implemented.

1.2 Purpose and Scope

Samples associated with the fourth of four (4) rounds of water quality monitoring for the 1992 calendar year were collected on October 26 through October 27, 1992. The purpose of this report is to provide a summary of the data generated for the Palmer Street Landfill site during the fourth quarterly monitoring event.

FIGURE 1



MALCOLM PIRNIE

MOE-21

PALMER STREET LANDFILL

SITE LOCATION

MOENCH TANNING COMPANY APRIL 1992

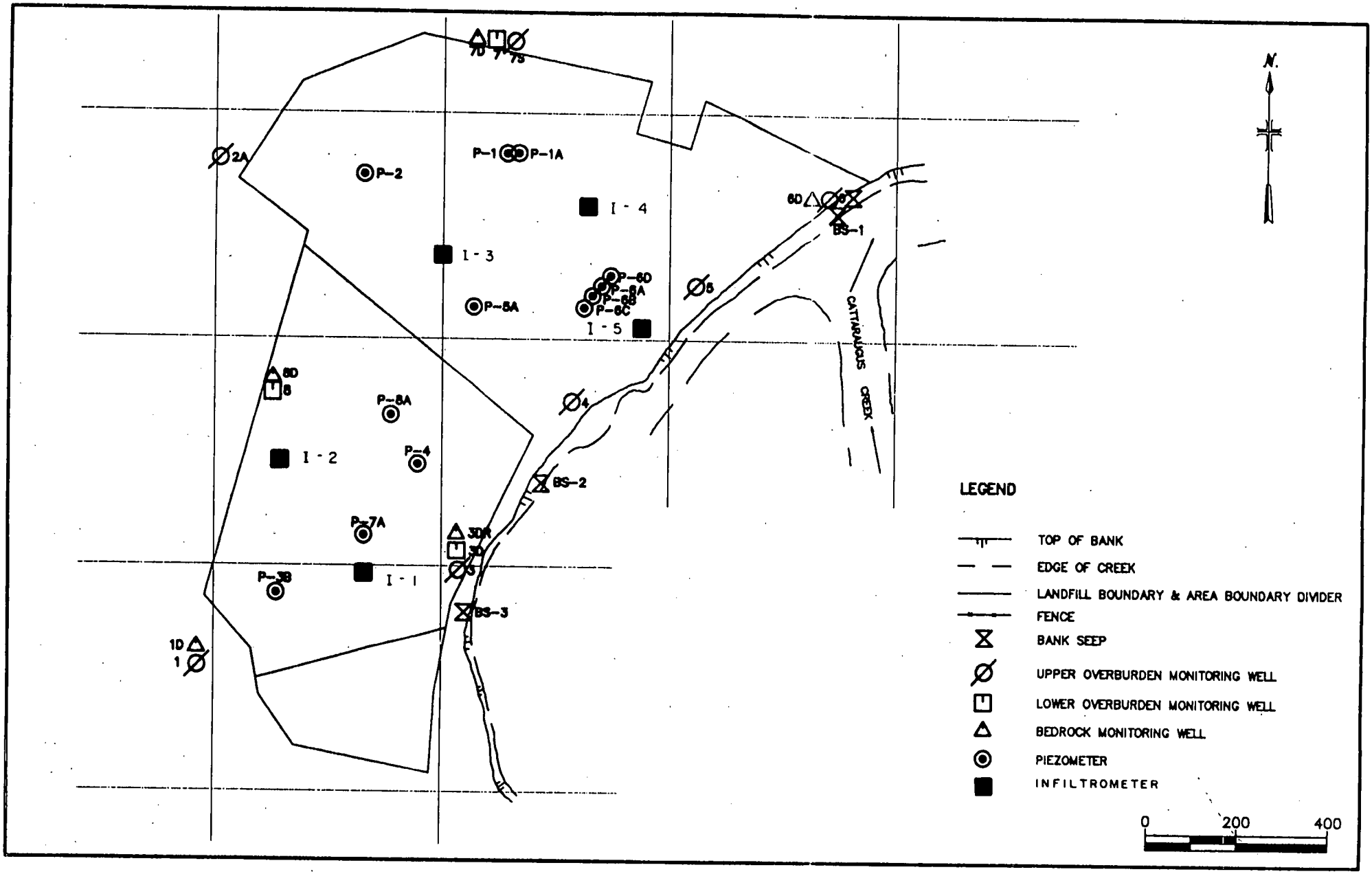
2.0 MONITORING SYSTEM

Ten (10) ground water monitoring wells at the Palmer Street Landfill are monitored in accordance with "Phase I" requirements for the site. These wells are designated as follows:

Shallow Overburden	Deep Overburden	Bedrock
MW-1	MW-3D	MW-3DR
MW-3	MW-7	MW-7D
MW-5		MW-8D
MW-6		
MW-7S		

Monitoring well MW-1 is the hydraulically upgradient well screened within the shallow overburden zone. Monitoring well MW-7D is the apparent hydraulically upgradient well screened within the bedrock (see Section 6.0). MW-3D, and MW-7 are screened in apparent discontinuous sand lenses within the glacial till (i.e., deep overburden). Consequently, no designation of upgradient/downgradient wells has been made. Monitoring well construction details are given in the report entitled "Palmer Street Landfill, Supplemental Hydrogeologic Investigation" (Ref. 2).

In addition to the wells, NYSDEC also requires the monitoring of two (2) bank seeps designated as BS-1 and BS-3, respectively. To evaluate cover performance, water levels from five (5) infiltrometers are also monitored. Locations of all monitoring points are shown on Figure 2.



MALCOLM PIRNIE

MOE - 23

PALMER STREET LANDFILL

MONITORING LOCATIONS

MOENCH TANNING COMPANY JULY 1992

FIGURE 2

3.0 MONITORING METHODS

3.1 Ground Water Monitoring

Samples collected during the fourth quarterly monitoring event were collected by Malcolm Pirnie, Inc. personnel and analyzed by General Testing Corporation and the Malcolm Pirnie, Inc. laboratory in accordance with the Sampling Plan/Quality Assurance Plan for the Palmer Street Landfill (Ref. 3). Laboratory analyses were performed in accordance with USEPA SW-846, 3rd Edition (Ref. 4). The monitoring parameters are listed in Table 1. Samples were collected from ten (10) of the twelve (12) monitoring locations identified in Section 2.0. As indicated in Table 1, MW-3D and MW-7 are monitored for contaminants-of-interest once annually. These wells were sampled during the July 27-28, 1992 monitoring event.

Prior to sampling, static water level elevations were measured in the monitoring wells and the wells were purged (see Table 2). Ground water elevations were also measured in the piezometers, infiltrometers, and well points on site. These measurements are included with the monitoring well water level data listed in Table 2.

Field samples were collected and measured for the field parameters identified in Table 1. A summary of field measurements is presented in Table 3. Field data sheets for this monitoring event are provided in Appendix A.

3.2 Infiltrometer Monitoring

Five infiltrometers have been installed beneath the landfill cap to be used in the assessment of the permeability and transmissibility of the cap. During each quarterly event water levels in the infiltrometers are measured and the amount of water infiltrating the cap is calculated.

During this quarterly event, water was present in infiltrometers I-1, I-2, I-3, and I-5. The calculated infiltration rates are presented on Table 4. As shown in the table, the rate of infiltration is less than the design infiltration rate of 1×10^{-7} cm/sec for each of the infiltrometers with the exception of I-1. A schematic showing the design and dimensions of the infiltrometers is presented in Attachment B.

MALCOLM PIRNIE

TABLE 1

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
OCTOBER 26-27, 1992 MONITORING EVENT

MONITORING PARAMETERS

CONTAMINANTS OF INTEREST[1]

Volatile Organic Compounds[2]
Methyl Ethyl Ketone
Total and Soluble Arsenic[3]
Total and Soluble Barium[3]
Total and Soluble Chromium[3]
Total and Soluble Lead[3]

FIELD PARAMETERS[4]

pH
Specific Conductivity
Turbidity
Temperature
Odor
Sample Appearance

NOTES:

1) Analyzed quarterly at MW-1, MW-3, MW-3DR, MW-5, MW-6, MW-7S, MW-7D, MW-8D, BS-1, and BS-2. Analyzed once annually at MW-3D, and MW-7.
2) Volatile organic compounds are those compounds determined by USEPA SW-846, 3rd Edition, Methods 8010 and 8020.
3) Samples for soluble metals analysis were filtered in the field immediately upon sample collection.
4) Measured quarterly at all monitoring points at the time of sample collection.

MALCOLM PIRNIE

TABLE 2

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
OCTOBER 26-27, 1992 MONITORING EVENT

GROUND WATER ELEVATIONS[1]

Location	Riser Elevation[2]	Total Well Depth[3]	STATIC WATER	
			Depth[3]	Elevation[2]
MW-1	826.04	31.94	6.06	819.98
MW-3	810.81	20.88	17.64	793.17
MW-3D	810.73	67.95	29.46	781.27
MW-3DR	810.47	102.64	27.70	782.77
MW-5	805.35	26.59	22.15	783.20
MW-6	800.48	19.09	16.14	784.34
MW-7S	800.38	14.81	8.20	792.18
MW-7	800.50	30.40	7.05	793.45
MW-7D	800.39	42.17	6.93	793.46
MW-8D	821.89	127.50	35.90	785.99
P-1	811.85	21.49	16.96	794.89
P-1A	811.91	17.84	15.97	795.94
P-2	811.94	20.27	14.97	796.97
P-3B	822.07	17.85	6.45	815.62
P-4	813.54	20.22	17.62	795.92
P-5A	805.89	—	**	—
P-6	801.77	—	**	—
P-7A	816.92	24.31	22.63	794.29
P-8A	809.00	17.52	Dry	Dry
WP-1	822.16	12.30	Dry	Dry
WP-2	802.36	—	*	—
WP-3	800.51	—	*	—
WP-4	806.31	15.02	14.62	791.69
WP-5	805.14	—	*	—
Staff Gauge	796.41	—	*	—

NOTES:
(1) Unless otherwise noted, water level readings were measured on October 26, 1992.
(2) Measured in Feet; distance above sea level.
(3) Measured in Feet; distance below top of riser.
* Well point/staff gauge destroyed.
** Piezometer inaccessible; buried under fill or destroyed.
MW = Monitoring Well P = Piezometer WP = Well Point

MALCOLM PIRNIE

TABLE 3

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
OCTOBER 26-27, 1992 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity (NTU)	Sample Appearance	Sample Odor
MW-1*[2]	10/26/92	11:34 a.m.	11.5	8.00	349	>100	Turbid	None
MW-3*	10/27/92	10:09 a.m.	11.9	6.85	1875	46	Clear	None
MW-3D**	10/27/92	09:52 a.m.	11.0	9.88	365	>100	Turbid	None
MW-3DR***	10/27/92	10:41 a.m.	11.0	7.81	474	20	Clear	None
MW-5*	10/27/92	02:10 p.m.	13.0	6.91	4247	>100	Turbid	Organic
MW-6*	10/27/92	01:43 p.m.	14.0	6.52	2806	>100	Blackish	Organic
MW-7**	10/26/92	02:23 p.m.	11.0	7.97	627	48	Clear	None
MW-7S*	10/26/92	02:05 p.m.	12.0	7.25	3150	63	Clear	None
MW-7D***[3]	10/26/92	02:35 p.m.	11.0	7.85	634	>100	Turbid	None
MW-8D***	10/26/92	11:54 a.m.	11.5	8.62	356	>100	Turbid	None
BS-1	10/27/92	11:55 a.m.	11.0	7.84	627	12	Clear	None
BS-3	10/27/92	11:12 a.m.	9.0	7.35	482	54	Clear	None

NOTES:
(1) Conductivity readings corrected to 25°C.
(2) MW-1 is hydraulically upgradient shallow overburden well.
(3) MW-7D is apparent hydraulically upgradient bedrock well.

* Shallow Overburden Well
** Deep Overburden Well
*** Bedrock Well
BS Bank Seep

MALCOM PIRNIE

TABLE 4

INFILTROMETER MEASUREMENTS
PALMER STREET LANDFILL

Infiltrometer	Static Water Level 7/27/92 (ft)	Depth of Water Column (ft)	Static Water Level 10/26/92 (ft)	Depth of Water Column (ft)	Δ Depth (ft)	# Days Between Readings (#)	Infiltration Rate gal/day/ft^2	Infiltration Rate (cm/sec)	Approximate Total Rainfall This Period (ft)	Infiltration (%)
1	8.39	0.71	7.94	1.16	0.45	92	0.0073	3.0×10^{-7}	1.10	8.9
2	8.73	0.27	8.64	0.36	0.09	92	0.0005	2.0×10^{-8}	1.10	0.5
3	dry	—	9.57*	—	—	92	—	—	1.10	—
4	dry	—	dry	—	<0.01	92	$<5.4 \times 10^{-5}$	$<2.5 \times 10^{-9}$	1.10	<0.05
5	8.35	0.74	8.33	0.76	0.02	92	0.0001	5.1×10^{-9}	1.10	0.1

* Note: No bottom depth measurement is available for I-3; therefore, infiltration rate could not be calculated.

4.0 GROUND WATER QUALITY MONITORING RESULTS

The ground water and surface water quality results for the fourth quarter monitoring period at the Palmer Street Landfill are presented in Table 5. The associated laboratory data is provided in Appendix C. It should be noted that Table 5 includes only those parameters which were detected above analytical detection limits at a minimum of one location. Comparison of the fourth quarter monitoring data to the NYSDEC Class "GA" Ground Water Quality Standards/Guidance Values is also presented in Table 5.

Both the soil and waste at the Palmer Street Landfill contain significant levels of the metals-of-interest absorbed to the soil or waste particles (Ref. 5). Therefore, the sediment (or turbidity) content of any ground or surface water quality samples will directly impact the total metal concentration of the samples. The turbidity content of the ground water samples collected at the site is extremely variable and relatively high because the soil and waste fill both contain high percentages of fine-grained particles. As NYSDEC has previously agreed, in order to avoid misinterpretation of water quality data, total metals will only be used as an indication of the potential for ground water quality problems. Determinations as to the status of compliance with ground water quality standards or evaluations of ground water quality impacts will continue to be based on soluble metal concentrations.

From the analytical data provided in Table 5, the soluble barium concentration detected in samples collected from MW-3, MW-5, MW-6 and MW-7S exceeded the Class "GA" standard for barium. The chloroethane concentration detected in the sample collected from MW-6 exceeded the Class "GA" standard. The soluble arsenic concentration and the benzene concentration detected in the sample collected from MW-5 exceeded the Class "GA" standard for these constituents. In addition, the pH of the sample collected from MW-8D was slightly greater (i.e., more basic) than the Class "GA" standard. There were no exceedances of the Class "GA" standards at any other monitoring locations.

MALCOLM PIRNIE

TABLE 5

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
OCTOBER 26-27, 1992 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

	Quantitation Limit	MW-1	MW-3	MW-3DR	MW-5	MW-6	MW-7S	Equipment Blank	Class "GA" Std.[2]
Metals (mg/l):									
Arsenic - Total	0.005	0.011	0.010	ND	0.023	0.023	0.009	ND	0.025
Arsenic - Soluble	0.005	0.007	0.009	ND	0.029	0.023	ND	ND	–
Barium - Total	0.05	0.84	1.01	0.97	2.39	1.80	1.28	ND	1.0
Barium - Soluble	0.05	0.59	1.19	0.94	1.60	1.62	1.24	ND	–
Chromium - Total	0.005	ND	0.013	ND	0.197	0.013	0.019	ND	0.05
Chromium - Soluble	0.005	ND	0.008	ND	0.040	0.007	0.018	ND	–
Lead - Total	0.005	0.011	0.006	ND	ND	0.008	ND	ND	0.025
Lead - Soluble	0.005	ND	ND	0.011	ND	ND	0.007	ND	–
Volatiles (ug/l):									
Benzene	2.0	ND	ND	ND	3.1	ND	ND	ND	0.7
Xylenes (total)	2.0	ND	2.3	ND	3.1	ND	2.2	ND	5
Chloroethane	2.0	ND	ND	ND	ND	11	ND	ND	5
Other: (S.U.)									
pH	-	8.00	6.85	7.81	6.91	6.52	7.25	—	6.5 - 8.5

TABLE 5 (Continued)

MOENCH TANNING COMPANY
PALMER STREET LANDFILL
OCTOBER 26-27, 1992 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

Parameter	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-3	Trip Blank[3]	Class "GA" Std.[2]
Metals (mg/l):							
Arsenic - Total	0.005	ND	ND	ND	ND		0.025
Arsenic - Soluble	0.005	ND	ND	ND	ND		–
Barium - Total	0.05	0.51	0.95	0.40	0.16		1.0
Barium - Soluble	0.05	0.52	0.58	0.19	0.16		–
Chromium - Total	0.005	ND	0.018	ND	0.007		0.05
Chromium - Soluble	0.005	ND	ND	ND	ND		–
Lead - Total	0.005	0.021	0.021	ND	ND		0.025
Lead - Soluble	0.005	0.007	0.006	ND	0.009		–
Volatiles (ug/l):							
Benzene	2.0	ND	ND	ND	ND	ND	0.7
Xylenes (total)	2.0	ND	ND	ND	ND	ND	5
Chloroethane	2.0	ND	ND	ND	ND	ND	5
Other:							
pH	–	7.85	8.62	7.84	7.35	-	6.5 - 8.5

NOTES:

ND = Not Detected

(1) Only those parameters found at a concentration above laboratory detection limits at a minimum of one location are shown.

(2) NYSDEC Class "GA" Ground Water Quality Standards, 6NYCRR Part 703, Revised November 1991.

(3) Trip blanks were analyzed for only volatile organic compounds.

5.0 GROUND WATER FLOW

A water table isopotential map for the shallow or upgradient ground water flow system was prepared for the Palmer Street Landfill and was presented in the January 27, 1992 Ground Water Quality Monitoring Report (Ref. 6). Ground water elevations measured on 01/27/92 were used in preparing the map. The map indicates that shallow ground water flow is primarily to the east toward Cattaraugus Creek, with some additional discharges to a topographic low located along the northern side of the landfill west of wellpoint WP-4. The topographic low is drained by a storm water sewer which crosses the Tannery Complex and ultimately discharges to Cattaraugus Creek (Reference 2).

Water level data for the October 26-27, 1992 monitoring period are generally consistent with the January 27, 1992 water level data, and ground water flow is assumed to be in the same general direction as previously reported.

MALCOLM PIRNIE

6.0 REFERENCES

1. Palmer Street Landfill Closure/Post-Closure Plan (EPA ID. NYD002126910), prepared by Malcolm Pirnie, Inc., revised February 1989.

2. Palmer Street Landfill, Supplemental Hydrogeologic Investigation, prepared by Malcolm Pirnie, Inc., January 1989.

3. Sampling Plan/Quality Assurance Plan for Ground Water Monitoring - Palmer Street Landfill. Prepared by Malcolm Pirnie, Inc., August 1989.

4. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition, USEPA Office of Solid Waste and Emergency Response, November 1986.

5. Palmer Street Landfill, Evaluation of Alternative Cover Systems, prepared by Malcolm Pirnie, Inc., January 1989.

6. Ground Water Quality Monitoring Report for January 27, 1992 Monitoring Event at Palmer Street Landfill, prepared by Malcolm Pirnie, Inc., April 1992.

MALCOLM PIRNIE

APPENDIX A

FIELD DATA SHEETS
FOR
OCTOBER 26-27, 1992 MONITORING EVENT

PROJECT NAME MOENCH TANNING SAMPLERS D~

SITE LOCATION PALMER STREET LF

GROUNDWATER ELEVATIONS

WELL #	ELEVATION TOP OF PVC (FT)	WATER DEPTH BELOW TOP OF PVC (FT)	BOTTOM	WATER ELEVATION (FT
P-1	811.85	16.96	21.49 *	794.89
P-1A	811.91	15.97	17.87 *	795.94
P-2	811.94	14.97	20.24 *	796.87
P-3B	822.07	6.45	17.83 *	815.62
P-4	813.54	17.62	20.18 *	795.29
P-5A	DESTROYED	DESTROYED		DESTROYED
P-6	DESTROYED	DESTROYED		DESTROYED
P-7A	816.92	22.63	~~24~~ 31	794.29
P-8A	809.00	DRY	—	—
WP-1	822.16	DRY		
WP-2	DESTROYED	DESTROYED		DESTROYED
WP-3	DESTROYED	DESTROYED		DESTROYED
WP-4	806.31	14.13	14.62 *	791.69
WP-5	DESTROYED	DESTROYED		DESTROYED
STAFF GAUGE	DESTROYED	DESTROYED	DESTROYED	—
P-6A	810.37	18.53	26.63	791.84
P-6B	810.35	20.12	41.05	790.23
P-6C	810.36	18.55	21.80	791.81
P-6D	810.30	21.03	60.90	789.27
	* SOFT BOTTOM (ie. SILT PRESENT)			— — —

MALCOLM

PROJECT NAME MOENCH TANNING SAMPLERS DMM

SITE LOCATION PALMER STREET LF

GROUNDWATER ELEVATIONS

WELL #	ELEVATION TOP OF PVC (FT)	WATER DEPTH BELOW TOP OF PVC (FT)	BOTTOM	WATER ELEVATION (FT)
MW-1	826.05	6.06	31.94	819.58
MW-2A	810.62	2.56	~~32.85~~	808.06
MW-1D	827.82	32.67	—	795.15
MW-3	810.61	17.64	20.88	793.17
MW-3D	810.73	29.46	129.95	781.27
MW-3DR	810.47	27.70	102.64	782.77
MW-4	806.75	DAMAGED ~~22.15~~	—	—
MW-5	805.35	22.15	25.98 *	783.20
MW-6	800.48	16.14	18.09	784.34
MW-6D	800.63	18.55	37.32	782.18
MW-7S	800.38	8.20	14.83	792.18
MW-7	800.50	7.05	~~41.09~~ 30.40	793.45
MW-7D	800 39	6.93	42.15	793.46
MW-8	821.82	DRY - DAMAGED	—	—
MW-8D	821.89	35.90	127.45	785.99
	SOFT BOTTOM SURVEY DATA AS OF 9/11/91			
INFILTROMETERS:		W.L.	BOTTOM	
#1		7.94	9.10	
#2		8.64	9.00	
#3/#4		9.57 / DRY	(4)	
#5		8.33	20.9	

MALCOLM

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4th QT. G.W. MONITORING
TYPE OF SAMPLE: GROUND WATER
CLIENT: MORENCH TANNING
LOCATION NO.: MW-1
JOB NO.: 0605 232-145
LAB SAMPLE NO.: GT #2

WELL DATA: DATE: 10-26-92 TIME: 0935

Casing Diameter (inches): 2
Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE
Screen Material: PVC
Static Water Level Below TOR (ft.): 6.60
Bottom Depth (ft.) 31.94
Elevation Top of Well Riser: 826.04
Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 10-26-92 TIME: Start: 0936 Finish: 1111

Method: TEFLON BAILER
Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 5
Was well purged dry? Yes ____ No X
Standing Volume (GAL.) 4.3
Was well purged below sand pack? Yes ____ No X
Volume Purged (GAL.) 21.6

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ____

Field Personnel: RLD/DMM

SAMPLING DATA: DATE: 10-26-92 TIME: Start: 1134 Finish: 1140

Method: TEFLON BAILER
Sampler: DMM/RLD
Present Water Level (ft.): 8.50
Air Temperature (F°): 40
Depth of Sample (ft.): 8.50
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ____ TIME: Start: ____ Finish: ____

Filtered: Yes ____ No ____
Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 ____ NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: ____ Turbid: N Color: ____
Contains Sediment ____
Odor: ____ Other: ____
Temperature (°C): 12/11 pH 8.03/7.96 Specific Conductivity (μmhos/cm): 279/270
Turbidity (NTU): >100/>100 Other: ____

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: DENNIS MALUCCI / RICK DUBISZ

DATE: 10-26-92

WELL NO.: MW-1

1	TOTAL CASING AND SCREEN LENGTH (ft.)	31.94
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	6.6
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 4.3 gal.

WELL I.D.	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)									
	4.3	8.6	12.9	17.3	21.6					
pH	7.31	7.65	7.67	7.71	7.97					
CONDUCTIVITY	275	~~10~~ 280	275	275	275					
TEMP.	10	10	10	11	11					
TURBIDITY	Lt. Brown >100	Lt. Cloudy >100	Lt. Cloudy >100	Lt. Cloudy >100	Lt. Cloudy >100					

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-3
JOB NO.: 0605232-145 — LAB SAMPLE NO.: GT # 6

WELL DATA: DATE: 10-27-92 — TIME: 0847
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 12.66 — Bottom Depth (ft.) 20.88
Elevation Top of Well Riser: 810.81 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 10-27-92 — TIME: Start: 0845/0940 Finish: 0938
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 6 — Was well purged dry? Yes ___ No X
Standing Volume (GAL.) .54 — Was Well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 3.34

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ___
Field Personnel: Omm/RLD

SAMPLING DATA: DATE: 10-29-92 — TIME: Start: 1009 Finish: 1026
Method: TEFLON BAILER — Sampler: Omm/RLD
Present Water Level (ft.): 17.66 — Air Temperature (F°): 48
Depth of Sample (ft.): 17.66 — Weather Conditions: cloudy
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ___ — TIME: Start: ___ Finish: ___
Filtered: Yes ___ No ___ — Cool to 4°C: X
Preservatives: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA
Appearance: Clear / Turbid: ___ — Color: ___
Contains Sediment: ___ — Odor: ___ Other: ___
Temperature (°C): 11.5/12 — pH 6.82/6.87 — Specific Conductivity (mhos/cm): 1420/1485
Turbidity (NTU): 46/67 — Other: ___

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MACUCH / R. DUBISZ

DATE: 10-27-92

WELL NO.: MW-3

1	TOTAL CASING AND SCREEN LENGTH (ft.)	20.88
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	17.66
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = .54 gal.

WELL I.D.	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)									
	.54	1.08	2.16	3.34						
pH	6.73	6.66	6.68	6.61						
CONDUCTIVITY	1495	1400	1495	1495						
TEMP.	12.5	12	12	12						
TURBIDITY	CLEAR 415	CLEAR 55	SLIGHTLY CLOUDY TURB 73	SLIGHTLY TURBID 69						

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MORENCH TANNING — LOCATION NO.: MW-30**
JOB NO.: 0605232-145 — LAB SAMPLE NO.:

WELL DATA: DATE: 10-27-92 — TIME: 0850
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 29.55 — Bottom Depth (ft.) 67.95
Elevation Top of Well Riser: 810.73 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 10-27-92 — TIME: Start: 0829 Finish: 0930
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 1.5 — Was well purged dry? Yes / No
Standing Volume (GAL.) 6.52 — Was Well purged below sand pack? Yes / No
Volume Purged (GAL.) 8

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No
Field Personnel: DMM/MD

SAMPLING DATA: DATE: 10-27-92 — TIME: Start: 0952 Finish: 1010
Method: TEFLON BAILER — Sampler: RDD
Present Water Level (ft.): 63.80 — Air Temperature (F°): 45
Depth of Sample (ft.): 63.80 — Weather Conditions: cloudy
Is sampling equipment dedicated to sample location: Yes X No
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: — TIME: Start: — Finish:
Filtered: Yes No — Cool to 4°C: X
Preservative: H_2SO_4 HNO_3 NaOH Other

PHYSICAL AND CHEMICAL DATA
Appearance: Clear Turbid: ✓ — Color:
Contains Sediment — Odor: Other:
Temperature (°C): 11 pH 9.88 — Specific Conductivity (µmhos/cm): 285
Turbidity (NTU): >100 — Other:

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

** WELL SAMPLE ANNUALLY

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4" QT. G.W.H. 1992

PROJECT NO.: 0605 232-145

STAFF: D. Macuga / R. Russo

DATE: 10-27-92

WELL NO.: MW-3D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	67.55
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	29.55
4	VOLUME OF WATER IN CASING (gal.)	

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

$V = 0.0408 (2^2 \times (1 - 3) = 6.5$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	6.5									
pH	8.88									
CONDUCTIVITY	285									
TEMP.	12									
TURBIDITY	SL TURBID SLOW									

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING
TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING
LOCATION NO.: MW-3DR
JOB NO.: 0605232-145
LAB SAMPLE NO.: GT# 1 (MS/MSD)

WELL DATA: DATE: 10-27-92 TIME: 0841

Casing Diameter (inches):	2	Casing Material:	PVC
Screened Interval (ft BGS):	NOT AVAILABLE	Screen Material:	PVC
Static Water Level Below TOR (ft.):	27.86	Bottom Depth (ft.)	102.64
Elevation Top of Well Riser:	810.47	Datum Ground Surface:	
Elevation Top of Screen:	NOT AVAILABLE		

PURGING DATA: DATE: 10-27-92 TIME: Start: 0850 Finish: 0957/1000

Method: ~~TEFLON BAILER~~ QED Purge Pump
Pumping Rate (gal/min): 0.5
Well Volumes Purged ($\pi R^2 H/231$): ~~3~~ 3.5
Was well purged dry? Yes ___ No X
Standing Volume (GAL.) 12.71
Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) ~~39~~ 45

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes ~~X~~ No X

Field Personnel: DMM/RLD

SAMPLING DATA: DATE: 10-27-92 TIME: Start: 1041 Finish: 1056

Method: TEFLON BAILER
Sampler: D. MALACCI / R. DIBOL
Present Water Level (ft.): 31.37
Air Temperature (F°): 48
Depth of Sample (ft.): 31.37
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: N.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ___ TIME: Start: ___ Finish: ___

Filtered: Yes ___ No ___ Cool to 4°C: X
Preservatives: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: V Turbid: ___ Color: ___
Contains Sediment ___ Odor: ___ Other: ___
Temperature (°C): 11/11 pH 7.81/7.81 Specific Conductivity (µmhos/cm): 320/320
Turbidity (NTU): 20/18 Other: ___

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4/K QT. G.W.H. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MACUCI / R. DUBISZ

DATE: 10-27-92

WELL NO.: MW- 3DR

1	TOTAL CASING AND SCREEN LENGTH (ft.)	102.64
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	22.86
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 12.71 gal.

WELL I.D.	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)									
	13	26	39	45						
pH	7.68	7.69	7.71	7.53 ~~7.55~~						
CONDUCTIVITY	380	380	380	375						
TEMP.	11	11	11	11						
TURBIDITY	clear 23	clear 17	clear 17	clear 36						

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4th QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-5
JOB NO.: 0605 232-145 — LAB SAMPLE NO.: GT #4

WELL DATA: DATE: 10/27/92 — TIME: 1308
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 22.13 — Bottom Depth (ft.) 25.98 XX
Elevation Top of Well Riser: 805.35 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE
XX SURF BOTTOM

PURGING DATA: DATE: 10-27-92 — TIME: Start: 1310 Finish: 1330
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 5 — Was well purged dry? Yes ____ No ____
Standing Volume (GAL.) 0.65 — Was Well purged below sand pack? Yes ____ No ____
Volume Purged (GAL.) 4.2

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ____
Field Personnel: D. MALUCCI

SAMPLING DATA: DATE: 10-27-92 — TIME: Start: 1410 Finish: 1417
Method: TEFLON BAILER — Sampler: DMM/RD
Present Water Level (ft.): 22.24 — Air Temperature (F°): 50
Depth of Sample (ft.): 22.24 — Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: M.P.E. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATES: ____ — TIMES: Start: ____ Finish: ____
Filtered: Yes ____ No ____ — Cool to 4°C: X
Preservatives: H_2SO_4 ____ HNO_3 ____ NaOH ____ Other ____

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear ____ Turbid: V — Color: BROWN
Contains Sediment V — Odor: ____ Other: ____
Temperature (°C): 13/13 — pH 6.90/6.92 — Specific Conductivity (µmhos/cm): 3500/3350
Turbidity (NTU): >100/>100 — Other: ____

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605-232-145

STAFF: D. Mancc / R. Dubois

DATE: 10/22/92

WELL NO.: MW-5

1	TOTAL CASING AND SCREEN LENGTH (ft.)	25.98
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	22.13
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 0.65 gal.

WELL I.D.	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)									
	0.17	1.5	2.2	3.0	4					
pH	6.86	6.84	6.84	6.85	6.82					
CONDUCTIVITY	2910	3200	3300	3120	2850					
TEMP.	12	12.5	12	12	12					
TURBIDITY	>100 NTU **	→	→	→						

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

** VERY TURBID BROWN / SEDIMENT AT BOTTOM OF WELL

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-6
JOB NO.: 0605 232-145 — LAB SAMPLE NO.: GT #7

WELL DATA: DATE: 10-27-92 — TIME: 1302
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 16.27 — Bottom Depth (ft.) 19.09
Elevation Top of Well Riser: 800.48 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 10-27-92 — TIME: Start: 1301 Finish: 1316
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi R^2 H/231$): 6 — Was well purged dry? Yes ___ No X
Standing Volume (GAL.) .48 — Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 3

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ___
Field Personnel: DMM/RLD

SAMPLING DATA: DATE: 10-27-92 — TIME: Start: 1343 Finish: 1347
Method: TEFLON BAILER — Sampler: D. MALUCCI R. DUBOIS
Present Water Level (ft.): 16.31 — Air Temperature (F°): 47
Depth of Sample (ft.): 16.31 — Weather Conditions: cloudy
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ___ — TIME: Start: ___ Finish: ___
Filtered: Yes ___ No ___ — Cool to 4°C: X
Preservatives: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL [illegible]
Appearance: Clear: ___ Turbid: V — Color: BLACK
Contains Sediment ___ — Odor: ___ Other: ___
Temperature (°C): 14/14 — pH 6.52/6.52 — Specific Conductivity (µmhos/cm): 2300/2300
Turbidity (NTU): >100/>100 — Other: ___

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC ACID THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MANUCCI / R DUBISE

DATE: 10/27/92

WELL NO.: MW-6

1	TOTAL CASING AND SCREEN LENGTH (ft.)	19.09
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	16.27
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = .49$ gal.

WELL I.D.	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)									
	1	2	3							
PH	6.53	6.50	6.53							
CONDUCTIVITY	2300	2400	2400							
TEMP.	14	14	14							
TURBIDITY	BLACK/>100	BLACK/>100	BLACK/>100							

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-7**
JOB NO.: 0605232-145 — LAB SAMPLE NO.:

WELL DATA: DATE: 10-26-92 — TIME: 1321
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): 22.5 - 27.5 — Screen Material: PVC
Static Water Level Below TOR (ft.): 7.05 — Bottom Depth (ft.) 30.40 * CAVE
Elevation Top of Well Riser: 800.50 — Datum Ground Surface:
Elevation Top of Screen: 750.00

PURGING DATA: DATE: 10-26-92 — TIME: Start: 1342 Finish: 1349
Method: TEFLON BAILER — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 1 — Was well purged dry? Yes X No ___
Standing Volume (GAL.) 3.9 — Was Well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 4

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ___
Field Personnel: DMM

SAMPLING DATA: DATE: 10-26-92 — TIME: Start: 1423 Finish: 1424
Method: TEFLON BAILER — Sampler: DMM/RLD
Present Water Level (ft.): 24.15 — Air Temperature (F°): 50
Depth of Sample (ft.): 24.15 — Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: — TIME: Start: — Finish:
Filtered: Yes ___ No ___ — Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other

PHYSICAL AND CHEMICAL DATA
Appearance: Clear: V — Turbid: — Color:
Contains Sediment: — Odor: — Other:
Temperature (°C): 11 — pH 7.97 — Specific Conductivity (µmhos/cm): 490
Turbidity (NTU): 48 — Other:

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

** WELL MONITORED / SAMPLED ANNUALLY ONLY

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4th QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. Macucci / R. Dubisz

DATE: 10-26-92

WELL NO.: MW-7

1	TOTAL CASING AND SCREEN LENGTH (ft.)	30.40
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	7.05
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 4$ gal.

WELL I.D.	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)									
	4									
pH	7.75									
CONDUCTIVITY	490									
TEMP.	11									
TURBIDITY	>100									

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4th QT. G.W. MONITORING
TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING
LOCATION NO.: MW-7S
JOB NO.: 0605232-145
LAB SAMPLE NO.: GT # 5

WELL DATA: DATE: 10-26-92 TIME: 1322

Casing Diameter (inches): 2	Casing Material: PVC
Screened Interval (ft BGS): 7 TO 12	Screen Material: PVC
Static Water Level Below TOR (ft.): 8.20	Bottom Depth (ft.) 14.83
Elevation Top of Well Riser: 800.38	Datum Ground Surface:
Elevation Top of Screen: 790.50	

PURGING DATA: DATE: 10-26-92 TIME: Start: 1325 Finish: 1346

Method: TEFLON BAILER	Pumping Rate (gal/min):
Well Volumes Purged ($\pi R^2 H/231$): 6	Was well purged dry? Yes ___ No X
Standing Volume (GAL.) 1.1	Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 6	

Is purging equipment dedicated to sample location? Yes X No ___

Field Personnel: R. DUBIS

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

SAMPLING DATA: DATE: 10-26-92 TIME: Start: 1405 Finish: 1417

Method: TEFLON BAILER	Sampler: DMM/RLD
Present Water Level (ft.): 8.20	Air Temperature (F°): 50
Depth of Sample (ft.): 8.20	Weather Conditions: CLOUDY

Is sampling equipment dedicated to sample location: Yes X No ___

Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ___ TIME: Start: ___ Finish: ___

Filtered: Yes ___ No ___ Cool to 4°C: X

Preservative: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA

Appearance: Clear ___ Slightly Turbid ✓ Turbid: ___	Color: ___
Contains Sediment ___	Odor: ___ Other: ___
Temperature (°C): 12/12 pH 7.27/7.22	Specific Conductivity (mhos/cm): 2600/2400
Turbidity (NTU): 63/66	Other:

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: D. MANUCCI / R DUBIEL

DATE: 10/26-27

WELL NO.: MW-7S

1	TOTAL CASING AND SCREEN LENGTH (ft.)	14.83
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	8.20
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 1$ gal.

WELL I.D.	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)									
	1	2	4½	6						
pH	7.15	7.15	7.27	7.20						
CONDUCTIVITY	1900	2200	2300	2250						
TEMP.	12	12	12	12						
TURBIDITY	cloudy 7100	cloudy 300	less turbid 51	less turbid 64						

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING LOCATION NO.: MW-7D
JOB NO.: 0605232-145 LAB SAMPLE NO.: GT #13

WELL DATA: DATE: 10-26-92 TIME: 1321
Casing Diameter (inches): 2 Casing Material: PVC
Screened Interval (ft BGS): 34 TO 39 Screen Material: PVC
Static Water Level Below TOR (ft.): 6.53 Bottom Depth (ft.) 42.15
Elevation Top of Well Riser: 800.39 Datum Ground Surface:
Elevation Top of Screen: 763.50

PURGING DATA: DATE: 10-26-92 TIME: Start: 1325 Finish: 1354
Method: TEFLON BAILER Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 2 Was well purged dry? Yes X No
Standing Volume (GAL.) 5.9 Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 12

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ___
Field Personnel: D. MALUCCI

SAMPLING DATA: DATE: 10-26-92 TIME: Start: 1430 Finish: 1437
Method: TEFLON BAILER Sampler: DMM/RLD
Present Water Level (ft.): 20.90 Air Temperature (F°): 50
Depth of Sample (ft.): 20.90 Weather Conditions: cloudy
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: M.P.I. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: ___ TIME: Start: ___ Finish: ___
Filtered: Yes ___ No ___ Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: ___ Turbid: V cloudy Color: ___
Contains Sediment ___ Odor: ___ Other: ___
Temperature (°C): 11/11 pH 7.85/7.85 Specific Conductivity (µmhos/cm): 495/495
Turbidity (NTU): >100/>100 Other: ___

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/RINSED WITH 10% NITRIC ACID THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. 4TH QT. G.W.M. 1992

PROJECT NO.: 0605-232-145

STAFF: D. MANUCCI / R. DUBISZ

DATE: 10-26-92

WELL NO.: MW-7D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	42.15
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	6.83
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (2^2 \times (1 - 3) = 5.9$ gal.

WELL I.D.	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)									
	6	12								
PH	7.87	7.91								
CONDUCTIVITY	530	495								
TEMP.	12	11								
TURBIDITY	>100	>100								

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. QT. G.W. MONITORING — TYPE OF SAMPLE: GROUND WATER
CLIENT: MOENCH TANNING — LOCATION NO.: MW-8D
JOB NO.: 0605232-145 — LAB SAMPLE NO.: GT #12

WELL DATA: DATE: 10-26-92 — TIME: 0900
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): NOT AVAILABLE — Screen Material: PVC
Static Water Level Below TOR (ft.): 35.90 — Bottom Depth (ft.) 127.45
Elevation Top of Well Riser: 821.89 — Datum Ground Surface:
Elevation Top of Screen: NOT AVAILABLE

PURGING DATA: DATE: 10-26-92 — TIME: Start: 0910 Finish: 1114
Method: TEFLON BAILER QED Purge Pump — Pumping Rate (gal/min):
Well Volumes Purged ($\pi r^2 h/231$): 2.50 — Was well purged dry? Yes X No
Standing Volume (GAL.) ~~60~~ 15.56 — Was well purged below sand pack? Yes ___ No X
Volume Purged (GAL.) 40

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes ~~X~~ No X
Field Personnel: DMM/RLD

SAMPLING DATA: DATE: 10-26-92 — TIME: Start: 1154 Finish: 1209
Method: TEFLON BAILER — Sampler: DMM/RLD
Present Water Level (ft.): 81.10 — Air Temperature (F°): 40
Depth of Sample (ft.): 81.10 — Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes ~~X~~ No
Source and type of water used in field for QC purposes: M.P.E. ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: — TIME: Start: Finish:
Filtered: Yes ___ No ___ — Cool to 4°C: X
Preservatives: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL [illegible]
Appearance: Clear ___ Turbid: ✓ — Color:
Contains Sediment — Odor: Other:
Temperature (°C): 12/11 pH 8.59/8.64 — Specific Conductivity (μmhos/cm): 280/280
Turbidity (NTU): >100/>100 — Other:

REMARKS: N/A = NOT APPLICABLE TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSED WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: PALMER ST. QT. G.W.M. 1992

PROJECT NO.: 0605 232-145

STAFF: ORMM/RLD

DATE: 10-26-92

WELL NO.: MW- 8D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	12.45
2	CASING INTERNAL DIAMETER (in.)	2
3	WATER LEVEL BELOW TOP OF CASING (ft.)	35.90
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (2^2 x (1 - 3) = 15.56 gal.

WELL I.D.	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)									
	16	32								
pH	8.80	8.50								
CONDUCTIVITY	240	270								
TEMP.	10.5	10								
TURBIDITY	murky 7100	murky 7100								

COMMENTS:

N/A = NOT APPLICABLE

* = SLOW RECHARGE / PURGED TO DRYNESS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4TH QT. G.W. MONITORING
CLIENT: MORENCH TANNING
JOB NO.: 0605232-145
TYPE OF SAMPLE: SURFACE GROUND WATER
LOCATION NO.: BS-1 BANK SEEP
LAB SAMPLE NO.: QT # 9 (NORTH OF MW-6)

WELL DATA: DATE: TIME:
Casing Diameter (inches): NOT APPLICABLE
Casing Material: NOT APPLICABLE
Screened Interval (ft BGS):
Screen Material:
Static Water Level Below TOR (ft.):
Bottom Depth (ft.)
Elevation Top of Well Riser:
Datum Ground Surface:
Elevation Top of Screen:

PURGING DATA: DATE: TIME: Start: Finish:
Method: NOT APPLICABLE (N/A)
Pumping Rate (gal/min): (N/A)
Well Volumes Purged ($\pi R^2 H/231$): (N/A)
Was well purged dry? Yes ____ No (N/A)
Standing Volume (GAL.) N/A
Volume Purged (GAL.) (N/A)
Was well purged below sand pack? Yes ____ No ____

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location? Yes X No ____
Field Personnel: D. MACUCA

SAMPLING DATA: DATE: 10-22-92 TIME: Start: 1155 Finish: 1205
Method: SURFACE WATER GRAB
Sampler: DMM IRD
Present Water Level (ft.): NI
Air Temperature (F°): 45
Depth of Sample (ft.): N/A
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample locations: Yes X No ____
Source and type of water used in field for QC purposes: MPI ENVIRONMENTAL LABORATORY

PRESERVATION DATA: DATE: TIME: Start: Finish:
Filtered: Yes X No ____
Cool to 4°C: X
Preservative: H_2SO_4 ____ HNO_3 ____ NaOH ____ Other ____

PHYSICAL AND CHEMICAL
Appearance: Clear ✓ Turbid: ____ Color: ____
Contains Sediment ____ Odor: ____ Other: ____
Temperature (°C): 11 pH 7.84 Specific Conductivity (μmhos/cm): 490
Turbidity (NTU): 12 Other: ____

REMARKS: N/A = NOT APPLICABLE

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4th QT. G.W. MONITORING
CLIENT: MOENCH TANNING
JOB NO.: 0605 232 - 145
TYPE OF SAMPLE: SURFACE GROUND WATER
LOCATION NO.: BS-3 (SOUTH OF MW-3)
LAB SAMPLE NO.: GT # 14 (BANK SEEP)

WELL DATA:
DATE:
TIME:
Casing Diameter (inches): NOT APPLICABLE
Casing Material: NOT APPLICABLE
Screened Interval (ft BGS):
Screen Material:
Static Water Level Below TOR (ft.):
Bottom Depth (ft.)
Elevation Top of Well Riser:
Datum Ground Surface:
Elevation Top of Screen:

PURGING DATA:
DATE:
TIME: Start: Finish:
Method: NOT APPLICABLE (N/A)
Pumping Rate (gal/min): (N/A)
Well Volumes Purged ($\pi r^2 h/231$): (N/A)
Was well purged dry? Yes ___ No (N/A)
Standing Volume (GAL.) (N/A)
Was well purged below sand pack? Yes ___ No ___
Volume Purged (GAL.)

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No ___
Field Personnel: D. MALUCCI

SAMPLING DATA:
DATE: 10-27-92
TIME: Start: 1112 Finish: 1117
Method: SURFACE WATER GRAB
Sampler: DMM/RLD
Present Water Level (ft.): N/A
Air Temperature (F°): 45
Depth of Sample (ft.):
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes X No ___
Source and type of water used in field for QC purposes: HPI ENVIRONMENTAL LABORATORY

PRESERVATION DATA:
DATE:
TIME: Start: Finish:
Filtered: Yes X No ___
Cool to 4°C: X
Preservative: H_2SO_4 ___ HNO_3 ___ NaOH ___ Other ___

PHYSICAL AND CHEMICAL [illegible]
Appearance: Clear ___ Turbid: V
Color:
Contains Sediment
Odor: Other:
Temperature (°C): 9 pH 7.35
Specific Conductivity (μmhos/cm): 365
Turbidity (NTU): 54
Other:

REMARKS: N/A = NOT APPLICABLE

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. 4th QT. G.W. MONITORING
CLIENT: MOENCH TANNING
JOB NO.: 0605232-145

TYPE OF SAMPLE: QA / QC GROUND WATER
LOCATION NO.: EQUIPMENT BLANK
LAB SAMPLE NO.: GT # 11

WELL DATA: DATE: _____ TIME: _____

Casing Diameter (inches): NOT APPLICABLE.
Screened Interval (ft BGS): _____
Static Water Level Below TOR (ft.): _____
Elevation Top of Well Riser: _____
Elevation Top of Screen: _____

Casing Material: NOT APPLICABLE
Screen Material: _____
Bottom Depth (ft.) _____
Datum Ground Surface: _____

PURGING DATA: DATE: _____ TIME: Start: _____ Finish: _____

Method: NOT APPLICABLE (N/A)
Well Volumes Purged ($\pi r^2 h/231$): (N/A)
Standing Volume (GAL.) N/A
Volume Purged (GAL.) (N/A)

Pumping Rate (gal/min): N/A
Was well purged dry? Yes _____ No (N/A)
Was well purged below sand pack? Yes ____ No ____

Well I.D. (inches)	Volume (gal/ft)
2	0.17
4	0.66
6	1.50

Is purging equipment dedicated to sample location?
Yes X No _____

Field Personnel: D. MAUCH

SAMPLING DATA: DATE: 10-22-97 TIME: Start: 1140 Finish: 1144

Method: TEFLON BAILER
Present Water Level (ft.): (N/A)
Depth of Sample (ft.): _____
Is sampling equipment dedicated to sample location: Yes X No ____
Source and type of water used in field for QC purposes: MPI ENVIRONMENTAL LABORATORY

Sampler: DMM/RLD
Air Temperature (F°): 45
Weather Conditions: CLOUDY

PRESERVATION DATA: DATE: _____ TIME: Start: _____ Finish: _____

Filtered: Yes _____ No _____ (N/A)
Preservative: H_2SO_4 _____ HNO_3 _____ NaOH _____ Other _____
Cool to 4°C: X

PHYSICAL AND CHEMICAL [illegible]

Appearance: Clear/[illegible] Turbid: N/A
Containing Sediment _____
Temperature (°C): _____ pH N/A
Turbidity (NTU): _____

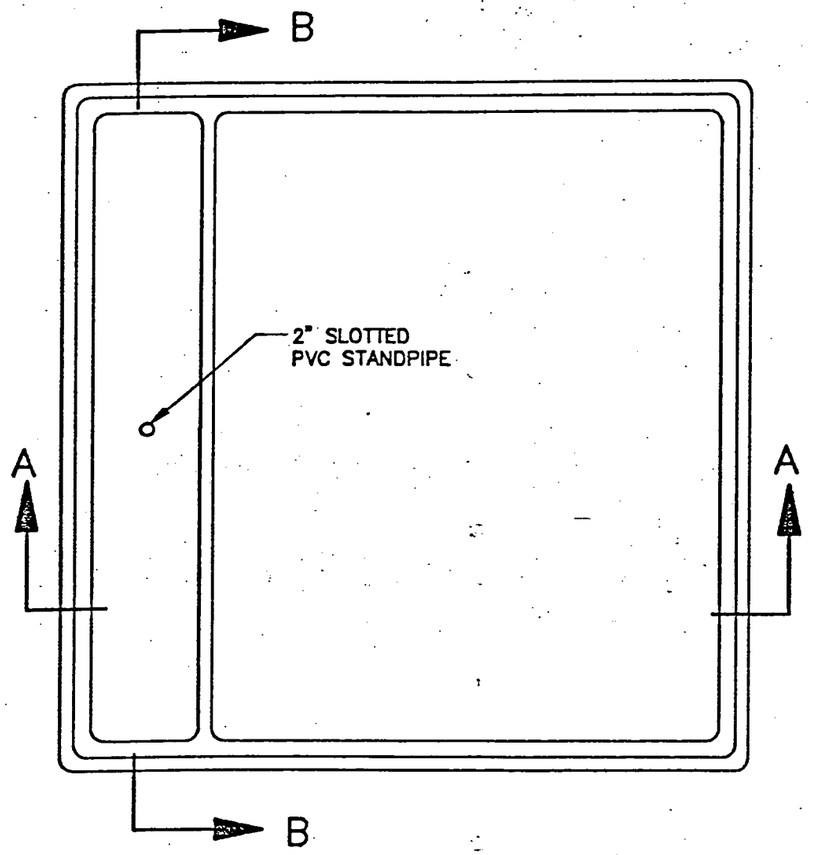
Color: _____
Odor: _____ Other: N/A
Specific Conductivity (μmhos/cm): N/A
Other: _____

REMARKS: N/A = NOT APPLICABLE BAILER WASHED WITH SOAP, 10% NITRIC WASH RINSED THEN 3X RINSED WITH LABORATORY WATER PRIOR TO USE.

MALCOLM PIRNIE

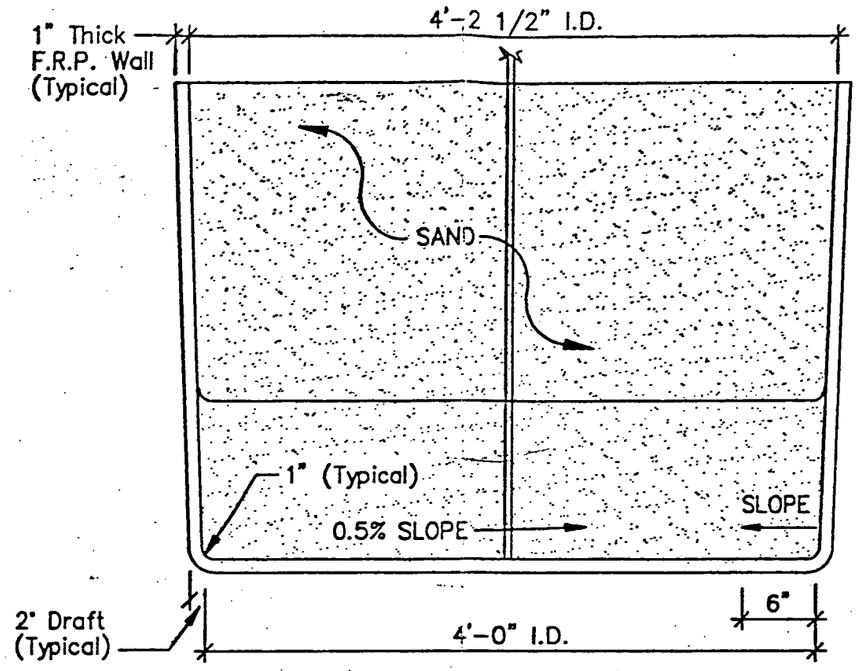
APPENDIX B

INFILTROMETER DESIGN

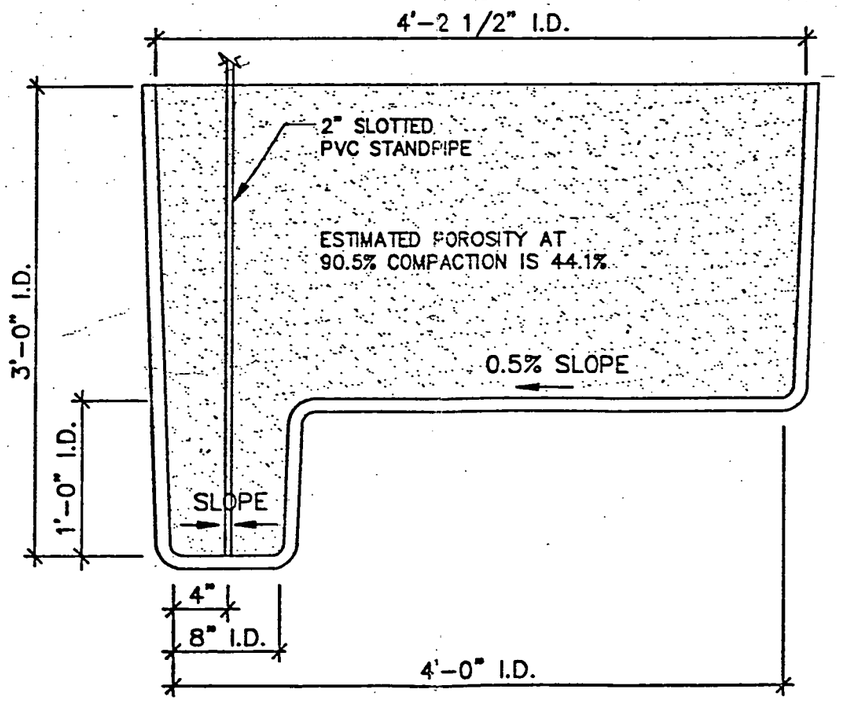


PLAN

SECTION B–B



SECTION A–A



TYPICAL INFILTROMETER BY HEY'S ENTERPRISES
AS INSTALLED AT PALMER STREET LANDFILL

INFILTROMETER

MALCOLM PIRNIE

APPENDIX C

ANALYTICAL REPORT
FOR
OCTOBER 26-27, 1992 MONITORING EVENT

MALCOLM PIRNIE

Malcolm Pirnie Laboratory
707 Old Saw Mill River Road
Tarrytown, NY 10591
Phone: (914) 345-8230
Fax: (914) 345-8741

TECHNICAL REPORT

PALMER STREET

Approved by: _____

Project Number : 0605-232-623

Date : 11-19-1992

MALCOLM PIRNIE ENVIRONMENTAL LABORATORY

CERTIFICATIONS

- New York State Department of Health:
  ELAP # 10202 Water, Wastewater, Solid and Hazardous Waste
- New Jersey Department of Environmental Protection:
  LAB ID# 73171
  Water, Wastewater (including solid and hazardous waste)
- Connecticut Department of Health Services:
  LAB ID# PH-0536 Water and Wastewater
- US ARMY CORPS OF ENGINEERS - Missouri River Division - HTRW Validation

ANALYTICAL REFERENCES

The Malcolm Pirnie Environmental Laboratory utilizes a variety of methods and procedures based on the analytical references listed below.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 3/83 Revision.

Test Methods for Evaluating Solids Waste-Physical/Chemical Methods, SW-846, 3rd Edition. Office of Solid Waste and Emergency repairs, USEPA, Washington, D.C., 1986.

USEPA Contract Laboratory Program, Statement of Work for Organics Analysis, USEPA, OLM01.5.

USEPA Contract Laboratory Program, Statement of Work for Inorganics Analysis, USEPA, ILM01.0.

Standard Methods for the Examination of Water and Wastewater, 16 Edition, APHA, Washington D.C., 1985.

Annual Book of ASTM Standards, Part 31 - Water. American Society for Testing and Materials, Philadelphia, PA, 1981.

Methods for Organic Chemisal Analysis of Municipal and Industrial Wastewater, Appendix A, CFR Part 136, Federal Register, Vol. 49, No. 209, 1984.

CLIENT IDENTIFICATION	LAB ID	DATE SAMPLED
MW-1	92-04126-T	10/26/92
MW-3	92-04127-N	10/27/92
MW-3DR (MSD)	92-04128-D	10/27/92
MW-3DR (MS/MSD)	92-04128-N	10/27/92
MW-3DR (MS)	92-04128-S	10/27/92
MW-5	92-04129-N	10/27/92
MW-6	92-04130-N	10/27/92
MW-7S	92-04131-N	10/26/92
MW-7D	92-04132-N	10/26/92
MW-8D	92-04133-N	10/26/92
BS-1	92-04134-N	10/27/92
BS-3	92-04135-N	10/27/92
EQUIP BLANK	92-04136-N	10/27/92
CREEK BANK SEDIMENT	92-04137-N	10/27/92

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04126-T	MW-1	10/26/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0105	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.841	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/04/92	ML	CR ICAP	Chromium by ICAP	<0.005	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.011	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0067	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.588	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04126-T	MW-1	10/26/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L

0605-232-623	92-04127-N	MW-3	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0103	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	1.01	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.0131	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0064	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0086	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	1.19	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.0075	mg/L
0605-232-623	92-04127-N	MW-3	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L

0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0381	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/07/92	DMK	BA ICAP	Barium by ICAP	3.02	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.189	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0224	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0421	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/07/92	DMK	BA ICAP F	Barium ICAP FILT	3.02	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.180	mg/L
0605-232-623	92-04128-D	MW-3DR (MSD)	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0247	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.973	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	<0.005	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.944	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04128-N	MW-3DR (MS/MSD)	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0107	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0432	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/07/92	DMK	BA ICAP	Barium by ICAP	2.22	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.137	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0244	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0407	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/07/92	DMK	BA ICAP F	Barium ICAP FILT	2.53	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.157	mg/L
0605-232-623	92-04128-S	MW-3DR (MS)	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0295	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04129-N	MW-5	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0225	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	2.39	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.197	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0291	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/06/92	DMK	BA ICAP F	Barium ICAP FILT	1.60	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.0404	mg/L
0605-232-623	92-04129-N	MW-5	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L

0605-232-623	92-04130-N	MW-6	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0231	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	1.80	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.0130	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0079	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	0.0225	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	1.62	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.0072	mg/L
0605-232-623	92-04130-N	MW-6	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L

0605-232-623	92-04131-N	MW-7S	10/26/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	0.0085	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/09/92	DMK	BA ICAP	Barium by ICAP	1.28	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.0187	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04131-N	MW-7S	10/26/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	1.24	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	0.0184	mg/L
0605-232-623	92-04131-N	MW-7S	10/26/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.007	mg/L

0605-232-623	92-04132-N	MW-7D	10/26/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.514	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/04/92	ML	CR ICAP	Chromium by ICAP	<0.005	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0207	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.524	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04132-N	MW-7D	10/26/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0066	mg/L

0605-232-623	92-04133-N	MW-8D	10/26/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.953	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.018	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/02/92	ML	PB ICAP	Lead by ICAP	0.0211	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.579	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04133-N	MW-8D	10/26/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0059	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04134-N	BS-1	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.396	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	<0.005	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.192	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04134-N	BS-1	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L

0605-232-623	92-04135-N	BS-3	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	0.155	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	0.0072	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	0.163	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04135-N	BS-3	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	0.0085	mg/L

0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/04/92	ML	AS-FURN	Arsenic (Furnace)	<0.005	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/09/92	DMK	BA ICAP	Barium by ICAP	<0.050	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/04/92	ML	CR ICAP	Chromium by ICAP	<0.005	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/02/92	ML	PB ICAP	Lead by ICAP	<0.005	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/04/92	ML	AS-FILT	Arsenic-filtered	<0.005	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: METALS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/09/92	DMK	BA ICAP F	Barium ICAP FILT	<0.050	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/04/92	ML	CR ICAP F	Chromium ICAP FILT	<0.005	mg/L
0605-232-623	92-04136-N	EQUIP BLANK	10/27/92	11/02/92	ML	PB ICAP F	Lead ICAP FILT	<0.005	mg/L
0605-232-623	92-04137-N	CREEK BANK SEDIMENT	10/27/92	11/13/92	ML	AS-FURN	Arsenic (Furnace)	0.0051	mg/L
0605-232-623	92-04137-N	CREEK BANK SEDIMENT	10/27/92	11/13/92	DMK	BA ICAP	Barium by ICAP	.626	mg/L
0605-232-623	92-04137-N	CREEK BANK SEDIMENT	10/27/92	11/12/92	ML	CR ICAP	Chromium by ICAP	0.0273	mg/L
0605-232-623	92-04137-N	CREEK BANK SEDIMENT	10/27/92	11/12/92	ML	PB-FURN	Lead (Furnace)	<0.005	mg/L

CLIENT RESULTS SUMMARY REPORT
Revision Notes: COMPLETE REPORT

PALMER STREET

Contact: DAVE HARTY, BUF
MPI Project Manager:

Group: INORGANICS

Project #	Lab Id	Client Id	Date Sampled	Date Analyzed	By	Analysis	Parameter	Result	Units
0605-232-623	92-04137-N	CREEK BANK SEDIMENT	10/27/92	10/29/92	ND	PH	pH	7.44	pH Units

KEY TO REPORT

LAB ID -D = MATRIX DUPLICATE OF ORIGINAL SAMPLE
-N = ORIGINAL SAMPLE
-S = MATRIX SPIKE OF ORIGINAL SAMPLE

B--THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE BLANK AS WELL AS THE SAMPLE. IT INDICATES POSSIBLE/PROBABLE CONTAMINATION, AND WARNS THE USER TO TAKE APPROPRIATE ACTION.

BR--BROKEN UPON RECEIPT

J--INDICATES AN ESTIMATED VALUE. THE RESULT IS LESS THAN THE SAMPLE QUANTITATION LIMIT BUT GREATER THAN ZERO.

LE--LABORATORY ERROR.

NA--NOT APPLICABLE.

ND--NOT DETECTED

NES--NOT ENOUGH SAMPLE.

U--INDICATES COMPOUND WAS ANALYZED FOR BUT NOT DETECTED

MALCOLM PIRNIE, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.:	SITE NAME:
0605-232	Palmer St

SAMPLERS (SIGNATURE):

	STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TOTAL # CONTAINERS						REMARKS
4126	1	10-26	1134		X	mw-1	2	2						
4127	2	10-27	1009		X	mw-3	2	2						
4128	3	10-27	1041		X	mw-3DR + MS/MSD	~~4~~ 6	6						
4129	4	10-27	1410		X	mw-5	2	2						
4130	5	10-27	1343		X	mw-6	2	2						INITIALS Include's AS,
4131	6	10-26	1405		X	mw-7S	2	2						BA, Cr, & Pb
4132	7	10-26	1430		X	mw-7D	2	2						
4133	8	10-26	1154		X	mw-8D	2	2						
4134	9	10-27	1155		X	BS-1	2	2						
4135	10	10-27	1112		X	BS-3	2	2						
4136	11	10-27	1140		X	Equipment BLANK	2	2						
						TOTAL	26	26						

RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
[signature]	10-28 0840	D Johnson 10/29 1:00			
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE/TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE/TIME:	REMARKS:	

Distribution Original accompanies shipment, copy to coordinator field files

General Testing Corporation

A Full Service Environmental Laboratory

November 19, 1992

Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Re: Palmer Street Facility

Dear Ms. Oliverio:

Enclosed please find General Testing Corporation's analytical report on samples taken by your personnel on October 26 & 27, 1992.

All data has been reviewed prior to report submittal. If you have any questions please contact me at (716) 454-3760.

Thank you once again for allowing General Testing the opportunity to provide this services.

Sincerely:
GENERAL TESTING CORPORATION

Sue Lochner
Client Representative Manager

Enc.

710 Exchange Street • Rochester, NY 14608 • Tele: (716) 454-3760 • Fax: (716) 454-1245
85 Trinity Place • Hackensack, NJ 07601 • Tele: (201) 488-5242 • Fax: (201) 488-6386
435 Lawrence Bell Drive • Amherst, NY 14608 • Tele: (716) 634-0454 • Fax: (716) 634-9019

General Testing Corporation

COMPANY: MALCOLM PIRNE, INC.
PALMER ST. FACILITY
JOB #: R92/04628

VOLATILE ORGANICS

Malcolm Pirnie water samples were analyzed for priority pollutant volatile organics, Xylene, and Methyl Ethyl Ketone using EPA methods 8010/8020 from SW-846.

The initial calibration criteria of 20% RSD was met for all analytes.

The continuing calibration criteria of 15% D was met for all analytes in all daily calibration check standards except the following:

DATE	COMPOUND	%D
11/02/92	Trans 1,2-Dichloropropene	16%

However this analyte was not detected in any of the samples, therefore no calculated values were affected.

All surrogate standard recoveries were within acceptance limits for all samples.

All matrix spike, matrix spike duplicate, reference check standard recoveries, and precision data were within QC acceptance limits.

The Trip Blank (R92/04628-012) was free of contamination.

The Equipment Blank (92/04628-009) was free of contamination.

All Laboratory Blanks were free of contamination.

All required analysis holding times were met.

Sample R92/04628-007 was analyzed on an alternative column to confirm the presence of Chloroethane.

No other analytical or QC problems were encountered.

General Testing Corporation

Effective 10/1/91

GTC 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 and reanalysis could not be performed.

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 analytes only)

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

- Also used to qualify Organics QC data outside limits. (Only used on the QC summary sheets)

M - Duplication injection precision not met (GFA only).

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

X - As specified in the case narrative.

General Testing Corporation

GTC REPORT # R92/4628

REPORT INDEX

General Testing Corporation

GTC REPORT # R92/4628

SECTION A

ANALYTICAL DATA

Presented in this section is analytical data for the parameters requested. The following references concerning units and analytical methodology apply to the data herein

Units: AS SPECIFIED

Analytical Methodology Obtained From:

( ) Federal Register, 40 CFR Part 136, Guidelines Establishing Test Procedures for the analyses of Pollutants under the Clean Water Act, 10/26/84.

(X) SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition, 9/86.

( ) Other:

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 18 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3DR	MW-1	MW-7D	MW-5	MW-7S	MW-3	MW-6	BS-1
Date Collected:	10/27/92	10/26/92	10/26/92	10/27/92	10/26/92	10/27/92	10/27/92	10/27/92
Time Collected:	10:41	11:34	14:35	14:10	14:05	10:09	13:43	11:55
Date Analyzed:	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92	10/31/92	11/02/92	10/31/92
Chloromethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	11	2.0 U
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene-Trans	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene (Cis)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U
1,1,2-Trichloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloroethylvinyl Ether	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	2.0 U	2.0 U	2.0 U	3.1	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Xylene (o,m,p)	2.0 U	2.0 U	2.0 U	3.1	2.2	2.3	2.0 U	2.0 U
Total Volatiles	ND	ND	ND	6.2	2.2	2.3	11	ND

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 16 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3DR	MW-1	MW-7D	MW-5	MW-7S	MW-3	MW-6	BS-1
Date Collected:	10/27/92	10/26/92	10/26/92	10/27/92	10/26/92	10/27/92	10/27/92	10/27/92
Time Collected:	10:41	11:34	14:35	14:10	14:05	10:09	13:43	11:55
SURROGATE STANDARD RECOVERIES								
% Recovery								
Bromochloromethane (Acceptance Limits: 60-138%)	80	87	94	90	91	88	95	79
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	97	88	92	96	91	93	102	79
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	98	77	80	82	79	90	84	75

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Thank K. Peng

Laboratory Director

5

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 18 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-009	-010	-011	-012				
Location:	EQUIPMENT BLANK	MW-8D	BS-3	TRIP BLANK				
Date Collected:	10/27/92	10/26/92	10/27/92	10/27/92				
Time Collected:	11:40	11:54	11:12	NA				
Date Analyzed:	10/31/92	11/02/92	11/03/92	11/03/92				
Chloromethane	5.0 U	5.0 U	5.0 U	5.0 U				
Bromomethane	5.0 U	5.0 U	5.0 U	5.0 U				
Vinyl Chloride	2.0 U	2.0 U	2.0 U	2.0 U				
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U				
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U				
Trichlorofluoromethane	1.0 U	1.0 U	1.0 U	1.0 U				
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U				
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U				
trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U				
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U				
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U				
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U				
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U				
Carbon Tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U				
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U				
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U				
1,3-Dichloropropene-Trans	2.0 U	2.0 U	2.0 U	2.0 U				
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U				
1,3-Dichloropropene (Cis)	1.0 U	1.0 U	1.0 U	1.0 U				
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U				
1,1,2-Trichloroethane	2.0 U	2.0 U	2.0 U	2.0 U				
2-Chloroethylvinyl Ether	2.0 U	2.0 U	2.0 U	2.0 U				
Bromoform	2.0 U	2.0 U	2.0 U	2.0 U				
1,1,2,2-Tetrachloroethane	2.0 U	2.0 U	2.0 U	2.0 U				
Tetrachloroethene	1.0 U	1.0 U	1.0 U	1.0 U				
Chlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U				
1,3-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U				
1,2-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U				
1,4-Dichlorobenzene	2.0 U	2.0 U	2.0 U	2.0 U				
Benzene	2.0 U	2.0 U	2.0 U	2.0 U				
Toluene	2.0 U	2.0 U	2.0 U	2.0 U				
Ethylbenzene	2.0 U	2.0 U	2.0 U	2.0 U				
Total Xylene (o,m,p)	2.0 U	2.0 U	2.0 U	2.0 U				
Total Volatiles	ND	ND	ND	ND		6		

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 16 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-009	-010	-011	-012
Location:	EQUIPMENT BLANK	MW-8D	BS-3	TRIP BLANK
Date Collected:	10/27/92	10/26/92	10/27/92	10/27/92
Time Collected:	11:40	11:54	11:12	NA
SURROGATE STANDARD RECOVERIES				
% Recovery				
Bromochloromethane (Acceptance Limits: 60-138%)	66	80	81	81
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	74	101	82	85
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	66	95	68	72

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Mark K. Peng

Laboratory Director

7

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 17 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8020 ANALYTICAL UNITS - ug/l

Sample:	-001	-002	-003	-004	-005	-006	-007	-008
Location:	MW-3DR	MW-1	MW-7D	MW-5	MW-7S	MW-3	MW-6	BS-1
Date Collected:	10/27/92	10/26/92	10/26/92	10/27/92	10/26/92	10/27/92	10/27/92	10/27/92
Time Collected:	10:41	11:34	14:35	14:10	14:05	10:09	13:43	11:55
Date Analyzed:	10/29/92	10/30/92	10/30/92	10/30/92	10/30/92	10/31/92	11/02/92	10/31/92
Methyl Ethyl Ketone	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Carl K. Perry
Laboratory Director

8

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 17 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8020 ANALYTICAL UNITS - ug/l

Sample:	-009	-010	-011	-012
Location:	EQUIPMENT BLANK	MW-8D	BS-3	TRIP BLANK
Date Collected:	10/27/92	10/26/92	10/27/92	10/27/92
Time Collected:	11:40	11:54	11:12	NA
Date Analyzed:	10/31/92	11/02/92	11/03/92	11/03/92
Methyl Ethyl Ketone	20 U	20 U	20 U	20 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Karl K. Perry
Laboratory Director

General Testing Corporation

GTC REPORT # R92/4628

SECTION B

LABORATORY QUALITY CONTROL DATA

Presented in this section is Quality Control Associated with the data provided in Section A of this report.

Quality Control Explanations:

(1) RUN QUALITY CONTROL - Selected QC data from the analytical run in which your sample(s) were involved.

(2) JOB SPECIFIC QUALITY CONTROL - QC data specific to your set of samples.

(3) DUPLICATES - Replicate analyses of a given sample used to monitor precision. Relative Percent Difference is calculated as the difference divided by the average, times 100.

(4) MATRIX SPIKES - Addition of a known amount of analyte to a sample. Recovery is calculated by subtracting original value attributable to the sample from the combined value. The difference is then divided by the amount added to calculate percent recovery. Poor recoveries may indicate analytical interference due to the matrix of the sample. Any other samples of this matrix may also have been affected, high or low as indicated by the percent recovery.

(5) LABORATORY CONTAMINANTS - Laboratory de-ionized water used to monitor for contamination during analysis.

(6) BLANK SPIKES - Same as item #4 but analyte is added to laboratory de-ionized water. This indicates the accuracy of analysis.

(7) REFERENCE CHECK SAMPLES - Samples from an outside source having a known concentration of analyte. Used as a measure of analytical accuracy.
When possible, all components of the above listed QC protocol are performed during an analytical run. The resulting data is compared to historical records when evaluating the quality of analytical runs. The data provided in your report has passede our Quality Assurance review.

Quality Control Notes:

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 18 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference

Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - ug/l

Sample:	-013	-014					
Location:	LAB METH BLANK	LAB METH BLANK					
Date Collected:	--	--					
Time Collected:	--	--					
Date Analyzed:	10/29/92	11/02/92					
Chloromethane	5.0 U	5.0 U					
Bromomethane	5.0 U	5.0 U					
Vinyl Chloride	2.0 U	2.0 U					
Chloroethane	2.0 U	2.0 U					
Methylene Chloride	1.0 U	1.0 U					
Trichlorofluoromethane	1.0 U	1.0 U					
1,1-Dichloroethene	1.0 U	1.0 U					
1,1-Dichloroethane	1.0 U	1.0 U					
trans-1,2-Dichloroethene	1.0 U	1.0 U					
cis-1,2-Dichloroethene	1.0 U	1.0 U					
Chloroform	1.0 U	1.0 U					
1,2-Dichloroethane	1.0 U	1.0 U					
1,1,1-Trichloroethane	1.0 U	1.0 U					
Carbon Tetrachloride	1.0 U	1.0 U					
Bromodichloromethane	1.0 U	1.0 U					
1,2-Dichloropropane	1.0 U	1.0 U					
1,3-Dichloropropene-Trans	2.0 U	2.0 U					
Trichloroethene	1.0 U	1.0 U					
1,3-Dichloropropene (Cis)	1.0 U	1.0 U					
Dibromochloromethane	2.0 U	2.0 U					
1,1,2-Trichloroethane	2.0 U	2.0 U					
2-Chloroethylvinyl Ether	2.0 U	2.0 U					
Bromoform	2.0 U	2.0 U					
1,1,2,2-Tetrachloroethane	2.0 U	2.0 U					
Tetrachloroethene	1.0 U	1.0 U					
Chlorobenzene	2.0 U	2.0 U					
1,3-Dichlorobenzene	2.0 U	2.0 U					
1,2-Dichlorobenzene	2.0 U	2.0 U					
1,4-Dichlorobenzene	2.0 U	2.0 U					
Benzene	2.0 U	2.0 U					
Toluene	2.0 U	2.0 U					
Ethylbenzene	2.0 U	2.0 U					
Total Xylene (o,m,p)	2.0 U	2.0 U					
Total Volatiles	ND	ND					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 16 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8010/8020 ANALYTICAL RESULTS - %

Sample:	-013	-014					
Location:	LAB METH BLANK	LAB METH BLANK					
Date Collected:	--	--					
Time Collected:	--	--					
SURROGATE STANDARD RECOVERIES							
% Recovery							
Bromochloromethane (Acceptance Limits: 60-138%)	85	79					
2-Bromo-1-chloropropane (Acceptance Limits: 60-134%)	103	94					
a,a,a-Trifluorotoluene (Acceptance Limits: 60-134%)	109	96					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Paul K. Penz

Laboratory Director

12

General Testing Corporation

A Full Service Environmental Laboratory

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. : R92/04628 -001

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	24.4	0	22.3	91	28-167
Trichloroethene	21.8	0	19.9	91	35-146
Benzene	21.2	0	15.6	74	39-150
Toluene	22.2	0	17.6	79	46-148
Chlorobenzene	20.6	0	19.5	94	38-150

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	24.4	27.9	114	22	30	28-167
Trichloroethene	21.8	24.4	112	21	30	35-146
Benzene	21.2	18.5	87	17	30	39-150
Toluene	22.2	19.1	86	8	30	46-148
Chlorobenzene	20.6	23.2	113	18	30	38-150

Columns to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

FORM III VOA-1
NYSDEC B-85

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Job No: R92/04628

Date: 16 NOV., 1992

REFERENCE CHECK

EPA METHOD 8010/8020	TRUE VALUE	% RECOVERY	ACCEPTANCE LIMITS (%)
Date Analyzed: 10/30/92			
Chloromethane	20	68	D - 193
Bromomethane	20	110	D - 144
Vinyl Chloride	20	68	28 - 163
Chloroethane	20	NA	46 - 137
Methylene Chloride	20	118	25 - 162
Trichlorofluoromethane	20	84	21 - 156
1,1-Dichloroethene	20	103	28 - 167
1,1-Dichloroethane	20	108	47 - 132
Total 1,2-Dichloroethene	20	NA	38 - 155
Chloroform	20	117	49 - 133
1,2-Dichloroethane	20	112	51 - 147
1,1,1-Trichloroethane	20	114	41 - 138
Carbon Tetrachloride	20	109	43 - 143
Bromodichloromethane	20	109	42 - 172
1,2-Dichloropropane	20	111	44 - 156
1,3-Dichloropropene-Trans	20	122	22 - 178
Trichloroethene	20	108	35 - 146
1,3-Dichloropropene(Cis)	20	117	22 - 178
Dibromochloromethane	20	120	24 - 191
1,1,2-Trichloroethane	20	93	39 - 136
2-Chloroethylvinyl Ether	20	NA	14 - 186
Bromoform	20	107	13 - 159
1,1,2,2-Tetrachloroethane	20	124	8 - 184
Tetrachloroethene	40	102	26 - 162
Chlorobenzene	40	114	38 - 150
1,3-Dichlorobenzene	40	109	7 - 187
1,2-Dichlorobenzene	40	112	D - 208
1,4-Dichlorobenzene	40	105	42 - 143
Benzene	20	83	39 - 150
Toluene	20	93	46 - 148
Ethylbenzene	20	82	32 - 160
Total Xylene (o,m,p)	20	85	47-135

NA - Not Added

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Job No: R92/04628

Date: 16 NOV., 1992

EPA METHOD 8010/8020	REFERENCE CHECK TRUE VALUE	% RECOVERY	ACCEPTANCE LIMITS (%)
Date Analyzed: 11/02/92			
Chloromethane	20	65	D - 193
Bromomethane	20	99	D - 144
Vinyl Chloride	20	49	28 - 163
Chloroethane	20	NA	46 - 137
Methylene Chloride	20	112	25 - 162
Trichlorofluoromethane	20	76	21 - 156
1,1-Dichloroethene	20	92	28 - 167
1,1-Dichloroethane	20	98	47 - 132
Total 1,2-Dichloroethene	20	NA	38 - 155
Chloroform	20	108	49 - 133
1,2-Dichloroethane	20	109	51 - 147
1,1,1-Trichloroethane	20	102	41 - 138
Carbon Tetrachloride	20	98	43 - 143
Bromodichloromethane	20	98	42 - 172
1,2-Dichloropropane	20	103	44 - 156
1,3-Dichloropropene-Trans	20	114	22 - 178
Trichloroethene	20	95	35 - 146
1,3-Dichloropropene(Cis)	20	111	22 - 178
Dibromochloromethane	20	115	24 - 191
1,1,2-Trichloroethane	20	92	39 - 136
2-Chloroethylvinyl Ether	20	NA	14 - 186
Bromoform	20	99	13 - 159
1,1,2,2-Tetrachloroethane	20	126	8 - 184
Tetrachloroethene	40	93	26 - 162
Chlorobenzene	40	100	38 - 150
1,3-Dichlorobenzene	40	99	7 - 187
1,2-Dichlorobenzene	40	104	D - 208
1,4-Dichlorobenzene	40	96	42 - 143
Benzene	20	71	39 - 150
Toluene	20	69	46 - 148
Ethylbenzene	20	67	32 - 160
Total Xylene (o,m,p)	20	70	47-135

NA - Not Added

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R92/04628 Date: NOV. 17 1992

Client:
Ms. Gina Oliverio
Malcolm Pirnie, Inc.
So. 3515 Abbott Road
Buffalo, NY 14219

Sample(s) Reference:
Palmer St. Facility

Received : 10/28/92 P.O. #:

ANALYSIS * BY GC METHOD 8020 ANALYTICAL UNITS - ug/l

Sample:	-013	-014
Location:	LAB METH BLANK	LAB METH BLANK
Date Collected:	--	--
Time Collected:	--	--
Date Analyzed:	10/30/92	11/02/92
Methyl Ethyl Ketone	20 U	20 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

15

General Testing Corporation

A Full Service Environmental Laboratory

3A - WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: General Testing Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No. : R92/04628 -001

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	MS CONCENT. (ug/l)	MS % REC #	QC LIMITS REC.
Methyl Ethyl Ketone	157	0.0	179	110	50-150

COMPOUND	SPIKE ADDED (ug/l)	MSD CONCENT. (ug/l)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methyl Ethyl Ketone	157	168	107	7	30	50-150

Columns to be used to flag recovery and RPD values with an asterik

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III VOA-1
NYSDEC B-85

General Testing Corporation

GTC REPORT # R92/4628

SECTION C

FIELD DOCUMENTATION

Presented in this section is all support documentation requested.

Documentation Provided:

(X) Chain of Custody Forms

( ) Analytical Request Forms

( ) Shipping Receipts

( ) Laboratory Receipt Log

( ) Other:

GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street, Rochester, NY 14608 | 85 Trinity Place, Hackensack, NJ 07601 | 435 Lawrence Bell Drive, Amherst, NY 14221-7077

GTC Job No. R92/4628
Client Project No. 0665232

Sample Origination & Shipping Information

Collection Site X PALMER ST LANDFILL

Address X

Collector X DENNIS MALUCCI (Print) — Street, City, State, Zip — Dennis Malucci (Signature)

Bottles Prepared by GTC-VG. Rec'd by Client

Bottles Shipped to Client via Click Seal/Shipping #

Samples Shipped via Click. Seal/Shipping #

Sample(s) Relinquished by:

	Relinquished by	Received by:	Date/Time
1.	Sign X Dennis Malucci	Sign K Hogan	10/28/92
	for X	for GTC	8:55
2.	Sign	Sign	/ /
	for	for	:
3.	Sign	Sign	/ /
	for	for	:

Sample(s) Received in Laboratory by [signature] 10/28/92 @ 12:12

	Client I.D.#	Sample Location / Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep Preserved Y	Preserved N	Filtered Y	Filtered N	Bottle Set(s) (see below)
1	(QC)	MW-3 DR 10/27/92 10:41	W	8010/8020, 8015 mEK					1 (but 5)
2		MW-1 10/26/92 11:34	W						1
3		MW-7D 10/26/92 14:35	W						
4		MW-5 10/27/92 14:10	W						
5		MW-7S 10/27/92 14:05	W						

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	3										

Additional Analytes 18

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), _____(X), _____(Y).

GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street, Rochester, NY 14608 | 85 Trinity Place, Hackensack, NJ 07601 | 435 Lawrence Bell Drive, Amherst, NY 14221-7077

GTC Job No. R92/4628
Client Project No. 0695232

Sample Origination & Shipping Information

Collection Site K PALMER ST.
Address K
Collector K DENNIS MACUCCI (Print) — Street / City / State / Zip — Dennis Macucci (Signature)

Bottles Prepared by GTC-VG
Bottles Shipped to Client via Click
Samples Shipped via Y

Rec'd by Client
Seal/Shipping #
Seal/Shipping #

Sample(s) Relinquished by:

		Received by:		Date/Time
1. Sign	K Dennis Macucci	1. Sign	K Scogy	10/28/92
for	K	for	GTC	8:55
2. Sign		2. Sign		/ / :
for		for		
3. Sign		3. Sign		/ / :
for		for		

Sample(s) Received in Laboratory by _____ 10/28/92 @ 12:12

	Client I.D.# / Lab#	Sample Location / Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep Preserved Y	Preserved N	Filtered Y	Filtered N	Bottle Set(s) (see below)
1	R92/4628-001	MW-3 10/27/92 10:09	W	8010/8020, 8015 MEK					1
2	R92/4628-002	MW-6 10/27/92 13:43	W						
3	R92/4628-003	BS-1 10/27/92 11:55	R						
4		/ / :		VOA					
5									

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	3										

Additional Analytes 19

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), _____ (X), _____ (Y).

GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street, Rochester, NY 14608 | 85 Trinity Place, Hackensack, NJ 07601 | 435 Lawrence Bell Drive, Amherst, NY 14221-7077

GTC Job No. R92/4628

Client Project No. 0605232

Sample Origination & Shipping Information

Collection Site X PALMER ST.

Address X (Street / City / State / Zip)

Collector X DENNIS MANUCCI (Print) Dennis Malone (Signature)

Bottles Prepared by GTC-VG. Rec'd by Client

Bottles Shipped to Client via Client Seal/Shipping # ____

Samples Shipped via X Seal/Shipping # ____

Sample(s) Relinquished by:

	Relinquished by:	Received by:	Date/Time
1.	Sign X Dennis Malone	Sign K Vogel	10/28/92
	for X	for GTC	8:55
2.	Sign	Sign	/ /
	for	for	:
3.	Sign	Sign	/ /
	for	for	:

Sample(s) Received in Laboratory by _____ 10/28/92 @ 12:12

	Client I.D.# / Lab #	Sample Location / Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep Preserved Y	Sample Prep Preserved N	Sample Prep Filtered Y	Sample Prep Filtered N	Bottle Set(s) (see below)
1	R92/	EQUIPMENT BLANK		8010/8020,					1
		10/27/92 11:40		8015-MEK					
2	R92/	MW-8D	W						
		10/26/92 11:54							
3		/ / :							
4	R92/4	BS-3	R						
		10/27/92 11:12							
5	R92/4	Trip Blank							
		10/27/92							

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.		
# of each	3										

Additional Analytes 20

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), _____ (X), _____ (Y).