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Superfund - HW
Spills - SP
ERP - E
VCP - V
BCP - C

MOENCH COMPANY
DIVISION OF CALERES*5*
465 PALMER ST.
GOWANDA, NEW YORK 14070
PHONE: 716-532-2201

✓Mr. Stanley F. Radon CHMM, CPG
NY State Dept. of Environmental Conservation
Division of Solid & Hazardous Waste
270 Michigan Ave.
Buffalo, New York 14203-2999

April 20, 2016

RE: Palmer St. Landfill, Groundwater Quality; March 2016 sample.

Mr. Radon:
Enclosed is the Groundwater Quality Report for our Palmer St. Landfill, March 2016 sample. A PDF file has also been forwarded to yourself. An electronic report "EDD" will be submitted by GEI Consultants.

As usually, there was insignificant detection of metals & VOCs in this sample. Acetone was detected in the Alpha Lab "trip blank". Acetone is a common Lab contaminant, and a guidance value parameter. It was also detected at MW-3D, and MW-4sr.

We accidently filled the metals bottle, prior to filtering it, at MW-6D. This resulted in a "total Metals" reading. I kept it that way, as an information event, rather than submitting another filtered sample. We have 25 years of historical data, as "filtered. Arsenic was evident, but is in the natural ground. This was the only metal detected.

The Village of Gowanda, has finally stopped using the deep Aquifer as a water supply, and is using spring water. They have received funding to rehabilitate the reservoir. This is reflected in the Bedrock water level graphs, in the report.

Please call me if you have any questions, and stop in if you are in the area.

Sincerely,

Jeffrey Smith
Site Manager

Alecia Jaruzel-Caleres *5*
St. Louis, Mo
Richard Frappa-GEI Consultants
Amherst, NY
Emily Schultz-_Caleres *5*
St. Louis, Mo
(summaries only)

MOENCH COMPANY
DIVISION OF CALERES*5*
465 PALMER ST.
GOWANDA, NEW YORK 14070
PHONE: 716-532-2201

PALMER ST. LANDFILL; APRIL 19, 2016

GROUNDWATER QUALITY MONITORING REPORT.

MARCH 23, 2016, MONITORING EVENT.

FIRST OF TWO SAMPLES FOR 2016

RECEIVED
APR 21 2016
NYS DEC
REGION 9

Jeffrey Smith
Site Manager

PALMER STREET LANDFILL - MOENCH COMPANY.
GROUNDWATER MONITORING REPORT FOR MARCH 2016, SAMPLING EVENT.

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1.0 INTRODUCTION

1.1 BACKGROUND-LANDFILL.

THE MOENCH COMPANY, A DIVISION OF BROWN SHOE CO., AND 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(APPROX), THROUGH JULY 1983, LIES IMMEDIATELY SOUTHWEST OF THE (FORMER) TANNERY COMPLEX ON AN APPROXIMATELY 25-ACRE, PARCEL OF LAND. A VARIETY OF WASTE 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, THE CLOSURE/POST CLOSURE PLAN(REFERENCE 1), IS BEING PERFORMED. THE LONG-TERM POST CLOSURE MONITORING PROGRAM HAS BEEN APPROVED & IMPLIMENTED.(JULY 1993, REVISED MARCH 1994, MARCH 2001 & DECEMBER 2006).

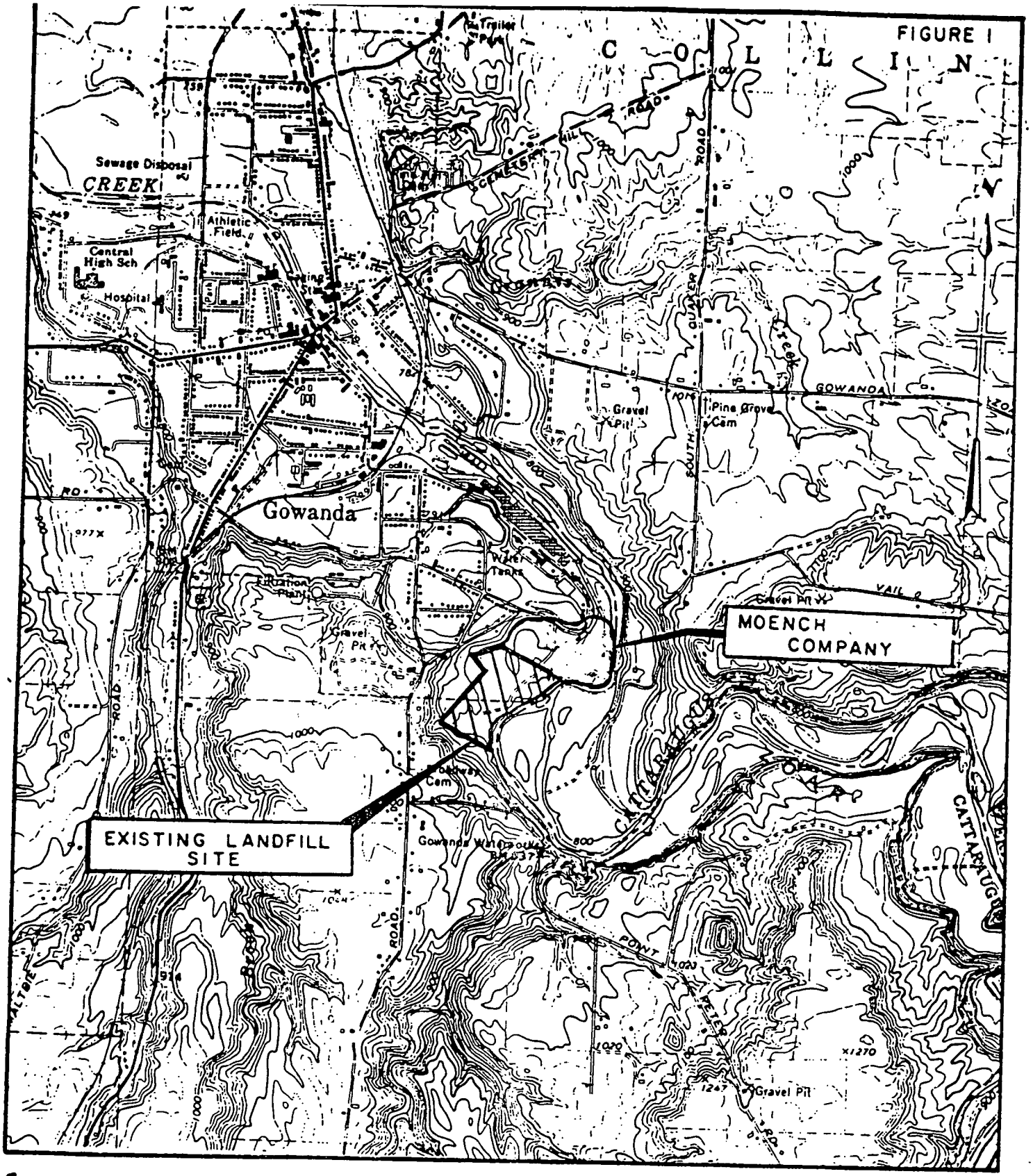
IN JULY OF 2006, A PROPOSAL WAS MADE TO THE NEW YORK STATE DEPT. OF ENVIRONMENT CONSERV.(NYSDEC), TO RECONFIGURE THE GROUNDWATER MONITORING SYSTEM(REF#7).
THIS WAS AGREED UPON IN EXCHANGE FOR THE ELIMINATION OF THE FIVE YEAR "COVER SYSTEM EVALUATION". THE NEW MONITORING SYSTEM IS DESCRIBED IN SECTION 2.0

1.2 PURPOSE AND SCOPE

SAMPLES ASSOCIATED WITH THE FIRST EVENT OF TWO, WATER QUALITY MONITORS, FOR 2016 YEAR, WERE COLLECTED ON MARCH 23,2016.

SAMPLES WERE OBTAINED ONLY BANK SEEP #3, OF THE THREE BANK SEEPS. NO SEEPS EXISTED AT BS-1 & BS-2.

SITES MW-5 & MW-3 WERE DRY,OR OF MINIMAL VOLUME, AND NO SAMPLE OBTAINED.



{FIGURE 1}

Lat. 42°, 27'0"
Long. 78°, 55'30"

NOTE:
TOPOGRAPHY TAKEN FROM 1963 GOWANDA, N.Y.
U.S.G.S. QUADRANGLE 7.5 MIN. SERIES
SCALE: 1" = 2000'

NEW YORK
QUADRANGLE LOCATION

SITE LOCATION MAP
PALMER STREET LANDFILL
GOWANDA, N.Y.

6-94

MOENCH Co.

2.0 MONITORING SYSTEM(RECONFIGURED 7/06)

THE RECONFIGURED GROUNDWATER MONITORING SYSTEM FOR THE PALMER STREET LANDFILL(FIG. 2), CONTAINS NINE(9) MONITORING WELLS AND THREE(3) BANK SEEPS. A REVISED POST CLOSURE PLAN, DESCRIBING THE DETAILS, WAS SUBMITTED TO THE NYSDEC 9, IN JANUARY 2007.

UPGRADIANT WELLS	OVERBURDEN/WASTE WELLS	BEDROCK WELLS
	MW-3	MW-3D
MW-7D	MW-4SR	MW-4D
MW-8D	MW-5	MW-6D
	MW-6	

IN ADDITION TO THE WELLS, NYSDEC ALSO REQUIRES THE MONITORING OF THREE (3) BANK SEEPS DESIGNATED AS BS-1, BS-2 AND BS-3, RESPECTIVELY. THE ABILITY TO OBTAIN SAMPLES FROM THESE BANK SEEPS IS SPORADIC DUE TO VARYING WEATHER/MOISTURE CONDITIONS. A BANK SEEP SAMPLE WAS OBTAINED ONLY FROM BS-3. THERE WERE NO CREEK SAMPLES TAKEN IN PLACE.

MW-8D IS DOWN GRADIENT FROM GERNATT'S GRAVEL WASHING OPERATION, SETTLING PONDS.

TO AID IN THE EVALUATION OF COVER PERFORMACE, WATER LEVELS FROM FIVE (5) INFILTROMETERS ARE ALSO MONITORED. LOCATIONS OF MONITORING POINTS ARE SHOWN ON FIGURE 2. THE RESULTS CONTINUE TO INDICATE THAT THE COVER SYSTEM IS PERFORMING AS PLANNED. THESE SHOWED MINIMAL INFILTRATION FOR THIS SAMPLING EVENT; TABLE #4.

THE VILLAGE IS BACK TO USING SURFACE RUNOFF SO THAT THE WATER LEVEL AT MW-1D IS BACK TO NORMAL.

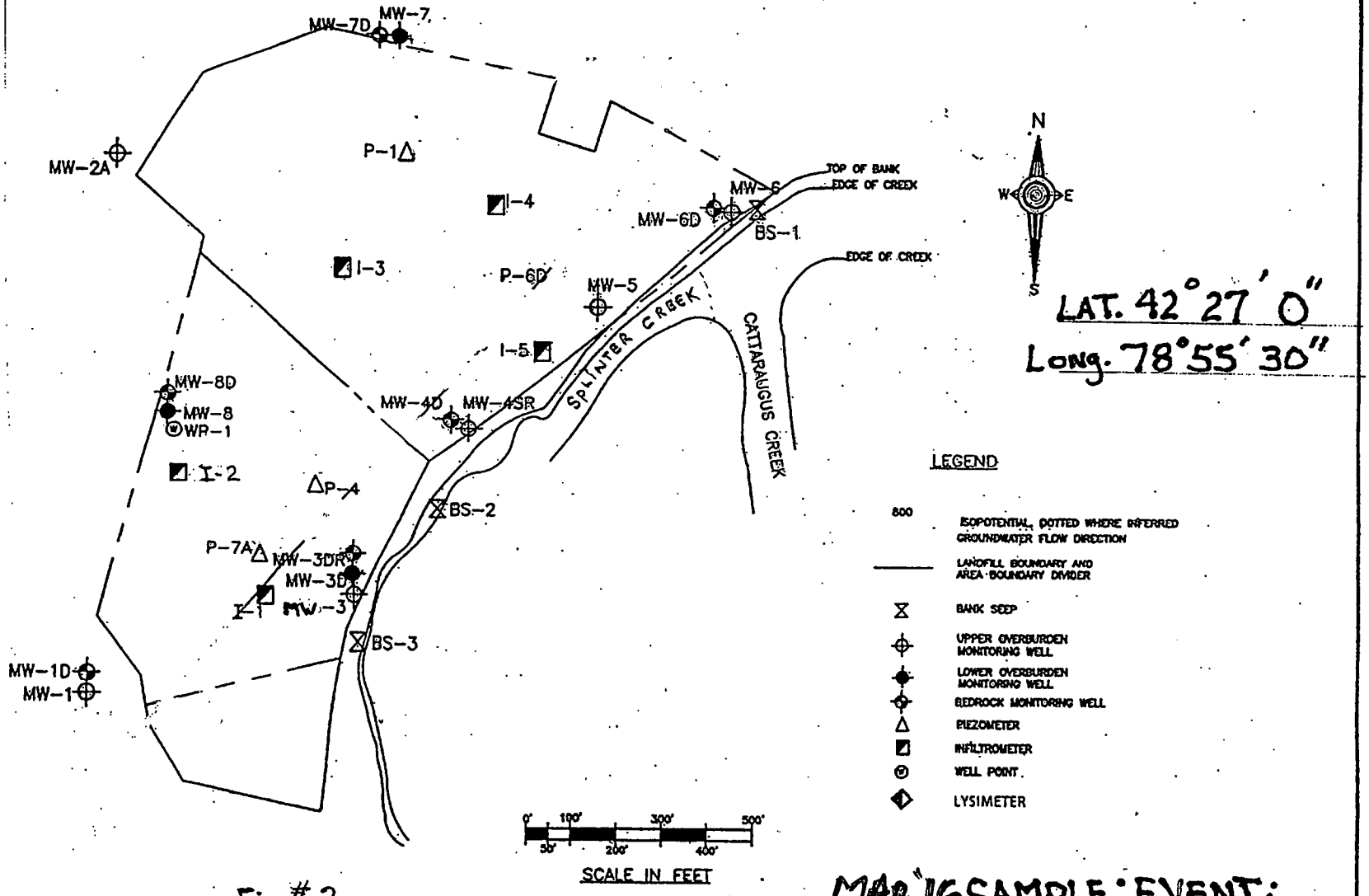


Fig. # 2

MAR '16 SAMPLE EVENT:

GEI Consultants, Inc. Williamsville, NY	PALMER STREET LANDFILL SITE PLAN	DATE: DEC '11	PROJ. NO. 8104
		FILE NO. N/A	DWG. NO. FIGURE 1.2

REVISED DEC '11

3.0 MONITORING METHODS

3.1 GROUNDWATER MONITORING -LANDFILL

SAMPLES COLLECTED DURING THE MARCH 23, 2016, MONITORING EVENT PERIOD, WERE COLLECTED BY MOENCH COMPANY PERSONNEL, AND ANALYZED BY ALPHA ANALYTICAL, TONAWANDA, NEW YORK. THE ANALYSIS IS PERFORMED IN ACCORDANCE WITH THE SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR THE PALMER STREET LANDFILL (REFERENCE 3). LABORATORY ANALYSIS WERE PERFORMED IN ACCORDANCE WITH THE USEPA 200.7 FOR METALS & VOC 8260. THE MONITORING PARAMETERS ARE LISTED IN TABLE 1. SAMPLES WERE NOT AVAILABLE FROM TWO WELLS AND TWO BANK SEEPS, 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. GROUNDWATER ELEVATIONS WERE ALSO MEASURED IN THE PIEZOMETERS, INFILTROMETERS, AND WELLS ON-SITE.

FIELD SAMPLES WERE COLLECTED AND MEASURED FOR THE FIELD PARAMETERS IDENTIFIED IN TABLE 1. THE FIELD MEASUREMENTS ARE SUMMARIZED IN TABLE #3.....

3.2 INFILTROMETER MONITORING

FIVE INFILTROMETERS HAVE BEEN INSTALLED BENEATH THE LANDFILL CAP TO AID IN THE ASSESSMENT OF PERFORMANCE OF THE CAP. DURING EACH SAMPLING EVENT, WATER LEVELS IN THE INFILTROMETER ARE MEASURED AND THE AMOUNT OF WATER INFILTRATING CALCULATED.
NOTE: IT IS BELIEVED THAT INFILTROMETER #1, IS OFTEN FLOODED DUE TO NEIGHBORING SPRINGS AND GRAVEL SETTLING PONDS. THIS CREATES A HIGH WATER TABLE, IN THE SOUTH END OF AREA #2.

A SCHEMATIC SHOWING THE DESIGN AND DIMENSIONS OF THE INFILTROMETERS IS PRESENTED IN APPENDIX "B".

TABLE 1

MOENCH TANNING COMPANY
PALMER STREET LANDFILL

MONITORING PARAMETERS *Twice/year

Soluble Arsenic[1]
Soluble Chromium[1]
Soluble Lead[1]

Volatile Organics[2][3]

pH[4]
Specific Conductance[4]
Turbidity[4] – VISUAL
Groundwater Elevation[4]
Temperature[4]
Odor[4]
Sample Appearance[4]

Notes:

1. *All samples collected for analysis of soluble metals are pressure-filtered in the field immediately upon sample collection.*

2. *The list of VOC analytes are those compounds included in SW-846, Method 8260.*

3. *Analysis for VOCs are not performed on pore water samples during performance monitoring events.*

4. *Field parameters (i.e., pH, specific conductance, temperature and turbidity) are measured in the field by sampling personnel. Laboratory analysis of these parameters will not be required.*

MOENCH COMPANY
465 PALMER ST.
GOWANDA, NY 14070

SAMPLERS Mike Best

PALMER STREET LANDFILL :

DATE 3/16/16

GROUNDWATER ELEVATIONS: (TABLE #2)

WP. WHALE pump - DEDICATED

WELL #	ELEVATION TOP OF PVC(FT)	TOTAL DEPTH FROM TOP OF PVC(FT)	WATER DEPTH(FT) FROM TOP OF PVC	WATER(FT) ELEVATION
MW-1	826.05 ASL	31.90 (8-12)	4.15	821.90
MW-1D	827.82	188.20 "	29.50	798.32
MW-2A	810.62	16.15 "	2.85	807.77
MW-3	810.81	17.10 "	15.70	795.11
MW-3D	810.73	67.70 "	22.80	787.93
MW-3DR	810.47	102.30 "	22.85	787.62
MW-4 SR	806.75 WP	24.92 "	12.15	794.60
MW-4D	805.93	74.94 "	17.45	788.48
MW-5	805.35	18.15 "	Dry	
MW-6	800.48 WP	18.78 "	14.55	785.93
MW-6D	800.63	37.03 "	17.60	783.03
MW-7	800.50	30.60 (8-12)	6.90	793.60
MW-7D	800.39	41.90 "	5.85	794.54
MW-8	821.82	15.96 "	Dry	
MW-8D	821.89 WP	126.80 (7/15)	32.50	789.39

INFILTROMETERS:

#1	9.00	4.30	
#2	8.80	7.20	
#3	9.00	6.80	
#4	8.92	6.35	
#5	9.00	7.10	

(TABLE #2) continued

Palmer st. Landfill

GROUNDWATER ELEVATIONS:

smpl date 3/16/16

WELL #	ELEVATION TOP OF PVC(FT)	TOTAL DEPTH FROM TOP OF PVC,(FT)	WATER DEPTH(FT) FROM TOP OF PVC	WATER (FT) ELEVATION
P-1	811.85 ASL	18.30 (8/12)	16.50	795.35
P-4	813.54 "	19.70 "	15.20	798.34
P-6D	810.30 "	61.25 "	19.70	790.60
P-7A	816.92 "	23.90 "	19.50	797.31
WP-1	822.16 "	11.71 by MW 8	8.50	813.66

NOTE:

Aug 2012 ALL WELLS "DEVELOPED"

REV'd 9/12

~~Revised 2/12~~

4.0 GROUNDWATER QUALITY MONITORING RESULTS:

4.1 EVALUATION OF GROUNDWATER ELEVATION DATA:

GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN AT EACH OF THE ACCESSIBLE ON-SITE MONITORING WELLS, PIEZOMETERS, AND WELL POINTS, DURING THE MARCH 2016, MONITORING EVENT. THE DATA ARE SUMMARIZED IN TABLE 2/3.

PLOTS OF THE GROUNDWATER ELEVATIONS MEASURED IN THE MONITORING WELLS WITH RESPECT TO TIME ARE PRESENTED IN FIGURE 3,4, AND 5, FOR THE SHALLOW OVERBURDEN, DEEP OVERBURDEN AND BEDROCK WELLS, ON THE LANDFILL, RESPECTIVELY. AS SHOWN IN FIGURES 3 AND 4, OVERBURDEN GROUNDWATER ELEVATIONS WERE GENERALLY CONSISTENT, THROUGHOUT THE MONITORING PERIOD. WATER LEVELS HAVE STABLIZED, AFTER THREE YEARS OF INCREASES.('92-'94). THIS OCCURRED DUE TO CESSATION OF VILLAGE AND TANNERY PUMPING OF THE DEEP AQUIFERS. SOME SLIGHT SEASONAL FLUCTUATION DOES OCCUR. IN AUGUST, 2009, A DRAMATIC FLOOD OCCURRED IN THE GOWANDA AREA, THAT DISABLED THE VILLAGE RESERVIOR FOR AN EXTENDED TIME. VILLAGE IS AGAIN USING ITS' DEEP WELL FOR WATER.

4.2 THE GROUNDWATER AND SURFACE WATER QUALITY RESULTS FOR THE MARCH 2016, MONITORING EVENTS, AT THE PALMER STREET LANDFILL, ARE PRESENTED IN TABLES #3 THROUGH #5.

. "GA" STANDARDS & GUIDANCE VALUES ARE ALSO PRESENTED.

BOTH THE SOIL AND WASTE AT THE PALMER STREET LANDFILL CONTAIN METALS-OF-INTEREST AS A COMPONENT OF THE SOIL OR WASTE PARTICLES (REFERENCE 5). THEREFORE, THE SEDIMENT (OR TURBIDITY) CONTENT OF ANY GROUNDWATER OR SURFACE WATER QUALITY SAMPLES WILL DIRECTLY IMPACT THE TOTAL METAL CONCENTRATION OF THE SAMPLES. THE TURBIDITY CONTENT OF THE GROUNDWATER 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 NO LONGER SAMPLED FOR GROUNDWATER QUALITY STANDARDS OR EVALUATIONS, OF GROUNDWATER QUALITY IMPACTS WILL BE BASED ON SOLUBLE METAL CONCENTRATIONS.

ALSO, BARIUM IS NO LONGE ANALYZED FOR DUE TO ITS' NATURAL PRESENCES IN THE NATIVE SOIL, AT HIGH CONCENTRATIONS.

I SHOULD BE NOTED THAT SEVERAL ON THE "ADDED" MONITORING WELL, ARE SCREENED IN THE WASTE. SUMMARY OF THE SAMPLING RESULTS IS AS FOLLOWS:

--THERE WAS NO DETECTION OF ANY FILTERD METALS ABOVE THE CLASS "GA" STANDARDS.
-- WE NEGLETED TO FILTER MW-6 BUT WANTED TO SEE RESULTS FOR TOTAL METALS ARSENIC EXCEEDED CLASS GA STANDARDS.
--THERE WERE NO DETECTIONS OF ANY VOCs, AT ANY SAMPLE LOCATION, EXCEPT A SLIGHT ACETONE DETECTION AT MW4SR & MW-3D.
---ACETONE WAS DETECTED IN TRIP BLANK
--Ph CONTINUES TO BE BELOW "NEUTRAL" AT MW-4S AND MW-6.

TABLE 3

MOENCH COMPANY
PALMER STREET LANDFILL
MAR. 23, 2016 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

INITIAL

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity NA	Sample Appearance	Sample Odor
* MW-3	3/23/16	10:10	NO Sample		Dry	NA	—	—
*** MW-3D	3/23/16	10:10	12.5	8.15	446	"	Clear	NO
* MW-4SR	3/23/16	9:00	10.9	6.67	750	"	Black	Organics
*** MW-4D	3/23/16	9:45	12.6	8.10	690	"	Clear	NO
* MW-5	"	—	NO	Sample -	Dry)	"	—	—
* MW-6	3/23/16	8:15	13.1	6.50	1500	"	Black	NO
*** MW-6D	3/23/16	8:07	13.9	8.10	1100	"	Clear	NO
*** MW-7D	3/23/16	11:20	9.3	8.10	650	"	Clear	NO
** MW-8D	3/23/16	10:45	12.2	8.10	540	"	Clear	Slight
BS-1	3/23/16	8:50	(No sample -		no seep)	"	—	—
BS-2	3/23/16	10:10	(No	Sample -	No seep)	"	—	—
BS-3	3/23/16	10:31	9.0	7.01	800	"	Red-Iron	NO

6.5-8.5 (Std)

NOTES:

(1) Conductivity readings corrected to 25°C.
(2) Blind Duplicate MW-4D
(3) MW-7D is apparent hydraulically upgradient bedrock well.

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

TABLE 4

MOENCH COMPANY
PALMER STREET LANDFILL
MAR. 23 MONITORING EVENT
2016
INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft) 3-23-16	Static Water Level (ft) 7-14-15	Δ Depth – gal. (ft)	# Days Between Readings (#)	Infiltration Rate gal/day.ft²	Infiltration Rate (cm/sec)	Approx. Total Rainfall This Period (ft)	Infiltration (%)
I-1 Ⓐ	4.30	4.67	.37' – 3.1g	253	.0005	2.4×10^{-8}	3.32	2.0 %
I-2	7.20	7.20	—	—	—	—	—	—
I-3	6.80	6.19	NEG.	—	—	—	—	—
I-4	6.35	6.98	.63' – 5.3g	253	.0008	3.8×10^{-8}	3.32	3.4 %
I-5	7.10	6.95	NEG	—	—	—	—	—

Note:
** Negative ΔD precludes calculation of meaningful data.

Ⓐ I-1 OFTEN FLOODED BY NATURAL SPRINGS + WASH PONDS, UPGRADIENT.

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
3/23/16 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

	Quantitation Limit	** MW-3	MW-3D	** MW-4SR	MW4D	** MW-5	** MW-6	MW-6D	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	Dry	ND	.007	ND	Dry	.069	ND	.025mg/l
Chromium - Soluble	0.005	ND	ND	.01	ND	ND	ND	ND	.05
Lead - Soluble	0.005	Sample	ND	ND	ND	Sample	ND	ND	.025
VOLATILES mg/L		—	ND		ND		ND	—	
ACETONE		—	.330	.250	"	—	"	.064	GUID. VALUE = .05mg/L
		—	—		"	—	"	—	
		—	—		"	—	"	—	
						—	"		

** Screened in Waste/Overburden.

Blind Duplicate_____

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

MW-4D

	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-2	BS-3	Blind Duplic		Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	ND	ND	ND	No	.006	ND		.025mg/l
Chromium - Soluble	0.005	ND	ND	Bank	Bank	ND	ND		.05
Lead - Soluble	0.005	ND	ND	seep	Seep	ND	ND		.025

Volatiles mg/L		ND	ND	—	—	ND	ND		
ACETONE		"	"	—	—	"	—		GUID. VALUE = .05 mg/L
		"	"	—	—	"	—		
		"	"	—	—	"	—		
		"	"	—	—	"	—		

5.0 GROUNDWATER FLOW

A WATER TABLE ISOPOTENTIAL MAP, BEDROCK ISOPOTENTIAL MAP AND A BEDROCK WATER LEVEL HYDROGRAPH HAVE BEEN PREPARED FOR THE PALMER STREET LANDFILL AND ARE PRESENTED IN FIGURES 3,4 AND 5, RESPECTIVELY. GROUNDWATER ELEVATIONS MEASURED ON MARCH 16, 2016. WERE USED IN PREPARING THE WATER TABLE AND BEDROCK ISOPOTENTIAL MAP. THEY INDICATE THAT THE SHALLOW GROUNDWATER FLOW IS PRIMARILY TO THE EAST, TOWARD CATTARAUGUS CREEK. THE BEDROCK ISOPOTENTIAL MAP AND THE BEDROCK WATER LEVEL HYDROGRAPH ILLUSTRATE A "LEVELING OFF" AFTER 3 YEARS('92-94) OF RISING GROUNDWATER LEVELS AT WELLS MW-1D, MW-3DR AND MW-8D. MW-1D AND MW-8D, WHICH WERE FORMERLY(BEFORE '92) DOWNGRADIENT WELLS, ARE NOW UPGRADIENT OF THE LANDFILL.

THE VILLAGE IS ONCE AGAIN USING THE SURFACE RUNOFF FOR A WATER SOURCE INSTEAD OF THE DEEP AQUIFER WHICH IN TURN BROUGHT WATER LEVELS IN MW-1D BACK TO NORMAL.

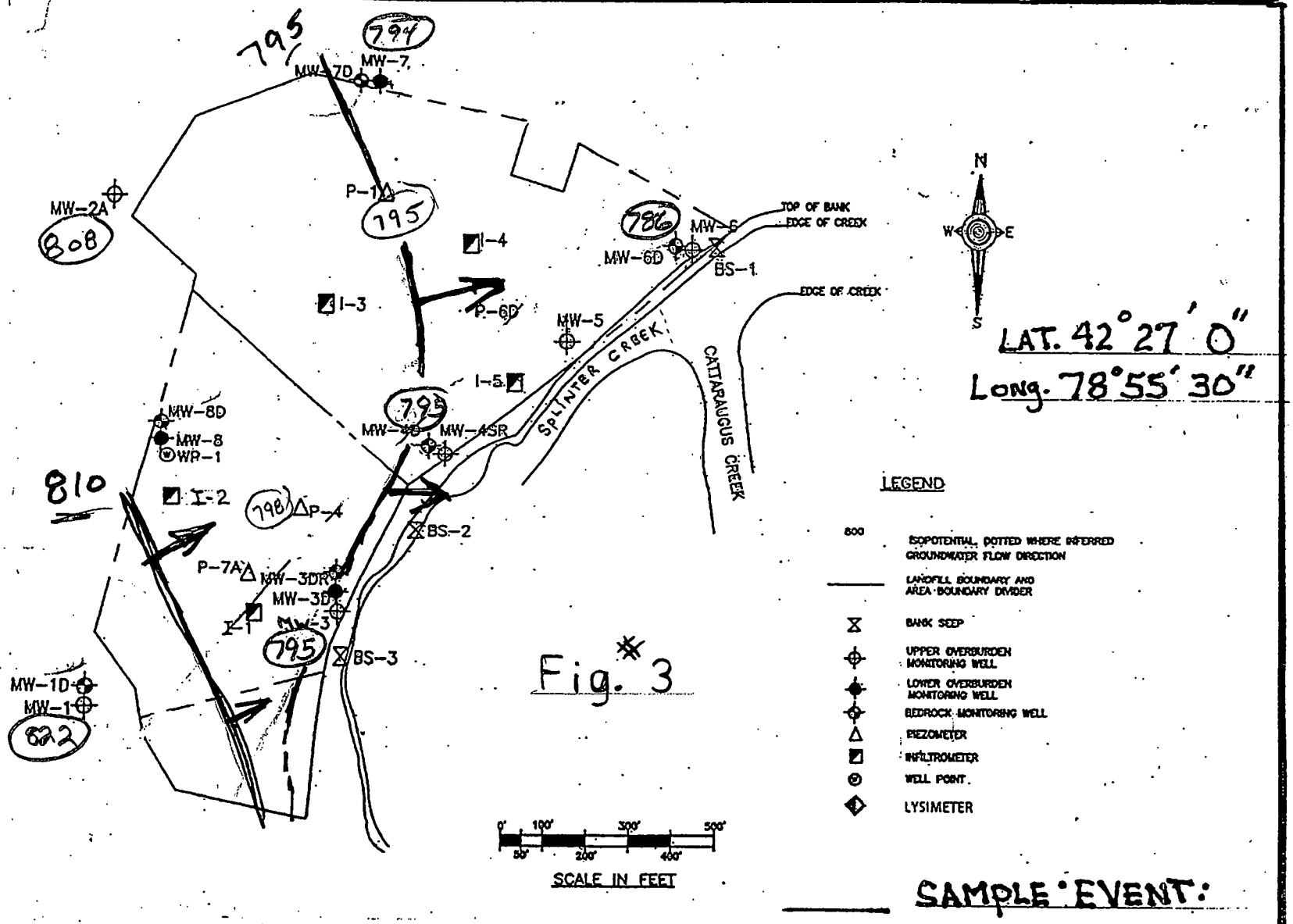


Fig. 3

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

WATERTABLE ISOPOTENTIAL MAP.

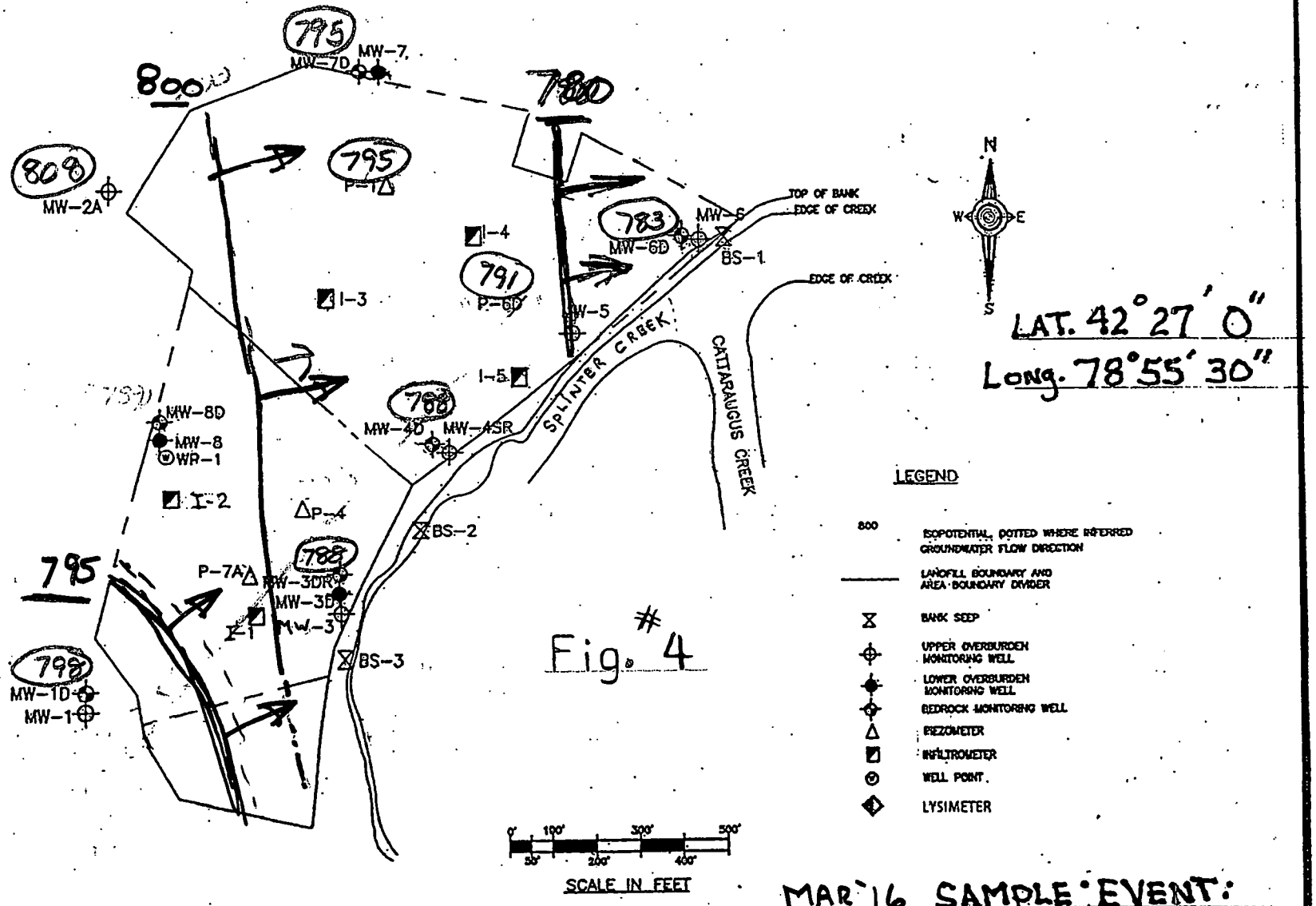


Fig. #4

MAR '16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

BEDROCK ISOPOTENTIAL MAP.

PALMER STREET LANDFILL
MOENCH COMPANY
GROUNDWATER ELEVATION vs TIME
BEDROCK MONITOR WELLS & PIEZOMETERS

(FIG.#5)

Apr. 2016
FIG. #5

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Oct-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
MW-3DR	773	773	773	773	772	775	787	775	777	777	778	783	788	789	792	794	797	797	799	799	800	800	799	798
MW-7D	795	794	794	795	795	794	794	795	793	792	792	793	793	792	790	793	792	791	793	794	794	793	794	795
MW-8D	766	766	767	767	763	770	773	771	773	772	776	786	790	794	796	798	802	803	804	804	805	805	804	805
MW-1D					743	762	765	752	756	758	776	795	798	801	802	807	811	810	810	813	814	809	810	812
MW-6D					783	781	787	781	781	781	782	782	781	781	781	782	784	780	782	782	784	781	781	779
P-6D					790	790	790	790	790	790	790	789	789	789	789	789	789	785	789	789	789	790	790	788

PLMRGW3.xlsx.xls

Apr. '16
(FIG #5)
Fig. #5
Apr. '16

	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar-01	Aug-01	Apr.-02	Aug.-02	Mar. '03	Aug. '03	MAR. '04	AUG. '04	Apr. '05	Aug. '05
MW-3DR	801	800	801	801	802	802	803	799	799	801	801	801	802	803	803	800	803	803	802	803	804	803	803	803
MW-7D	795	794	794	795	795	796	796	795	795	795	795	795	795	795	797	796	796	796	796	796	797	796	796	796
MW-8D	805	805	805	806	807	808	809	800	803	805	807	806	808	808	809	808	809	809	808	809	809	809	809	809
MW-1D	813	813	814	815	816	816	818	795	806	813	818	814	816	816	818	817	819	819	817	818	818	819	818	819
MW-6D	782	782	783	782	782	783	782	781	782	783	781	781	783	783	783	782	783	782	784	782	783	780	784	782
P-6D	790	790	791	791	791	791	792	792	790	791	791	791	792	792	792	792	793	793	793	792	793	792	792	792

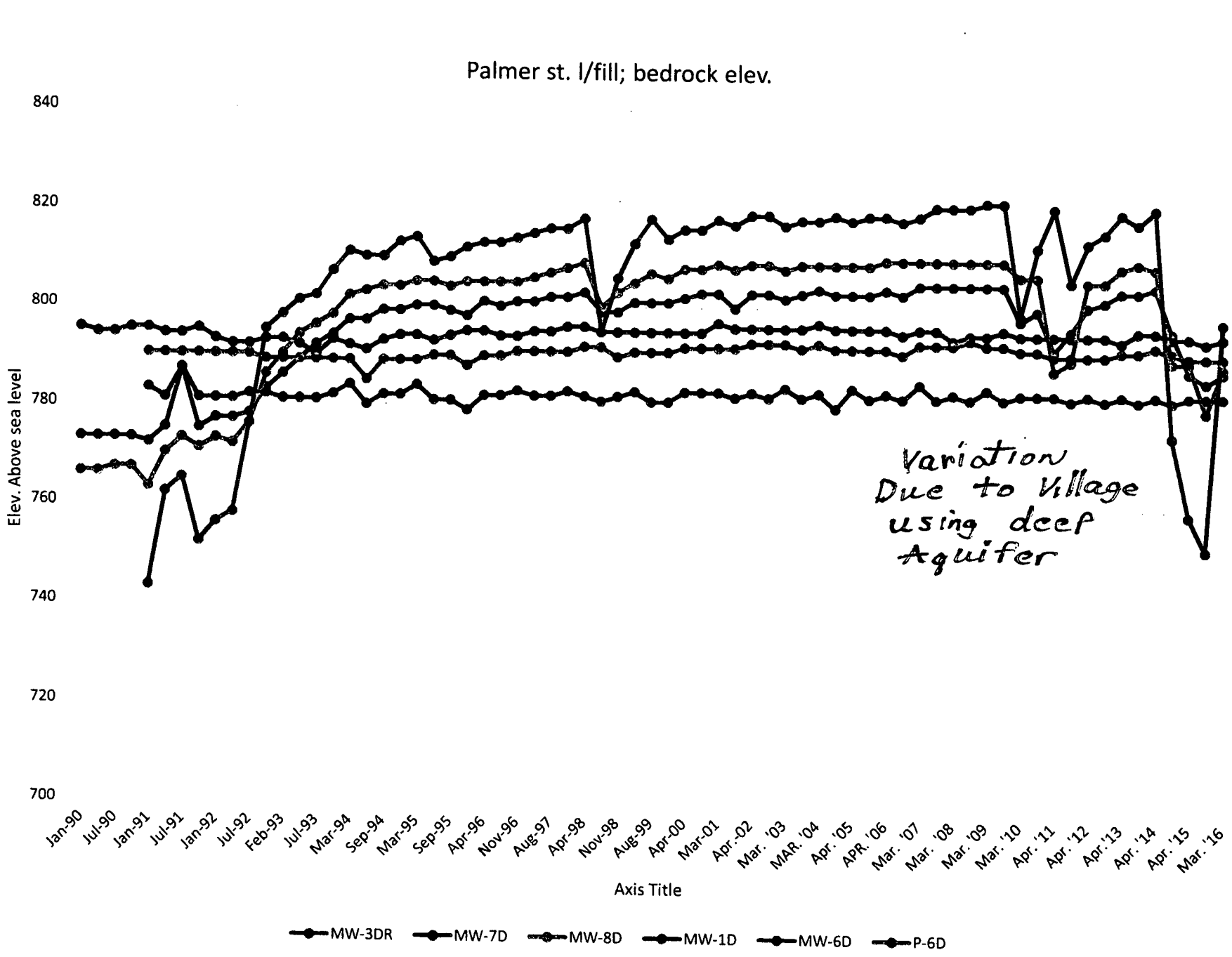
PLMRGW3.xlsx.xls

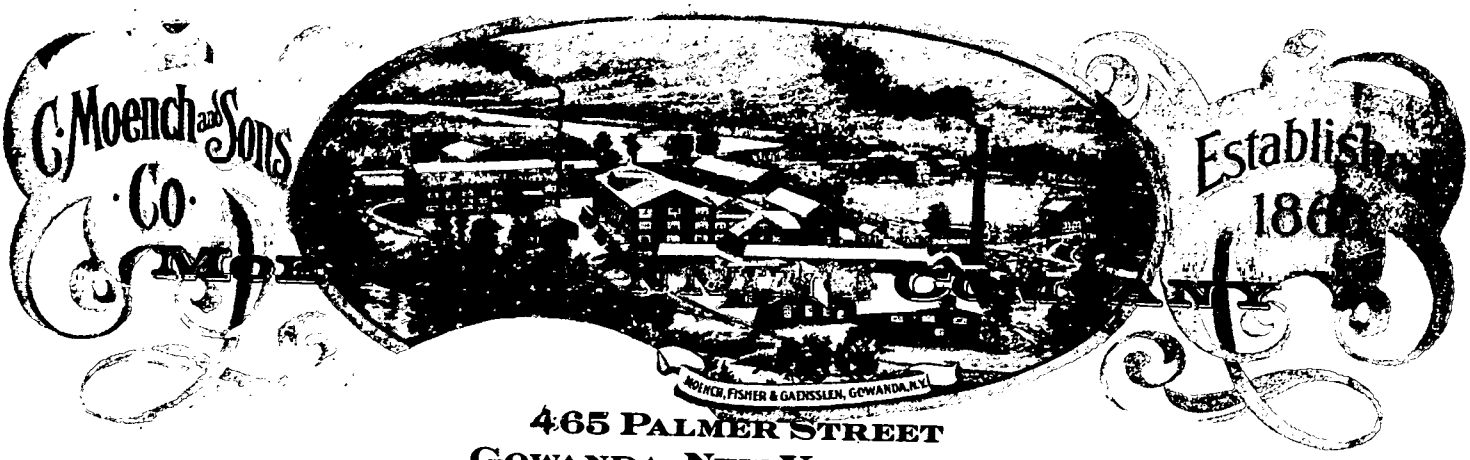
FIG. #5

	APR. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	Aug. '10	Apr. '11	Aug. '11	Apr. '12	Aug.'12	Apr.'13	July '13	Apr. '14	Aug. '14	Apr. '15	Aug. '15	Mar. '16
MW-3DR	804	803	805	805	805	805	805	805	798	800	792	796	801	802	804	804	805	796	788	786	788
MW-7D	796	795	796	796	794	795	795	796	795	795	795	795	795	795	794	796	796	795	795	794	795
MW-8D	810	810	810	810	810	810	810	810	807	807	788	790	806	806	809	810	809	790	790	780	789
MW-1D	819	818	819	821	821	821	822	822	798	813	821	806	814	816	820	818	821	775	759	752	798
MW-6D	783	782	785	782	783	782	784	782	783	783	783	782	783	782	783	782	783	782	783	783	783
P-6D	792	791	793	793	793	794	793	793	792	792	791	791	791	791	792	792	793	792	791	791	791

**MW-8D depth measured at MW8, after April 2011

***Village using deep aquifer for water supply since 2009. Hydrant on often.


Palmer st. I/fill; bedrock elev.
840
820
800
780
760
740
720
700
Elev. Above sea level
Variation Due to Village using deep Aquifer
Jan-90
Jul-90
Jan-91
Jul-91
Jan-92
Jul-92
Feb-93
Jul-93
Mar-94
Sep-94
Mar-95
Sep-95
Apr-96
Nov-96
Aug-97
Apr-98
Nov-98
Aug-99
Apr-00
Mar-01
Apr.-02
Mar. '03
MAR. '04
Apr. '05
APR. '06
Mar. '07
Mar. '08
Mar. '09
Mar. '10
Apr. '11
Apr. '12
Apr.'13
Apr. '14
Apr. '15
Mar. '16
Axis Title
MW-3DR
MW-7D
MW-8D
MW-1D
MW-6D
P-6D



465 PALMER STREET
GOWANDA, NEW YORK 14070

TEL. 716-532-2201

FAX 716-532-5518

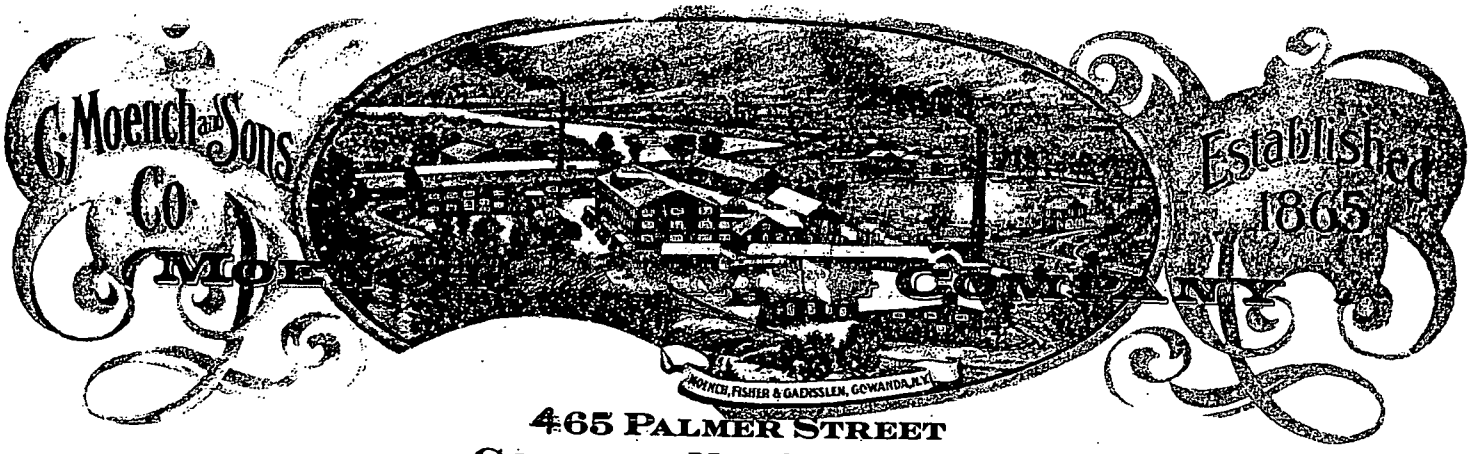
TABLE #8

PALMER STREET LANDFILL
GROUNDWATER MONITORING

calibrated by: Mike Best

RECORD OF CALIBRATION:

Instrument:	date	reading b4 - after	Test
Slope-Water Level Indicator			Probe response to water.
Grace-Conductivity meter	3/22/16	1300	Read standardize liquid & calibrate. zero calibrate.
Cole-Parmer(multi meter)			
Ph---	3/22/16 3/[illegible]/16	7.02 10.12	Calibrate to buffer(s) solutions. ph-7.00 ph-10.00
Temperature	3/22	21.9 C.	Calibrate to standard thermometer. 71 °C.



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FAX 716-532-5518

TABLE #7

revised 8/06

PALMER STREET LANDFILL
GROUNDWATER MONITORING

EQUIPMENT INVENTORY:

NA (A) Slope Indicator Co. - Model 51453, water level indicator

✓ (B) W.R. Grace (Dearborn) - Model EP-10, Micromhos meter (conductivity)

✓ (C) Cole-Parmer Instrumentation Co. - Model 5985-80, Ph, temperature °C , with probes.

✓ whale pump for Purging

~~(D) Grundfos Purging System.~~

-Hose, VFD, Generator.

✓ (E) Norton Company - Part #865-3170, Posi-Filter for filtering dissolved metals with filters. And vacuum pump/flask.

✓ (F) Wash bucket (5 gallon) with Alconox soap.

✓ (G) Rinse bucket with D.I. water. -buy 10 gal. distilled at store.
-get 2 gal. lab certified, eqpt. blank.

✓ (H) Rinse bottle with 10% Nitric Acid and water.

✓ (I) five gallon bucket to measure volume purged.

✓ (J) Latex gloves

(K) Required bottles and coolers and ice.

(L) Required field data forms.

✓ (M) Cell Phone

✓ (N) Watch

~~(O) Head Radio~~

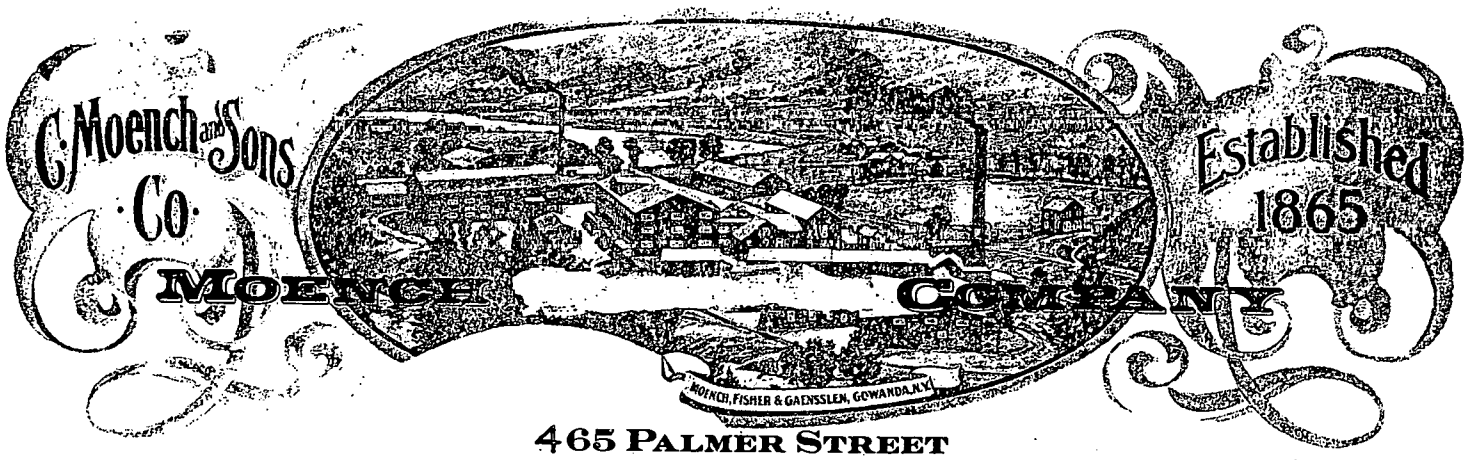
✓ (P) Board to hold Meters & equipment

~~(Q) Liquid soap/water spray bees.~~

~~(R) Benedryl-bee sting.~~

6.0 REFERENCES

1. PALMER STREET LANDFILL CLOSURE/POST CLOSURE PLAN (EPA ID. NYDOO2126910), PREPARED BY MALCOLM PIRNIE, INC. REVISED FEBRUARY 1989. REVISED DECEMBER 2006.
2. PALMER STREET LANDFILL, SUPPLEMENTAL HYDROGEOLOGIC INVESTIGATION, PREPARED BY MALCOLM PIRNIE, INC. JANUARY 1989.
3. SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR GROUNDWATER MONITORING - PALMER STREET LANDFILL. PREPARED BY MALCOLM PIRNIE, INC., AUGUST 1989. REVISED 12/2006.
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. COVER SYSTEM PERFORMANCE EVALUATION, PALMER STREET LANDFILL; PREPARED BY MALCOLM PIRNIE, INC. OCTOBER 1995. Second "Evaluation"; 3/99. THIRD EVALUATION; 8/03.(LAST)
7. JULY 27TH, 2006 LETTER FROM GEOMATRIX TO STAN RADON (NYSDEC) DOCUMENTING A JULY 19TH MEETING IN WHICH REVISIONS TO THE GROUNDWATER MONITOIRNG SYSTEM, WERE AGREED UPON.
8. SEPTEMBER 7, 2006 LETTER FROM STAN RADON(NYSDEC) TO JEFFREY SMITH(MOENCH) CONFIRMING AGREEMENT OF REVISED GROUNDWATER MONITORING SYSTEM, AND COVER SYSTEM EVALUATION ELIMINATON.



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GOWANDA, NEW YORK 14070

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FAX 716-532-5518

APPENDIX "A"

FIELD DATA SHEETS FOR:

_____

MONITORING EVENT:
PALMER STREET LANDFILL

WELL DEVELOPMENT/PURGING LOG

MOENCH COMPANY

PROJECT TITLE: PALMER ST. LANDFILL-GWM

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS

STAFF: JEFF Smith + Mike Best

DATE: 3/23/16, 1010 (*)

WELL NO.: MW-3 {USUALLY DRY} (8)

			WELL I.D.	VOL. GAL./FT.
1	TOTAL CASING AND SCREEN LENGTH (ft.)	17.10	1"	0.04
2	CASING INTERNAL DIAMETER (in.)	2"	(2")	(0.17)
3	WATER LEVEL BELOW TOP OF CASING (ft.)	15.70	3"	0.38
4	VOLUME OF WATER IN CASING (gal.)	(MUD)	4"	0.66
			5"	1.04
			6"	1.50
			8"	2.60

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

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	IN. IT.									
pH										
APPEAR, INITIAL TURBIDITY										
CONDUCTIVITY										
Temp °C										

COMMENTS:

(*) Dry No Sample Just MUD

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER St. LANDFILL - GWM

~~PROJECT NO.~~: 1ST OF 2 ANNUAL EVENTS.

STAFF: J. Smith + M. Best

DATE: 3/23/16 , 1010

WELL NO.: MW-3D (9)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	67.70
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	22.80
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (\quad ^2 \times (1 - 3) = 7.6$ 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)									
	INIT.	2nd								
pH	8.2	8.1								
TURBID APPEAR.	clear	clear	(INITIAL)							
CONDUCTIVITY	440	440								
TEMP °C	12.5	-								

COMMENTS:

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER St. L/FILL-GW/M TYPE OF SAMPLE: GROUNDWATER - GRAB

~~CLIENT~~: MOENCH CO. LOCATION NO.: MW-3D

~~JOB NO.~~: ~~LAB SAMPLE NO.~~:

WELL DATA: DATE: 3/23/16 TIME: 1010

Casing Diameter (inches): 2" Casing Material: PVC

Screened Interval (ft BGS): Screen Material: PVC

Static Water Level Below TOR (ft): Bottom Depth (ft): 67.70

Elevation Top of Well Riser: 810.73 Datum Ground Surface:

PURGING DATA: DATE: 3/23/16 TIME: Start: 1010 Finish: 1020

Method: SUPER NOVA - Pump 12V. Pumping Rate (gal/min): .5 gpm

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

Standing Volume (gal): Was well purged below sand pack? X 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 ____ No X

Field Personnel: J. SMith/M. BEST

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 1020 Finish: 1025

Method: TEFLON BAILER Sampler: J. Smith

Present Water Level (ft): Air Temperature (°F): 45

Depth of Sample (ft): Weather Conditions: Cloudy

Is sampling equipment dedicated to sample location? Yes * No /

ALPHA LAB

PRESERVATION DATA: DATE: 3/14/16 ~~TIME~~: Start: Finish:

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

Preservative: ____ H_2SO_4 * HNO_3 ____ NaOH HCl Other

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: X Turbid: NO Color: clear

Contains Sediment: NO Odor: NO Other:

Temperature (°C): pH: Specific Conductivity (umhos/cm):

Turbidity (NTU): Other:

REMARKS: SAMPLE/FILTER Equipment: WASH'd W/SOAP + WATER (3X). RINSED IN DISTIL'd WATER. RINSE With 10% NITRIC ACID WASH. FINAL RINSE W/ DISTIL'd WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER St. LANDFILL – GWM

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS.

STAFF: J. Smith + M. Best

DATE: 3/23/11 / 900

WELL NO.: MW-4SR (4)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	24.92
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	12.15
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (^{2} x (1 - 3) = 2.2 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)									
	INIT.									
pH	6.66	6.71	6.67							
TUR. APPEARANCE	Clear			FINAL						
CONDUCTIVITY	740	750								
Temp °C	10.9									

COMMENTS:

SAMPLE VOLUME

VERY TURBID - BLACK

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER St. LANDFILL-GWM
~~CLIENT~~: MOENCH CO.
~~[illegible]~~:
TYPE OF SAMPLE: GROUNDWATER-GRAB
LOCATION NO.: MW-4SR
~~[illegible]~~.:

WELL DATA: DATE: 3/23/16 TIME: 900
Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): Screen Material: PVC
Static Water Level Below TOR (ft): Bottom Depth (ft): 24.92
Elevation Top of Well Riser: 806.75 AGL Datum Ground Surface:

PURGING DATA: DATE: 3/23/16 TIME: Start: 900 Finish: 915
Method: DEDICATED BAILER Pumping Rate (gal/min): 1.0
Well Volumes Purged ($V=\pi R^2H/231$): Was well purged dry? ____ Yes X No
Standing Volume (gal): Was well purged below sand pack? X 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 * No
Field Personnel: J. Smith + M. Best

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 915 Finish: 927
Method: DEDICATED BAILER Sampler: J. Smith
Present Water Level (ft): Air Temperature (°F): 45
Depth of Sample (ft): Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location? Yes * No

PRESERVATION DATA: DATE: 3/24/16 ALPHA TIME: Start: — Finish: —
Filtered: * Yes ____ No Cool to 4°C: *
Preservative: ____ H_2SO_4 * HNO_3 ____ NaOH HCl Other

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: X Turbid: ____ Color: ____
Contains Sediment: NO Odor: ORGANIC Other: like diesel
Temperature (°C): ____ pH: ____ Specific Conductivity (µmhos/cm): ____
Turbidity (NTU): ____ Other: ____

REMARKS: SAMPLE/FILTER EQUIPMENT: WASH W/SOAP + WATER (3X). RINSED WITH DISTL'd WATER. RINSED WITH 10% NITRIC ACID WASH. FINAL RINSE W/DISTILL'd WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS (6)

STAFF: JEFF SMITH + MIKE BEST BLIND DUP

DATE: 3/23/16 | 945

WELL NO.: MW-4D (5)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	74.94
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	17.45
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

$V = 0.0408 (\ ^{2} \times (1 - 3) = 9.8$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	1ST	2ND								
'PH'	8.2	8.1								
VISUAL TURBIDITY	clear	clear	←	INITIAL						
CONDUCTIVITY	700	690								
TEMP. °C	12.6	—								

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. L/F - G.W.M. — TYPE OF SAMPLE: GROUND WATER
MOENCH CO. — LOCATION NO.: MW-4D
1ST OF 2 ANNUAL EVENTS

WELL DATA: DATE: 3/23/16 — TIME: 945
Casing Diameter (inches): 2" — Casing Material: PVC
Screened Interval (ft BGS): — Screen Material: PVC
Static Water Level Below TOR (ft.): — Bottom Depth (ft.) 74.94
Elevation Top of Well Riser: 805.93 — Datum Ground Surface:
Elevation Top of Screen: 72.9

PURGING DATA: DATE: 3/23/16 — TIME: Start: 945 Finish: 1000
Method: ELECTRIC PUMP - NOT DEDICT'd — Pumping Rate (gal/min): 1-2 gpm
Well Volumes Purged (πR²H/231): — Was well purged dry? Yes ___ No X
Standing Volume (GAL.) ___ — Was Well purged below sand pack? Yes ___ No X
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 ___ No *
Field Personnel: J.Smith + M.BesT

SAMPLING DATA: DATE: 3/23/16 — TIME: Start: 1000 Finish: 1010
Method: DEDICATED BAILER — Sampler: JS / MB
Present Water Level (ft.): — Air Temperature (F°): 48
Depth of Sample (ft.): — Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No ___
Source and type of water used in field for QC purposes: ~~EnviroChem LAB~~ ALPHA Lab ALPHA

PRESERVATION DATA: DATE: 3/19/16 ~~ENVIROCHEM~~ — TIME: Start: ___ Finish: ___
Filtered: Yes * No ___ — Cool to 4°C: *
Preservative: H_2SO_4 ___ HNO_3 * NaOH ___ Other HCl

PHYSICAL AND CHEMICAL
Appearance: Clear X — Turbid: NO — Color: clear
Contains Sediment NO — Odor: NO — Other: ___
Temperature (°C): ___ pH ___ — Specific Conductivity (μmhos/cm): ___
Turbidity (NTU): ___ — Other: ___

E. FLASK +/OR

REMARKS: NA - NOT APPLICABLE. TEFLON BAILER USED FOR SAMPLE WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/ RINSED WITH 10% NITRIC ACID WASH, THEN FINAL RINSE WITH LAB. GRADE WATER PRIOR TO USE.

Dry

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - GWM

~~PROJECT NO.~~: 1ST OF 2 SAMPLES, ANNUALLY.

STAFF: J. Smith + M. Best (STILL DRY)

DATE: 3/23/16, 8:50

WELL NO.: MW-5 {USUALLY DRY}

1	TOTAL CASING AND SCREEN LENGTH (ft.)	18.15
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	
4	VOLUME OF WATER IN CASING (gal.)	Dry

V = 0.0408 (^{2} x (1 - 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)
	INIT.
Ph	ALWAY
TURBID APPEAR.	DRY
CONDUCTIVITY	
TEMP °C	

COMMENTS:

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - GWM

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS.

STAFF: J. Smith + Mike Best

DATE: 3/23/16 , 815

WELL NO.: MW-6 (2)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	18.78
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	11.55
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (^{2} x (1 - 3) = .72 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)									
	INIT.	2nd								
Ph	6.5	6.5								
TURBID. APPEAR.	very Turbid	—	INITIAL							
CONDUCTIVITY	1500	1500								
Temp °C	13.1									

COMMENTS:

only ~~one~~ Two Volume

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER ST. LANDFILL
CLIENT: MOENCH CO.
~~JOB NO.~~: 1ST OF 2 ANNUAL EV.

TYPE OF SAMPLE: GROUNDWATER
LOCATION NO.: MW-6
~~LAB SAMPLE NO.~~:

WELL DATA: DATE: 3/23/16 TIME: 815

Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): Screen Material: PVC
Static Water Level Below TOR (ft): Bottom Depth (ft): 18.78
Elevation Top of Well Riser: 800.48 ASL Datum Ground Surface:

PURGING DATA: DATE: 3/23/16 TIME: Start: 0815 Finish: 0830

Method: ~~DEDICATED WITH PUMP~~ BAILER
Pumping Rate (gal/min): 1.0
Well Volumes Purged ($V=\pi R^2H/231$):
Was well purged dry? ____ Yes X No
Standing Volume (gal):
Was well purged below sand pack? X 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: J. Smith + M. Best

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 830 Finish: 843

Method: ~~DEDICATED PUMP~~ BAILER
Sampler: J. Smith
Present Water Level (ft):
Air Temperature (°F): 45
Depth of Sample (ft):
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location? Yes X No

PRESERVATION DATA: DATE: 3/24/16 ~~Preservative~~ TIME: Start: Finish:

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

ALPHA

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: ____ Turbid: X Color: Black
Contains Sediment: X Odor: None Other:
Temperature (°C): pH: Specific Conductivity (umhos/cm):
Turbidity (NTU): Other:

REMARKS: DEDICATED BAILER FOR SAMPLE, & FILTER EQUIPMNT. WASHED (3X), RINSED with LAB GRADE WATER. RINSED W/ 10% NITRIC ACID WASH. FINAL RINSE D.I. WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH + Mike Best

DATE: 3-23-16, 807 A.

WELL NO.: MW-6D (1)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	37.03
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	17.60
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

$V = 0.0408 (\quad ^2 \times (1 - 3) = 3.3$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	IN. IT.	2ND								
PH	8.1	8.1								
TURBIDITY	Clear	clear								
CONDUCTIVITY	1100	1100								
TEMP. °C	13.9	—								

COMMENTS: (X) FORGOT TO FILTER & TOTAL METALS TO SEE RESULTS. JS

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL
MOENCH CO.
1ST OF 2 ANNUAL EVENTS.

TYPE OF SAMPLE: GROUNDWATER
LOCATION NO.: MW-6D

WELL DATA: DATE: 3/23/16 TIME: 0807
Casing Diameter (inches): 2 Casing Material: PVC
Screened Interval (ft BGS): NA Screen Material: PVC
Static Water Level Below TOR (ft.): Bottom Depth (ft.) 37.03
Elevation Top of Well Riser: 800.63 Datum Ground Surface:
Elevation Top of Screen: NA

PURGING DATA: DEDICATED DATE: 3/23/16 TIME: Start: 807 Finish: 812
Method: TEFLON BAILER-HAND Pumping Rate (gal/min): ~ 5gpm
Well Volumes Purged (πR²H/231): Was well purged dry? Yes ____ No X
Standing Volume (GAL.) ____ Was Well purged below sand pack? Yes X 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 * No ____
Field Personnel: JS + MB

Total Metals

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 812 Finish: 815
Method: DEDIC. TEFLON BAILER-HAND Sampler: J.Smith
Present Water Level (ft.): Air Temperature (F°): 43
Depth of Sample (ft.): Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No ____
Source and type of water used in field for QC purposes: [redacted] LAB ALPHA

PRESERVATION DATA: DATE: 3/14/16 [redacted] TIME: Start: ____ Finish: ____
Filtered: Yes * No ____ ALPHA Cool to 4°C: *
Preservative: H_2SO_4 ____ HNO_3 * NaOH ____ Other HCl

PHYSICAL AND CHEMIC
Appearance: Clear: X Turbid: ____ Color: Clear
Contains Sediment ____ Odor: ____ Other: NO
Temperature (°C): ____ pH ____ Specific Conductivity (µmhos/cm): ____
Turbidity (NTU): ____ Other: ____

REMARKS: E. FLASK +/OR TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH / 1120

DATE: 3/23/16 / 1120

WELL NO.: MW-7D (12)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	41.90
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	5.85
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (\quad ^2 \times (1 - 3) = 6.1$ 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)									
	INIT.									
"PH"	8.14	8.10								
TURBIDITY		Clear - Initial								
CONDUCTIVITY	640	650								
TEMP. °C	9.4	9.3								

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL
: MOENCH CO.
JOB NO.: OF 2 ANNUAL EVENTS

TYPE OF SAMPLE: GROUND WATER
LOCATION NO.: MW-7D
[redacted] NO.: —

WELL DATA: DATE: 3/23/16 TIME: 1120

Casing Diameter (inches): 2
Casing Material: PVC
Screened Interval (ft BGS): 34 - 39
Screen Material: PVC
Static Water Level Below TOR (ft.): _____
Bottom Depth (ft.) 41.90
Elevation Top of Well Riser: 800.39
Datum Ground Surface: _____
Elevation Top of Screen: 763.50

PURGING DATA: DATE: 3/23/16 TIME: Start: 1120 Finish: 1133

Method: TEFLON BAILER - MANUAL
Pumping Rate (gal/min): .5 gpm
Well Volumes Purged (πR²H/231): _____
Was well purged dry? Yes ____ No X
Standing Volume (GAL.) _____
Was well purged below sand pack? Yes ____ No X
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 * No _____

Field Personnel: J. SMITH + M. BOST

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 1133 Finish: 1140

Method: TEFLON BAILER
Sampler: JSmith
Present Water Level (ft.): _____
Air Temperature (F°): 50
Depth of Sample (ft.): _____
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No ____
Source and type of water used in field for QC purposes: ~~[redacted]~~ ALPHA LAB

PRESERVATION DATA: DATE: 3/14/16 ALPHA ~~[redacted]~~ TIME: Start: _____ Finish: _____

Filtered: Yes * No _____
Cool to 4°C: *
Preservative: H_2SO_4 _____ HNO_3 * NaOH _____ Other HCl

PHYSICAL AND CHEMICAL

Appearance: Clear: X Turbid: _____ Color: CLEAR (Bugs)
Contains Sediment _____ Odor: NO Other: _____
Temperature (°C): _____ pH _____ Specific Conductivity (μmhos/cm): _____
Turbidity (NTU): _____ Other: _____

E. FLASK +/OR

REMARKS: TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LAB. WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO. YEAR -

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH + Mike Best

DATE: 3/23/16, 1045

WELL NO.: MW-8D (11)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	127.70
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	38.50
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (\quad ^2 \times (1 - 3) = 16.2$ 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)									
	INIT.	2nd								
"PH"	8.1	8.1								
VISUAL TURBIDITY	clear	clear	INITIAL							
CONDUCTIV.	500	540								
TEMP. °C	12.2									

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL
MOENCH COMPANY
1ST OF 2 ANNUAL EVENTS

TYPE OF SAMPLE: GROUND WATER-GRAB
LOCATION NO.: MW-8D

WELL DATA: DATE: 3/23/16 TIME: 1045
Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): NA Screen Material: PVC
Static Water Level Below TOR (ft.): Bottom Depth (ft.) 127.70
Elevation Top of Well Riser: 821.89 Datum Ground Surface: —
Elevation Top of Screen: NA

PURGING DATA: DEDICATED DATE: 3/23/16 TIME: Start: 1045 Finish: 1105
Method: ELECTRIC Pump - 80', 12V Whale Pumping Rate (gal/min): 1-2 gPM
Well Volumes Purged (GAL.): Super NOVA Was well purged dry? Yes ____ No X
Standing Volume (GAL.) ____ Was well purged below sand pack? Yes ____ No X
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 * No ____
Field Personnel: JS

SAMPLING DATA: DATE: 3/23/16 TIME: Start: 1105 Finish: 1124
Method: DEDICATE BAILER - Sampler: JS
Present Water Level (ft.): Air Temperature (F°): 45
Depth of Sample (ft.): Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No ____
Source and type of water used in field for QC purposes: ~~DI FROM LAB~~ ALPHA LAB

PRESERVATION DATA: DATE: 3/14/16 ~~ISCO BLANK~~ ALPHA TIME: Start: ____ Finish: ____
Filtered: Yes * No ____ Cool to 4°C: *
Preservative: H_2SO_4 ____ HNO_3 * NaOH ____ Other HCl

PHYSICAL AND CHEMICAL
Appearance: Clear: X Turbid: NO Color: clear
Contains Sediment: NO Odor: SLIGHT Other: ____
Temperature (°C): ____ pH ____ Specific Conductivity (µmhos/cm): ____
Turbidity (NTU): ____ Other: ____

REMARKS: E. FLASK +/OR TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LAB. WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE WATER PRIOR TO USE.

WATER SAMPLING FIELD DATA SHEETS BS-1 (3)

PROJECT: PALMER ST. LANDFILL
MOENCH CO.
1ST OF 2 ANNUAL EVENTS.

TYPE OF SAMPLE: SURFACE / GROUND WATER
LOCATION NO.: BS-1
(BANK SEEP SOUTH OF MW6)

WELL DATA: DATE: 3/23/16 TIME: 850

Casing Diameter (inches): N/A
Casing Material: N/A
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: NA
Pumping Rate (gal/min): N/A
Well Volumes Purged (πR²H/231): NA
Was well purged dry? Yes No
Standing Volume (GAL.) NA
Was Well purged below sand pack? Yes No
Volume Purged (GAL.) NA

NO BANK SEEP

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: JS + MB

SAMPLING DATA: DATE: TIME: Start: Finish:

Method: SURFACE WATER GRAB
Sampler: J.Smith
Present Water Level (ft.): NA
Air Temperature (F°):
Depth of Sample (ft.): NA
Weather Conditions:
Is sampling equipment dedicated to sample location: Yes * No
Source and type of water used in field for QC purposes: ~~Deionized~~ GRAB ALPHA
ALPHA

PRESERVATION DATA: DATE: 3/14/16 ~~DI/Deionized~~ TIME: Start: Finish:

Filtered: Yes * No
Cool to 4°C: *
Preservative: H_2SO_4 HNO_3 * NaOH Other HCl

PHYSICAL AND CHEMIC

Appearance: Clear: Turbid: Color:
Contains Sediment: Odor: Other:
Temperature (°C): pH Specific Conductivity (μmhos/cm):
Turbidity (NTU): Other:

E. FLASK +/OR

REMARKS: NA - NOT APPLICABLE - TEFLON BAILER USED FOR SAMPLE WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER - RINSED WITH 10% NITRIC ACID WASH, FINAL RINSE WITH LAB. GRADE WATER, PRIOR TO EACH USE.

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER ST. LANDFILL
~~CLIENT~~: MOENCH CO.
~~JOB NO.~~: 1ST OF 2 ANNUAL EV.

TYPE OF SAMPLE: GROUNDWATER - GRAB
LOCATION NO.: BS-2
~~LAB SAMPLE NO.~~:

WELL DATA: DATE: 3/23/16 TIME: 1010

Casing Diameter (inches): _____
Screened Interval (ft BGS): _____
Static Water Level Below TOR (ft): _____
Elevation Top of Well Riser: _____

Casing Material: ND
Screen Material: SOIL
Bottom Depth (ft): _____
Datum Ground Surface: _____

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

Method: _____
Well Volumes Purged ($V=\pi R^2H/231$): _____
Standing Volume (gal): _____
Volume Purged (gal): _____
Pumping Rate (gal/min): _____
Was well purged dry? _____ Yes _____ No
Was well purged below sand pack? _____ Yes _____ No

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

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

SAMPLING DATA: DATE: _____ TIME: Start: _____ Finish: _____

Method: GRAB
Present Water Level (ft): _____
Depth of Sample (ft): _____
Sampler: J. Smith
Air Temperature (°F): _____
Weather Conditions: _____

Is sampling equipment dedicated to sample location? Yes _____ No *

ALPHA Lab

PRESERVATION DATA: DATE: 3/14/16 ~~Westchem~~ TIME: Start: _____ Finish: _____

Filtered: * Yes _____ No
Cool to 4°C: *
Preservative: _____ H_2SO_4 * HNO_3 _____ NaOH HCL ~~Other~~

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: _____ Turbid: _____ Color: _____
Contains Sediment: _____ Odor: _____ Other: _____
Temperature (°C): _____ pH: _____ Specific Conductivity (µmhos/cm): _____
Turbidity (NTU): _____ Other: _____

REMARKS: SAMPLE/FILTER EQUIPMENT: WASH W/SOAP + WATER (3X). RINSED W/ DISTL'd WATER. RINSE WITH 10% NITRIC ACID WASH. FINAL RINSE W/ DISTL'd WATER.

(10)

WATER SAMPLING FIELD DATA SHEETS BS-3

PROJECT: PALMER ST. LANDFILL — TYPE OF SAMPLE: SURFACE/GROUND WATER
MOENCH CO. — LOCATION NO.: BS-3 (BANK SEEP
1ST OF 2 ANNUAL EVENTS : SOUTH OF MW-3)

WELL DATA: DATE: 3/23/16 — TIME: 1030

Casing Diameter (inches): NA	Casing Material: N/A
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: NA	Pumping Rate (gal/min): N/A
Well Volumes Purged (πR²H/231): NA	Was well purged dry? Yes ___ No ___
Standing Volume (GAL.) NA	Was well purged below sand pack? Yes ___ No ___
Volume Purged (GAL.) NA	

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

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

Field Personnel: J.Smith + M. Best

SAMPLING DATA: DATE: 3/23/16 — TIME: Start: 1030 — Finish: 1040

Method: SURFACE WATER GRAB	Sampler: J.Smith
Present Water Level (ft.): NA	Air Temperature (F°): 45
Depth of Sample (ft.): NA	Weather Conditions: CLOUDY

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

Source and type of water used in field for QC purposes: ~~Eaton Chem~~ ALPHA Lab

PRESERVATION DATA: DATE: 3/14/16 ALPHA Lab — TIME: Start: — Finish:

Filtered: Yes * No ___ — Cool to 4°C: *

Preservative: H_2SO_4 ___ HNO_3 * NaOH ___ Other * HCl

PHYSICAL AND CHEMICAL

Appearance: Clear: Very cloudy Turbid: very — Color: red
Contains Sediment: yes — Odor: No — Other:
Temperature (°C): 9 pH 7.01 — Specific Conductivity (μmhos/cm): 800
Turbidity (NTU): yes — Other:

REMARKS: N/A - NOT APPLIC. E. FLASK +/OR TEFLON BAILER USED FOR SAMPLING/FILTERING, WAS WASHED WITH ALCONOX SOAP, RINSED W/ LAB GRADE WATER, RINSED W/ 10% NITRIC WASH, FINAL RINSE WITH LAB GRADE WATER PRIOR TO USE.

(7)

WELL DEVELOPMENT/PURGING LOG

MOENCH COMPANY

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: 1ST OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH / MIKE

DATE: 3/23/16, 1300

WELL NO.: EQUIPMENT BLANK

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

$V = 0.0408 (\quad ^2 \times (1 - 3) = NA$ 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)									
	ONLY									
"PH"	8.8									
VISUAL TURBIDITY										
CONDUCTIVITY	18									
TEMP. °C										

COMMENTS:

D.I. WATER (Q.C) FROM: IsleChem Lab.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab

ALPHA Job #

Client Information

Client: Moench Company
Address: 465 Palmer St
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@caleres.com

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Jeff Smith
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Metals samples are filtered by the client in the field. Yes GS

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☒ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)	Sample Specific Comments	Total Bottles
	Site 1 MW-6D	3/23/16	807	GW	GS	X	X	Grab	4
	Site 2 MW-6	"	815	GW	GS	X	X	Grab	4
	Site 3 BS-1	"	815	~~GW~~	~~GS~~	X	X	NO SAMPLE AVAILABLE	4
	Site 4 MW-4SR	"	900	GW	GS	X	X	Grab	4
	Site 5 MW-4D	"	945	GW	GS	X	X	Grab	4
	Site 6 BLIND DUPLIC	"	—	GW	GS	X	X	Grab	4
	Site 7 EQUIPMT BLANK	"	1200	GW	GS	X	X	Grab	4
	Site 8 MW-3	"	1010	~~GW~~	~~GS~~	~~X~~	~~X~~	NO SAMPLE AVAILABLE	4
	Site 9 MW-3D	"	1010	GW	GS	X	X	Grab	4
	Site 10 BS-3	"	1030	GW	GS	X	X	Grab	4

Container Type: V P
Preservative: B C

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	3/23/16, 1500		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA Analytical

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

[redacted] Center
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page X of 2

Date Rec'd in Lab

ALPHA Job #

Client Information

Client: Moench Company
Address: 465 Palmer St
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@caleres.com

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Jeff Smith
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Metals samples are filtered by the client in the field. YES JS

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)	Sample Filtration	# of Bottles
	Site 11 MW-8D	3/23/16	1045	GW	JS	X	X	☑ Done	4
	Site 12 MW-7D	"	1120	GW	JS	X	X	☐ Lab to do	4
								Preservation	
								☐ Lab to do	
	Trip Blank	3/23/16		Water		X	X	(Please Specify below)	2

Sample Specific Comments

Grab
Grab
Trip Blank

Container Type: V P
Preservative: B C

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

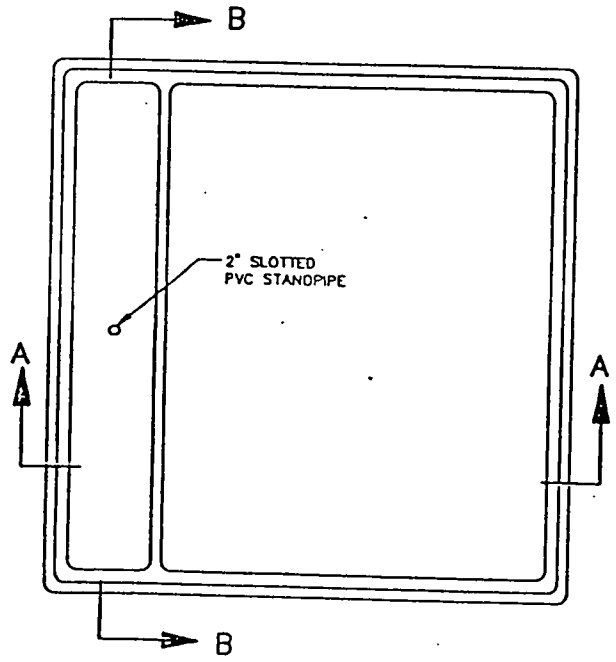
Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	3/23/16 1500		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

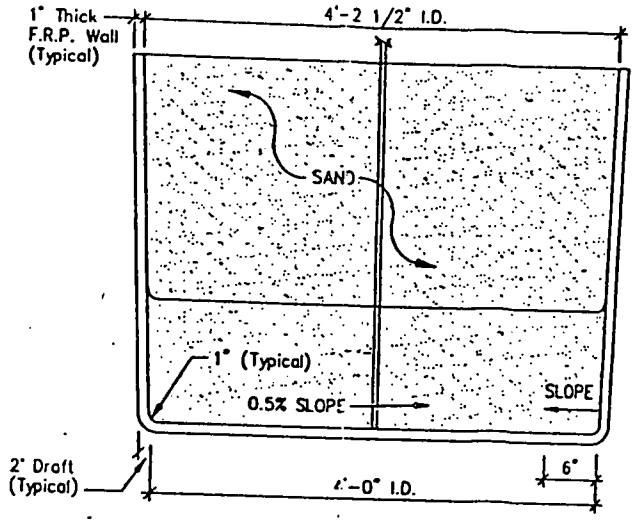
APPENDIX B

INFILTROMETER DESIGN

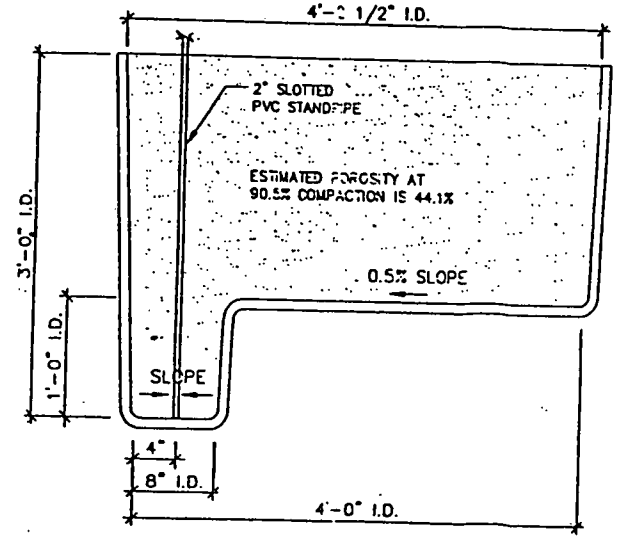


PLAN

SECTION B–B



SECTION A–A

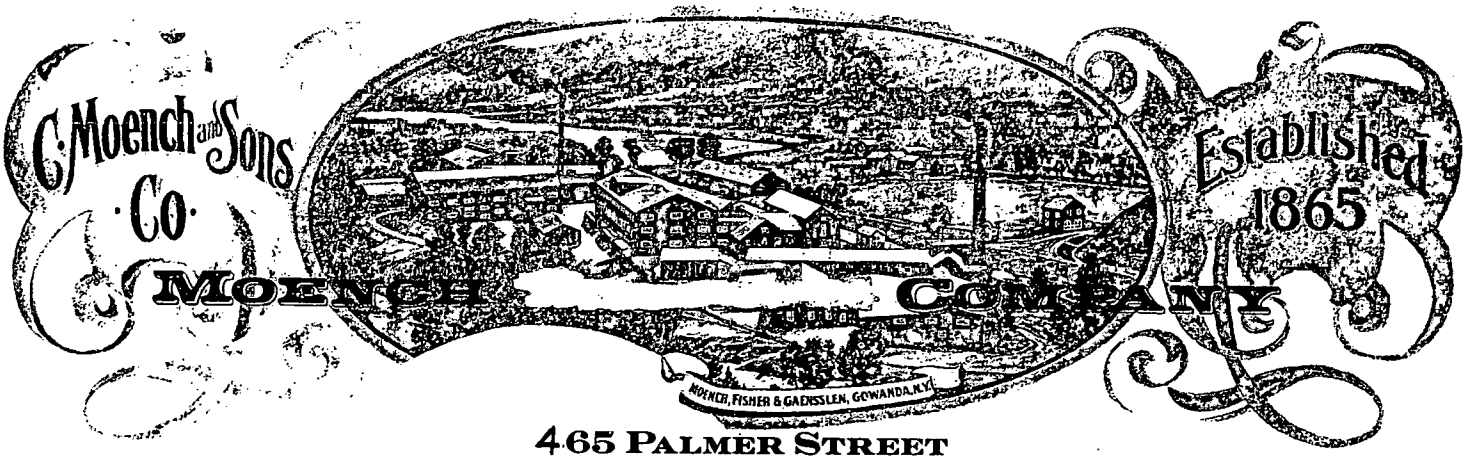


MTC-23-INF

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

INFILTROMETER

MOENCH TANNING COMPANY 3/20 93



465 PALMER STREET
GOWANDA, NEW YORK 14070

TEL. 716-532-2201

FAX 716-532-5518

APPENDIX "C"

ANALYTICAL REPORT FROM LABORATORY:

FOR March 23, 2016

MONITORING EVENT....

PALMER STREET LANDFILL

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L1608355
Client:	Moench Company 465 Palmer Street Gowanda, NY 14070
ATTN:	Jeff Smith
Phone:	(716) 532-2201
Project Name:	PALMER ST LFILL - ROUTINE LIST
Project Number:	Not Specified
Report Date:	04/01/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

Case Narrative (continued)

Report Submission

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Volatile Organics

L1608355-03: Differences were noted between the results of the original analysis and the re-analysis on dilution which have been attributed to vial discrepancies. Further re-analysis could not be performed due to the existing vials being compromised.

L1608355-11: The Trip Blank has results for acetone present above the reporting limit. The sample vial was verified as being labeled correctly by the laboratory and the previous analysis showed there was no potential for carry over.

Dissolved Metals

L1608355-02: The sample has an elevated detection limit for lead due to the dilution required by matrix interferences encountered during analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker Cristin Walker

Title: Technical Director/Representative

Date: 04/01/16

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1608355-01	SITE 1 MW-6D	WATER	GOWANDA, NY	03/23/16 08:07	03/23/16
L1608355-02	SITE 2 MW-6	WATER	GOWANDA, NY	03/23/16 08:15	03/23/16
L1608355-03	SITE 4 MW-4SR	WATER	GOWANDA, NY	03/23/16 09:00	03/23/16
L1608355-04	SITE 5 MW-4D	WATER	GOWANDA, NY	03/23/16 09:45	03/23/16
L1608355-05	SITE 6 BLIND DUPLIC	WATER	GOWANDA, NY	03/23/16 00:00	03/23/16
L1608355-06	SITE 7 EQPMT BLANK	WATER	GOWANDA, NY	03/23/16 12:00	03/23/16
L1608355-07	SITE 9 MW-3D	WATER	GOWANDA, NY	03/23/16 10:10	03/23/16
L1608355-08	SITE 10 BS-3	WATER	GOWANDA, NY	03/23/16 10:30	03/23/16
L1608355-09	SITE 11 MW-8D	WATER	GOWANDA, NY	03/23/16 10:45	03/23/16
L1608355-10	SITE 12 MW-7D	WATER	GOWANDA, NY	03/23/16 11:20	03/23/16
L1608355-11	TRIP BLANK	WATER	GOWANDA, NY	03/23/16 00:00	03/23/16

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

VOLATILES

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 14:34
Analyst: PD

Date Collected: 03/23/16 08:07
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 08:07
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	64		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	94		70-130

= .064 ppm
mg/L

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 08:15
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 14:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 08:15
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	160		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-03
Client ID: SITE 4 MW-4SR
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 09:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 15:22
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-03
Client ID: SITE 4 MW-4SR
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 09:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	250	E	ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-03 D
Client ID: SITE 4 MW-4SR
Sample Location: GOWANDA, NY

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/31/16 13:45
Analyst: PD

Date Collected: 03/23/16 09:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Acetone	92		ug/l	25	-	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	101		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-04
Client ID: SITE 5 MW-4D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 09:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 15:45
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-04
Client ID: SITE 5 MW-4D
Sample Location: GOWANDA, NY
Date Collected: 03/23/16 09:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-05
Client ID: SITE 6 BLIND DUPLIC
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 00:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 16:09
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-05
Client ID: SITE 6 BLIND DUPLIC
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 00:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-06
Client ID: SITE 7 EQPMT BLANK
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 12:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 13:46
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-06
Client ID: SITE 7 EQPMT BLANK
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 12:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-07
Client ID: SITE 9 MW-3D
Sample Location: GOWANDA, NY

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 16:33
Analyst: PD

Date Collected: 03/23/16 10:10
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-07
Client ID: SITE 9 MW-3D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 10:10
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	330	E	ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-07 D
Client ID: SITE 9 MW-3D
Sample Location: GOWANDA, NY

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/31/16 14:19
Analyst: PD

Date Collected: 03/23/16 10:10
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Acetone	220		ug/l	50	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	98		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-08
Client ID: SITE 10 BS-3
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 10:30
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 16:56
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-08
Client ID: SITE 10 BS-3
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 10:30
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-09
Client ID: SITE 11 MW-8D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 10:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 17:20
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-09
Client ID: SITE 11 MW-8D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 10:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-10
Client ID: SITE 12 MW-7D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 11:20
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 17:44
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-10
Client ID: SITE 12 MW-7D
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 11:20
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-11
Client ID: TRIP BLANK
Sample Location: GOWANDA, NY

Date Collected: 03/23/16 00:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/30/16 14:10
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-11
Client ID: TRIP BLANK
Sample Location: GOWANDA, NY
Date Collected: 03/23/16 00:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	8.9		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	96		70-130

METALS

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 08:07
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	–	1	03/31/16 14:07	04/01/16 03:17	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.010	–	1	03/31/16 14:07	04/01/16 03:17	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	–	1	03/31/16 14:07	04/01/16 03:17	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 08:15
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.069		mg/l	0.005	-	1	03/31/16 14:07	04/01/16 03:21	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 03:21	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.100	-	10	03/31/16 14:07	04/01/16 06:05	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-03
Client ID: SITE 4 MW-4SR
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 09:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.007		mg/l	0.005	–	1	03/31/16 14:07	04/01/16 03:26	EPA 3005A	19,200.7	PS
Chromium, Dissolved	0.01		mg/l	0.01	–	1	03/31/16 14:07	04/01/16 03:26	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	–	1	03/31/16 14:07	04/01/16 03:26	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-04
Client ID: SITE 5 MW-4D
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 09:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	-	1	03/31/16 14:07	04/01/16 03:52	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	-	1	03/31/16 14:07	04/01/16 03:52	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 03:52	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-05
Client ID: SITE 6 BLIND DUPLIC
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 03/23/16 00:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	-	1	03/31/16 14:07	04/01/16 03:56	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	-	1	03/31/16 14:07	04/01/16 03:56	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 03:56	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-06
Client ID: SITE 7 EQPMT BLANK
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 12:00
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.0050	-	1	03/31/16 14:07	04/01/16 01:21	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	-	1	03/31/16 14:07	04/01/16 01:21	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 01:21	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Lab Number: L1608355
Project Number: Not Specified
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-07
Client ID: SITE 9 MW-3D
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 03/23/16 10:10
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.0050	-	1	03/31/16 14:07	04/01/16 04:00	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	-	1	03/31/16 14:07	04/01/16 04:00	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 04:00	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-08
Client ID: SITE 10 BS-3
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 10:30
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.006		mg/l	0.005	-	1	03/31/16 14:07	04/01/16 04:05	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.0100	-	1	03/31/16 14:07	04/01/16 04:05	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	-	1	03/31/16 14:07	04/01/16 04:05	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-09
Client ID: SITE 11 MW-8D
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 10:45
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	–	1	03/31/16 14:07	04/01/16 04:09	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	–	1	03/31/16 14:07	04/01/16 04:09	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	–	1	03/31/16 14:07	04/01/16 04:09	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

SAMPLE RESULTS

Lab ID: L1608355-10
Client ID: SITE 12 MW-7D
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 03/23/16 11:20
Date Received: 03/23/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	–	1	03/31/16 14:07	04/01/16 04:13	EPA 3005A	19,200.7	PS
Chromium, Dissolved	ND		mg/l	0.01	–	1	03/31/16 14:07	04/01/16 04:13	EPA 3005A	19,200.7	PS
Lead, Dissolved	ND		mg/l	0.010	–	1	03/31/16 14:07	04/01/16 04:13	EPA 3005A	19,200.7	PS

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1608355-01A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-01B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-01C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-01D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-02A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-02B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-02C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-02D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-03A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-03B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-03C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-03D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-04A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-04B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-04C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-04D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-05A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-05B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-05C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-05D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-06A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-06B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-06C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-06D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-07A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-07B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-07C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified

Lab Number: L1608355
Report Date: 04/01/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1608355-07D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-08A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-08B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-08C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-08D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-09A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-09B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-09C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-09D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-10A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-10B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-10C	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-10D	Plastic 250ml HNO3 preserved	A	<2	4.0	Y	Absent	CR-RI(180),AS-RI(180),PB-RI(180)
L1608355-11A	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)
L1608355-11B	Vial HCl preserved	A	N/A	4.0	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: PALMER ST LFILL - ROUTINE LIST **Lab Number:** L1608355

Project Number: Not Specified **Report Date:** 04/01/16

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report - No QC

Project Name:	PALMER ST LFILL - ROUTINE LIST	**Lab Number:**	L1608355
Project Number:	Not Specified	**Report Date:**	04/01/16

Data Qualifiers

C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
P	- The RPD between the results for the two columns exceeds the method-specified criteria.
Q	- The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
R	- Analytical results are from sample re-analysis.
RE	- Analytical results are from sample re-extraction.
S	- Analytical results are from modified screening analysis.
J	- Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
ND	- Not detected at the reporting limit (RL) for the sample.

Report Format: DU Report - No QC

Project Name: PALMER ST LFILL - ROUTINE LIST
Project Number: Not Specified
Lab Number: L1608355
Report Date: 04/01/16

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead; ***8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers:
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 3/24/16

ALPHA Job #: L1608355

Client Information

Client: Moench Company
Address: 465 Palmer St.
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@calaras.com

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #:
(Use Project name as Project #)
Project Manager: Jeff Smith
ALPHAQuote #:

Turn-Around Time

Standard [x] Due Date:
Rush (only if pre approved) [ ] # of Days:

Deliverables

[ ] ASP-A [ ] ASP-B
[ ] EQuIS (1 File) [ ] EQuIS (4 File)
[ ] Other

Regulatory Requirement

[ ] NY TOGS [ ] NY Part 375
[ ] AWQ Standards [ ] NY CP-51
[ ] NY Restricted Use [ ] Other
[ ] NY Unrestricted Use
[ ] NYC Sewer Discharge

Billing Information

[x] Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
[ ] NJ [ ] NY
[ ] Other:

These samples have been previously analyzed by Alpha [ ]

Other project specific requirements/comments:

Metals samples are filtered by the client in the field. Yes QS

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
[x] Done
[ ] Lab to do
Preservation
[ ] Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)	Sample Specific Comments	
08355-01	Site 1 MW-6D	3/23/16	807	GW	QS	x	x	Grab	4
-02	Site 2 MW-6	"	815	GW	QS	x	x	Grab	4
-03	Site 3 BS-1	"	815	GW	QS	x	x	NO SAMPLE AVAILABLE	
-04	Site 4 MW-4SR	"	900	GW	QS	x	x	Grab	4
-05	Site 5 MW-4D	"	945	GW	QS	x	x	Grab	4
-06	Site 6 BLIND DUPLIC	"	—	GW	QS	x	x	Grab	4
-07	Site 7 EQUIP BLANK	"	1200	GW	QS	x	x	Grab	4
-08	Site 8 MW-3	"	1010	GW	QS	x	x	NO SAMPLE AVAILABLE	
-09	Site 9 MW-3D	"	1010	GW	QS	x	x	Grab	4
-10	Site 10 BS-3	"	1030	GW	QS	x	x	Grab	4

Container Type: V P
Preservative: B C

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; K/E = Zn Ac/NaOH; O = Other

Container Code: P = Plastic; A = Amber Glass; V = Vial; G = Glass; B = Bacteria Cup; C = Cube; O = Other; E = Encore; D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	3/23/16, 1500	[illegible]	3/23/16 1430
[illegible]	3/23/16	[illegible]	3/24/16 0700

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS

Form No: 01-25 (rev. 30-Sept-2013)

ALPHA

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 3/24/16

ALPHA Job #: L1608355

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Jeff Smith
ALPHAQuote #:

Client Information

Client: Moench Company
Address: 465 Palmer St
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@caleres.com

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Metals samples are filtered by the client in the field. JS

Please specify Metals or TAL.

Sample Filtration
☑ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)	Sample Specific Comments	Total Bottles
08355-09	Site 11 MW-8D	3/23/16	1045	GW	JS	X	X	Grab	4
10	Site 12 MW-7D	"	1120	GW	JS	X	X	Grab	4
11	Trip Blank	3/23/16		Water		X	X	Trip Blank	2
	Container Type					V	P		
	Preservative					B	C		

Preservative Code: A = None, B = HCl, C = HNO₃, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	3/23/16 1500	[signature]	3/23/16 1450
[signature]	3/23/16	[signature]	3/24/16 01:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev 30-Sept-2013)

MOENCH COMPANY
DIVISION OF CALERES*5*
465 PALMER ST.
GOWANDA, NEW YORK 14070
PHONE: 716-532-2201

RECEIVED
JUL 29 2016
NYS DEC
REGION 9

PALMER STREET LANDFILL JULY 2016

GROUNDWATER QUALITY MONITORING REPORT.

JULY 12, 2016 MONITORING EVENT.

SECOND OF TWO SAMPLING EVENTS FOR 2016.

Jeffrey Smith
Site Manager

MOENCH COMPANY
DIVISION OF CALERES*5*
465 PALMER ST.
GOWANDA, NEW YORK 14070
PHONE: 716-532-2201

Mr. Stanley F. Radon CHMM, CPG
NY State Dept. of Environmental Conservation
Div. of Solid & Hazardous Waste
270 Michigan Ave.
Buffalo, New York 14203-2999

July 27, 2016

RE: Palmer St. Landfill, Groundwater Quality, July 2016 Sample.

Mr. Radon:
Enclosed is the Groundwater Quality Report for our Palmer St. Landfill, July 2016 sample. A PDF file will also be forwarded to yourself. An Electronic Report "EDD" will be submitted by GEI Consultants.

The Village of Gowanda has stopped using the deep Aquifer as a water source, and is now using natural springs. This has resulted in a significant rise in the Bedrock water levels. As a result, a rare sample was obtained from MW-3 well.

Extremely low precipitation fell the past 3 months. This usually results in more detections. "pH" continues to be about 6.5, in the wells in the waste. Also, there was no detection of infiltration in the monitors; most had negative water levels.

Acetone was detected at all locations, except MW-7D. It was also detected in the Equipment Blank, which is DI water supplied from the Lab. It seems likely a lab contamination, which has occurred before. It is were cross contamination from our decontamination, it would have showed in the MW-7D well. It was also in the Pool next to the splinter creek, which would not be affected by the landfill.

Call me if you have questions. We had Jacob here, Monday to observe our processes. I think he learned a lot.

Sincerely,

Jeffrey Smith

Jeffrey Smith
Site Manager

Alecia Jaruzel- Caleres *5*
St. Louis, Mo
Emily Schultz- Caleres *5*
St. Louis, MO
Richard Frappa-GEI Consultants
Amherst, NY(summaries only)

PALMER STREET LANDFILL - MOENCH COMPANY.
GROUNDWATER MONITORING REPORT FOR JULY 2016, SAMPLING EVENT.

TABLE OF CONTENTS:

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TABLE OF CONTENTS (CONTINUED)

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 BACKGROUND-LANDFILL.

THE MOENCH COMPANY, A DIVISION OF BROWN SHOE CO., NOW KNOWS AS CALERES, 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(APPROX), THROUGH JULY 1983, LIES IMMEDIATELY SOUTHWEST OF THE (FORMER) TANNERY COMPLEX ON AN APPROXIMATELY 25-ACRE, PARCEL OF LAND. A VARIETY OF WASTE 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 CO. HAS CLOSED THE PALMER STREET LANDFILL. ACCORDINGLY, THE CLOSURE/POST CLOSURE PLAN(REFERENCE 1), IS BEING PERFORMED. THE LONG-TERM POST CLOSURE MONITORING PROGRAM HAS BEEN APPROVED & IMPLIMENTED.(JULY 1993, REVISED MARCH 1994, MARCH 2001 & DECEMBER 2006).

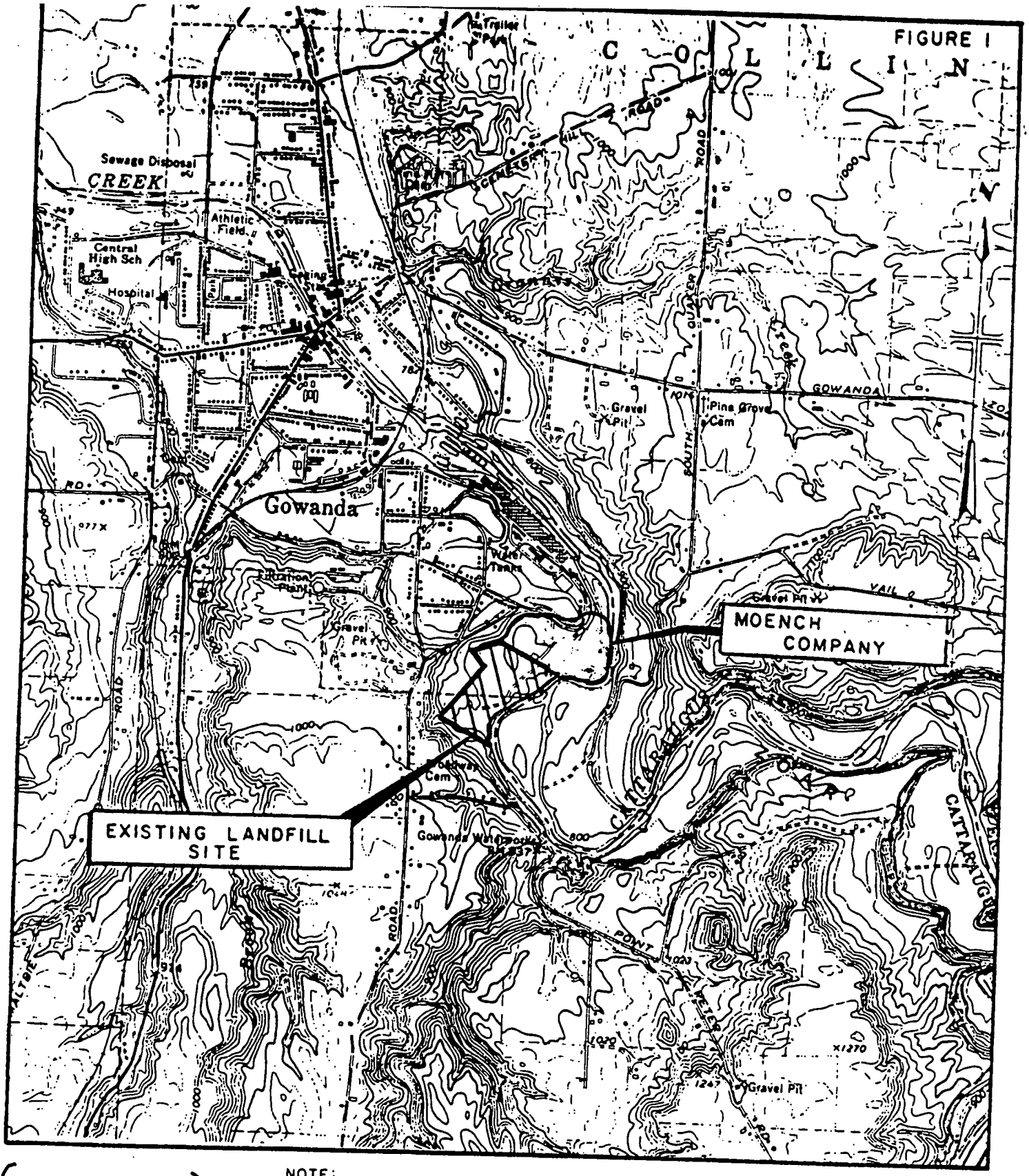
IN JULY OF 2006, A PROPOSAL WAS MADE TO THE NEW YORK STATE DEPT. OF ENVIRONMENT CONSERV.(NYSDEC), TO RECONFIGURE THE GROUNDWATER MONITORING SYSTEM(REF#7).
THIS WAS AGREED UPON IN EXCHANGE FOR THE ELIMINATION OF THE FIVE YEAR "COVER SYSTEM EVALUATION". THE NEW MONITORING SYSTEM IS DESCRIBED IN SECTION 2.0

1.2 PURPOSE AND SCOPE

SAMPLES ASSOCIATED WITH THE SECOND EVENT OF TWO, WATER QUALITY MONITORS, FOR 2016 YEAR, WERE COLLECTED ON 12 JULY,2016.

DUE TO EXTREMELY DRY WEATHER, THERE WERE NO BANK SEEPS AVAILABLE. A SAMPLE WAS OBAINED FROM A POOL ADJACENT TO THE SPLINTER CREEK NEAR BS-3.

SITES MW-5 WAS DRY; NO SAMPLE OBTAINED.



{FIGURE 1}

Lat. 42°, 27'0"
Long. 78°, 55'30"

NOTE:
TOPOGRAPHY TAKEN FROM 1963 GOWANDA, N.Y.
U.S.G.S. QUADRANGLE 7.5 MIN. SERIES
SCALE: 1" = 2000'

QUADRANGLE LOCATION

SITE LOCATION MAP
PALMER STREET LANDFILL
GOWANDA, N.Y.

6-94

MOENCH Co.

2.0 MONITORING SYSTEM(RECONFIGURED 7/06)

THE RECONFIGURED GROUNDWATER MONITORING SYSTEM FOR THE PALMER STREET LANDFILL(FIG. 2), CONTAINS NINE(9) MONITORING WELLS AND THREE(3) BANK SEEPS. A REVISED POST CLOSURE PLAN, DESCRIBING THE DETAILS, WAS SUBMITTED TO THE NYSDEC 9, IN JANUARY 2007.

UPGRADIANT WELLS	OVERBURDEN/WASTE WELLS	BEDROCK WELLS
	MW-3	MW-3D
MW-7D	MW-4SR	MW-4D
MW-8D	MW-5	MW-6D
	MW-6	

IN ADDITION TO THE WELLS, NYSDEC ALSO REQUIRES THE MONITORING OF THREE (3) BANK SEEPS DESIGNATED AS BS-1, BS-2 AND BS-3, RESPECTIVELY. THE ABILITY TO OBTAIN SAMPLES FROM THESE BANK SEEPS IS SPORADIC DUE TO VARYING WEATHER/MOISTURE CONDITIONS.

MW-8D IS DOWN GRADIENT FROM GERNATT'S GRAVEL WASHING OPERATION, SETTLING PONDS. IT MAY BE AFFECTED FROM THESE.

TO AID IN THE EVALUATION OF COVER PERFORMACE, WATER LEVELS FROM FIVE (5) INFILTROMETERS ARE ALSO MONITORED. LOCATIONS OF MONITORING POINTS ARE SHOWN ON FIGURE 2. THE RESULTS CONTINUE TO INDICATE THAT THE COVER SYSTEM IS PERFORMING AS PLANNED. THESE SHOWED NO/NEGATIVE INFILTRATION FOR THIS SAMPLING EVENT; TABLE #4.
THE VILLAGE IS BACK TO USING SURFACE RUNOFF SO THAT THE WATER LEVEL AT MW-1D IS BACK TO NORMAL.

A RARE SAMPLE WAS OBTAINED FROM MW-3, LIKELY DUE TO THE CESSATION OF THE VILLAGE USING THE AQUIFER.

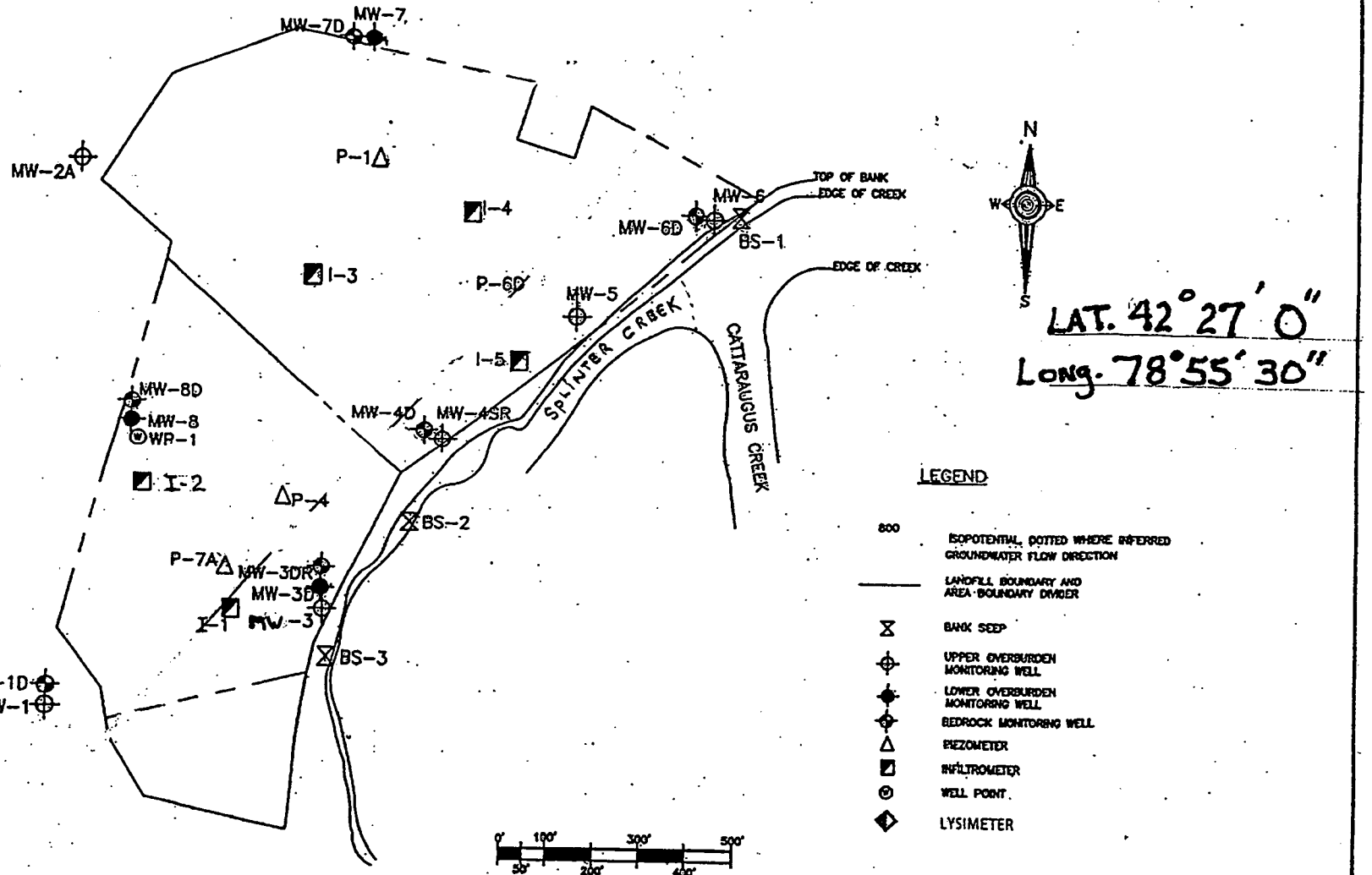


Fig. # 2

July '16 SAMPLE EVENT:

GEI AMEX Consultants, Inc. Williamsville, NY	PALMER STREET LANDFILL SITE PLAN	DATE: DEC '11	PROJ. NO.: 8104
		FILE NO.: N/A	DWG. NO.: FIGURE 1.2

REVISED DEC '11

3.0 MONITORING METHODS

3.1 GROUNDWATER MONITORING -LANDFILL

SAMPLES COLLECTED DURING THE JULY 12, 2016, MONITORING EVENT PERIOD, WERE COLLECTED BY MOENCH COMPANY PERSONNEL, AND ANALYZED BY ALPHA ANALYTICAL, TONAWANDA, NEW YORK. THE ANALYSIS IS PERFORMED IN ACCORDANCE WITH THE SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR THE PALMER STREET LANDFILL (REFERENCE 3). LABORATORY ANALYSIS WERE PERFORMED IN ACCORDANCE WITH THE USEPA 200.7 FOR METALS & VOC 8260. THE MONITORING PARAMETERS ARE LISTED IN TABLE 1. SAMPLES WERE NOT AVAILABLE FROM ONE WELLS AND THREE BANK SEEPS, 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. GROUNDWATER ELEVATIONS WERE ALSO MEASURED IN THE PIEZOMETERS, INFILTROMETERS, AND WELLS ON-SITE.

FIELD SAMPLES WERE COLLECTED AND MEASURED FOR THE FIELD PARAMETERS IDENTIFIED IN TABLE 1. THE FIELD MEASUREMENTS ARE SUMMARIZED IN TABLE #3.....

3.2 INFILTROMETER MONITORING

FIVE INFILTROMETERS HAVE BEEN INSTALLED BENEATH THE LANDFILL CAP TO AID IN THE ASSESSMENT OF PERFORMANCE OF THE CAP. DURING EACH SAMPLING EVENT, WATER LEVELS IN THE INFILTROMETER ARE MEASURED AND THE AMOUNT OF WATER INFILTRATING CALCULATED. NOTE: IT IS BELIEVED THAT INFILTROMETER #1, IS OFTEN FLOODED DUE TO NEIGHBORING SPRINGS AND GRAVEL SETTLING PONDS. THIS CREATES A HIGH WATER TABLE, IN THE SOUTH END OF AREA #2.

A SCHEMATIC SHOWING THE DESIGN AND DIMENSIONS OF THE INFILTROMETERS IS PRESENTED IN APPENDIX "B".

TABLE 1

MOENCH TANNING COMPANY
PALMER STREET LANDFILL

MONITORING PARAMETERS *Twice/year

Soluble Arsenic[1]
Soluble Chromium[1]
Soluble Lead[1]

Volatile Organics[2][3]

pH[4]
Specific Conductance[4]
Turbidity[4] – Visual
Groundwater Elevation[4]
Temperature[4]
Odor[4]
Sample Appearance[4]

Notes:

1. *All samples collected for analysis of soluble metals are pressure-filtered in the field immediately upon sample collection.*
2. *The list of VOC analytes are those compounds included in SW-846, Method 8260.*
3. *Analysis for VOCs are not performed on pore water samples during performance monitoring events.*
4. *Field parameters (i.e., pH, specific conductance, temperature and turbidity) are measured in the field by sampling personnel. Laboratory analysis of these parameters will not be required.*

MOENCH COMPANY
465 PALMER ST.
GOWANDA, NY 14070

SAMPLERS M. Best / Jeff Smith

PALMER STREET LANDFILL :

DATE 7/8/16

GROUNDWATER ELEVATIONS: (TABLE #2)

WP - WHALE PUMP - DEDICATED

WELL #	ELEVATION TOP OF PVC(FT)	TOTAL DEPTH FROM TOP OF PVC(FT)	WATER DEPTH(FT) FROM TOP OF PVC	WATER(FT) ELEVATION
MW-1	826.05 ASL	31.90 (8-12)	5.20	820.85
MW-1D	827.82	188.20 "	30.30	797.52
MW-2A	810.62	16.15 "	4.70	805.92
MW-3	810.81	17.10 "	16.15	794.66
MW-3D	810.73	67.70 "	18.30	792.43
MW-3DR	810.47	102.30 "	16.10	794.37
MW-4 SR	806.75 WP	24.92 "	13.05	793.70
MW-4D	805.93	74.94 "	16.60	789.33
MW-5	805.35	18.15 "	Dry	DRY
MW-6	800.48 WP	18.78 "	16.95	783.53
MW-6D	800.63	37.03 "	18.85	781.78
MW-7	800.50	30.60 (8-12)	7.30	793.20
MW-7D	800.39	41.90 "	6.80	793.59
MW-8	821.82	15.96 "	Dry	DRY
MW-8D	821.89 WP	126.80 (7/15)	25.50	796.39

INFILTROMETERS:

#1	9.00	6.50	
#2	8.80	7.20	
#3	9.00	7.25	
#4	8.92	6.40	
#5	9.00	7.13	

(TABLE #2) continued

Palmer st. Landfill

GROUNDWATER ELEVATIONS:

smpl date__

WELL #	ELEVATION TOP OF PVC(FT)	TOTAL DEPTH FROM TOP OF PVC,(FT)	WATER DEPTH(FT) FROM TOP OF PVC	WATER (FT ELEVATION
P-1	811.85 ASL	18.30 (8/12)	17.40	794.45
P-4	813.54 "	19.70 "	15.40	798.14
P-6D	810.30 "	61.25 "	22.66	787.64
P-7A	816.92 "	23.90 "	19.70	797.22
WP-1	822.16 "	11.71 by MW 8	9.35	812.81

NOTE:

Aug 2012 ALL WELLS "DEVELOPED"

REV'd 9/12

~~Revised 2/12~~

4.0 GROUNDWATER QUALITY MONITORING RESULTS:

4.1 EVALUATION OF GROUNDWATER ELEVATION DATA:

GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN AT EACH OF THE ACCESSIBLE ON-SITE MONITORING WELLS, PIEZOMETERS, AND WELL POINTS, DURING THE MARCH 2016, MONITORING EVENT. THE DATA ARE SUMMARIZED IN TABLE 2/3.

PLOTS OF THE GROUNDWATER ELEVATIONS MEASURED IN THE MONITORING WELLS WITH RESPECT TO TIME ARE PRESENTED IN FIGURE 3,4, AND 5, FOR THE SHALLOW OVERBURDEN, DEEP OVERBURDEN AND BEDROCK WELLS, ON THE LANDFILL, RESPECTIVELY. AS SHOWN IN FIGURES 3 AND 4, OVERBURDEN GROUNDWATER ELEVATIONS WERE GENERALLY CONSISTENT, THROUGHOUT THE MONITORING PERIOD. WATER LEVELS HAVE STABLIZED, AFTER THREE YEARS OF INCREASES.('92-'94). THIS OCCURRED DUE TO CESSATION OF VILLAGE AND TANNERY PUMPING OF THE DEEP AQUIFERS. SOME SLIGHT SEASONAL FLUCTUATION DOES OCCUR. IN AUGUST, 2009, A DRAMATIC FLOOD OCCURRED IN THE GOWANDA AREA, THAT DISABLED THE VILLAGE RESERVIOR. BUT, NOW AFTER 7 YEARS, THE VILAGE IS CONSISTENTLY USING NATURAL SPRINGS. WATER LEVELS HAVE RISEN AGAIN TO EXPECTED LEVELS.

4.2 THE GROUNDWATER AND SURFACE WATER QUALITY RESULTS FOR THE JULY 2016, MONITORING EVENTS, AT THE PALMER STREET LANDFILL, ARE PRESENTED IN TABLES #3 THROUGH #5.

. "GA" STANDARDS & GUIDANCE VALUES ARE ALSO PRESENTED.

BOTH THE SOIL AND WASTE AT THE PALMER STREET LANDFILL CONTAIN METALS-OF-INTEREST AS A COMPONENT OF THE SOIL OR WASTE PARTICLES (REFERENCE 5). THEREFORE, THE SEDIMENT (OR TURBIDITY) CONTENT OF ANY GROUNDWATER OR SURFACE WATER QUALITY SAMPLES WILL DIRECTLY IMPACT THE TOTAL METAL CONCENTRATION OF THE SAMPLES. THE TURBIDITY CONTENT OF THE GROUNDWATER 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 NO LONGER SAMPLED FOR GROUNDWATER QUALITY STANDARDS OR EVALUATIONS, OF GROUNDWATER QUALITY IMPACTS WILL BE BASED ON SOLUBLE METAL CONCENTRATIONS.

I SHOULD BE NOTED THAT SEVERAL ON THE "ADDED" MONITORING WELL, ARE SCREENED IN THE WASTE. SUMMARY OF THE SAMPLING RESULTS IS AS FOLLOWS:

--THE ONLY DETECTION OF METALS ABOVE STANDARD WAS ARSENIC AT MW-6. THAT WAS SLIGHT. ARSENIC IS NATURAL IN THE NATIVE SOIL.

--ACETONE WAS DETECTED AT ALL MONITORING LOCATIONS, EXCEPT MW-7D. IT WAS DETECTED IN THE EQUIPMENT BLANK(DI WATER FROM THE LAB). IF THERE WAS CROSS CONTAMINATION, IT WOULD HAVE BEEN DETECTED AT MW-7D. LAB CONTAMINATION IS SUSPECTED. IT WAS EVEN DETECTED IN THE POOL NEXT TO THE SPLINTER CREEK; AN UNLIKELY AFFECT FROM THE LANDFILL..

--Ph CONTINUES TO BE BELOW "NEUTRAL" AT MW-4S, MW-6 AND MW-3.

TABLE 3

MOENCH COMPANY
PALMER STREET LANDFILL
7-12-16 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

INITIAL

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity NA	Sample Appearance	Sample Odor
* MW-3	7-12-16	945	15.1	6.75	1600	NA	TURBID	ORGANIC
*** MW-3D	"	1000	13.9	7.77	400	"	CLEAR	SHALE ?
* MW-4SR	"	850	13.1	6.47	1300	"	TURBID	FINISH
*** MW-4D	"	915	13.4	7.71	620	"	Clear	"
* MW-5	"	—	—	—	—	"	—	—
* MW-6	"	833	16.4	6.41	1400	"	ALMOST CLR	ORGANIC METHANE ?
*** MW-6D	"	803	14.7	7.77	1050	"	Clear	NONE
*** MW-7D	"	1125	15.8	7.90	580	"	SL. TURB	NO
*** MW-8D	"	1050	13.9	7.85	410	"	Clear	NO
BS-1	"	NO SMPL	—	—	—	"	—	—
BS-2	"	" "	—	—	—	"	—	—
(A) BS-3	"	1018	11.0	7.07	700	"	RED	NO
				6.5-8.5 (STD)				

NOTES:

(1) Conductivity readings corrected to 25°C.
(2) Blind Duplicate MW-4SR
(3) MW-7D is apparent hydraulically upgradient bedrock well.

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

(A) NO BANK SEEP - SAMPLED POOL BY CREEK.

NO SMPL AVAIL - MW5, BS1, BS2

* NO MEASURABLE INFILTRATION

TABLE 4

MOENCH COMPANY
PALMER STREET LANDFILL
7-8-16 MONITORING EVENT

INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft) 3-23-16	Static Water Level (ft) 7-8-16	Δ Depth-gal. (ft)	# Days Between Readings (#)	Infiltration Rate gal/day.ft²	Infiltration Rate (cm/sec)	Approx. Total Rainfall This Period (ft)	Infiltration (%)
I-1 (A)	4.30	6.50	NEG.	107	—	—	.73	—
I-2	7.20	7.20	No chg.	"	—	—	"	—
I-3	6.80	7.25	NEG.	"	—	—	"	—
I-4	6.35	6.40	NEG.	"	—	—	"	—
I-5	7.10	7.13	NEG.	"	—	—	"	—

Note:
** Negative ΔD precludes calculation of meaningful data.

(A) I-1 OFTEN FLOODED BY NATURAL SPRINGS & WASH PONDS, UPGRADIENT.

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
July 12, 2016 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

	Quantitation Limit	** MW-3	MW-3D	** MW-4SR	MW4D	** MW-5	** MW-6	MW-6D	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	.009	.005	.009	ND	DRY	.065	.005	.025mg/l
Chromium - Soluble	0.005	ND	"	.02	ND		ND	ND	.05
Lead - Soluble	0.005	ND	"	ND	ND	NO	ND	ND	.025
						SAMPLE			
VOLATILES mg/L									
ACETONE		.018	.098	.083	.005		.024	.027	GuiD. VALUE = .05mg/L
CHLOR BENZ		—	—	.003	—		—	—	

** Screened in Waste/Overburden.

Blind Duplicate _____

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
July 12, 2016 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS 4Sr

	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-2	BS-3	Blind Duplic	EQPT BLANK	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	ND	.006	ND	ND	.012	ND	ND	.025mg/l
Chromium - Soluble	0.005	ND	ND	SMPL	SMPL	ND	.02	ND	.05
Lead - Soluble	0.005	ND	ND			ND	ND	ND	.025

VOLATILES mg/L									
ACETONE		.008	.006	NA	NA	.008	.024	.006	GUID. VALUE = .05 mg/L

5.0 GROUNDWATER FLOW

A WATER TABLE ISOPOTENTIAL MAP, BEDROCK ISOPOTENTIAL MAP AND A BEDROCK WATER LEVEL HYDROGRAPH HAVE BEEN PREPARED FOR THE PALMER STREET LANDFILL AND ARE PRESENTED IN FIGURES 3,4 AND 5, RESPECTIVELY. GROUNDWATER ELEVATIONS MEASURED ON JULY 8, 2016. WERE USED IN PREPARING THE WATER TABLE AND BEDROCK ISO-POTENTIAL MAP. THEY INDICATE THAT THE SHALLOW GROUNDWATER, AND BEDROCK FLOW IS PRIMARILY TO THE EAST.

THE VILLAGE IS ONCE AGAIN USING THE SURFACE RUNOFF FOR A WATER SOURCE INSTEAD OF THE DEEP AQUIFER WHICH IN TURN BROUGHT WATER LEVELS IN MW-1D BACK TO NORMAL. THIS HAS RESULTED IN A SUBSTANTIAL RISE IN WATER LEVELS, BACK TO THE PRE 2009 LEVLES.

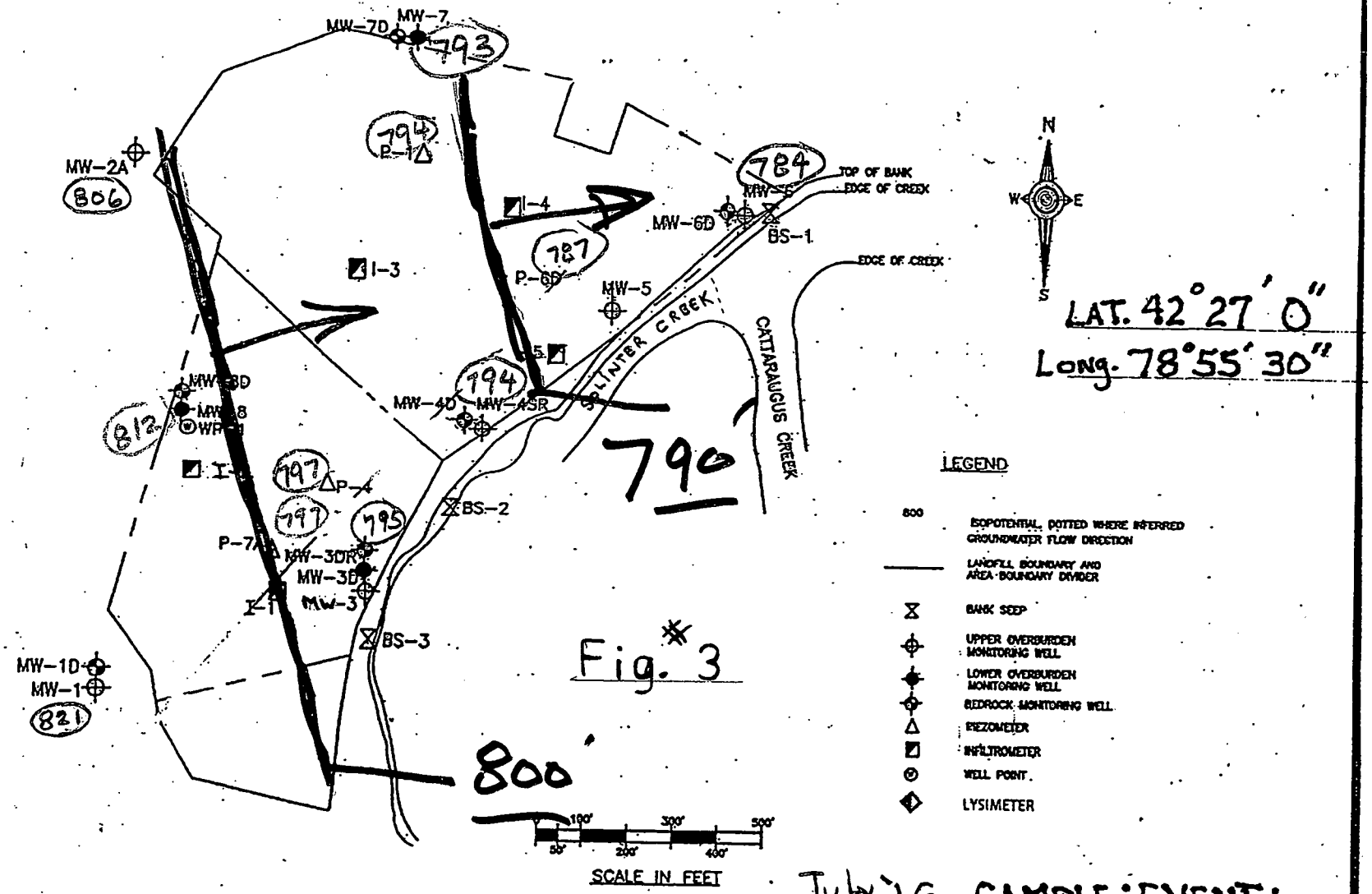


Fig. 3

July '16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

WATERTABLE ISOPOTENTIAL MAP.

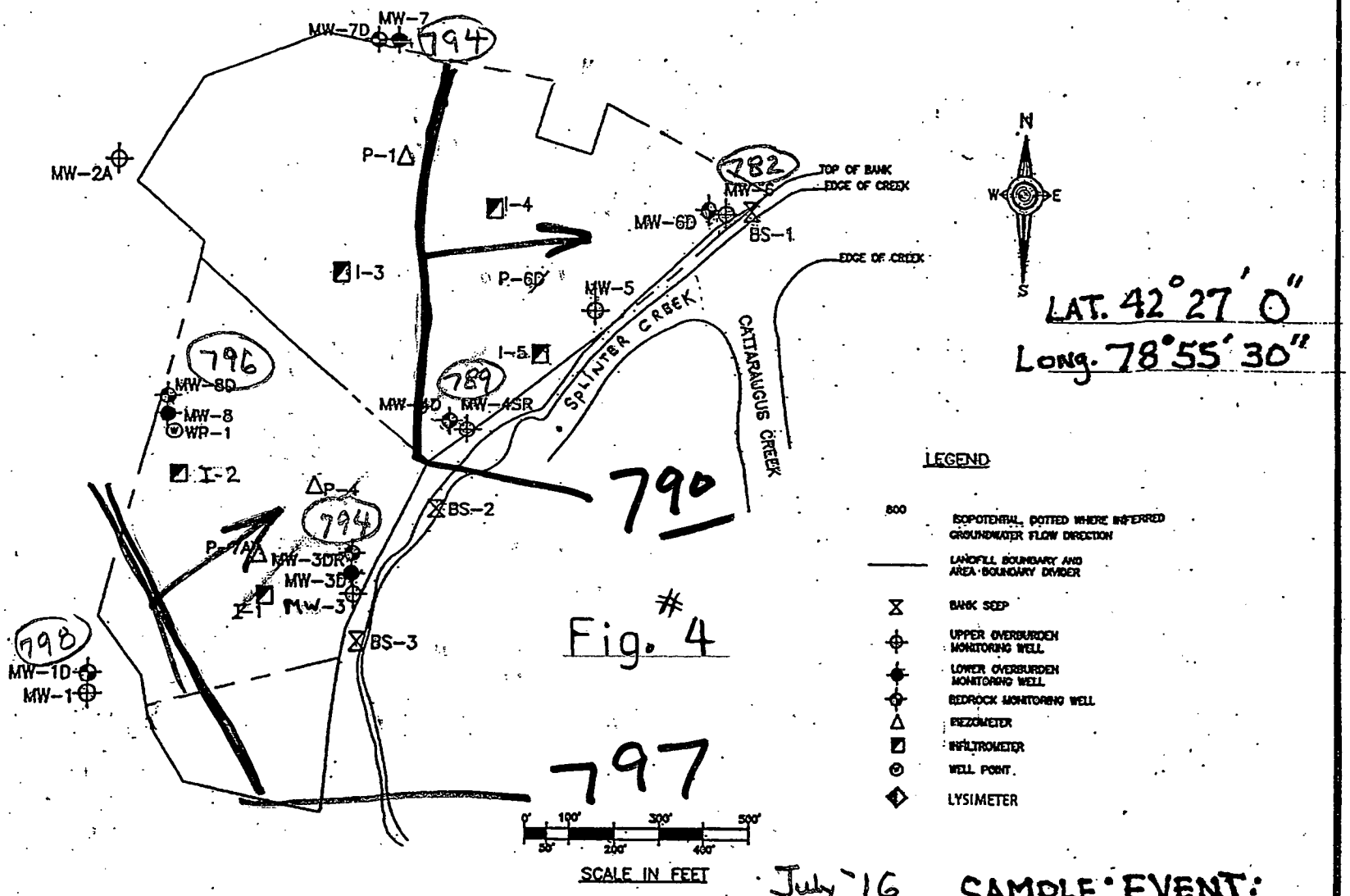


Fig. # 4

July '16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

BEDROCK ISOPOTENTIAL MAP.

PALMER STREET LANDFILL
MOENCH COMPANY
GROUNDWATER ELEVATION vs TIME
BEDROCK MONITOR WELLS & PIEZOMETERS

(FIG.#5)

Jul-16
FIG. #5

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Oct-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
MW-3DR	773	773	773	773	772	775	787	775	777	777	778	783	788	789	792	794	797	797	799	799	800	800	799	798
MW-7D	795	794	794	795	795	794	794	795	793	792	792	793	793	792	790	793	792	791	793	794	794	793	794	795
MW-8D	766	768	767	767	763	770	773	771	773	772	776	786	790	794	798	798	802	803	804	804	805	805	804	805
MW-1D					743	762	765	752	756	758	776	795	798	801	802	807	811	810	810	813	814	809	810	812
MW-6D					783	781	787	781	781	781	782	782	781	781	781	782	784	780	782	782	784	781	781	779
P-6D					790	790	790	790	790	790	790	789	789	789	789	789	789	785	789	789	789	790	790	788

PLMRGW3.xlsx.xls

July '16

(FIG #5)

Fig. #5

16-Jul

	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar-01	Aug-01	Apr.-02	Aug.-02	Mar. '03	Aug. '03	MAR. '04	AUG. '04	Apr. '05	Aug. '05
MW-3DR	801	800	801	801	802	802	803	799	799	801	801	801	802	803	803	800	803	803	802	803	804	803	803	803
MW-7D	795	794	794	795	795	796	796	795	795	795	795	795	795	795	797	796	796	796	796	796	797	796	796	796
MW-8D	805	805	805	806	807	808	809	800	803	805	807	806	808	808	809	808	809	809	808	809	809	809	809	809
MW-1D	813	813	814	815	816	816	818	795	806	813	818	814	816	816	818	817	819	819	817	818	818	819	818	819
MW-6D	782	782	783	782	782	783	782	781	782	783	781	781	783	783	783	782	783	782	784	782	783	780	784	782
P-6D	790	790	791	791	791	791	792	792	790	791	791	791	792	792	792	792	793	793	793	792	793	792	792	792

PLMRGW3.xlsx.xls

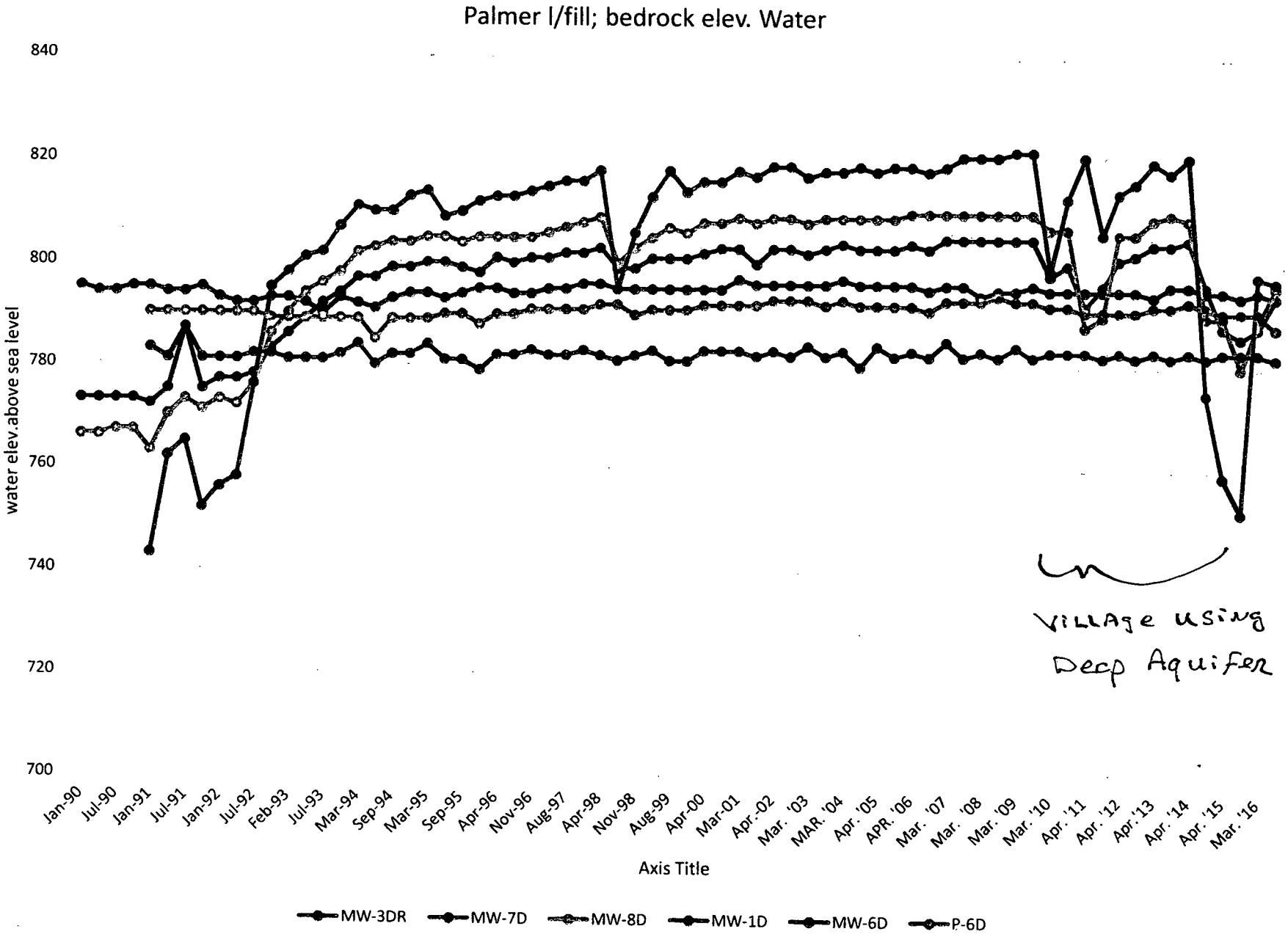
FIG. #5

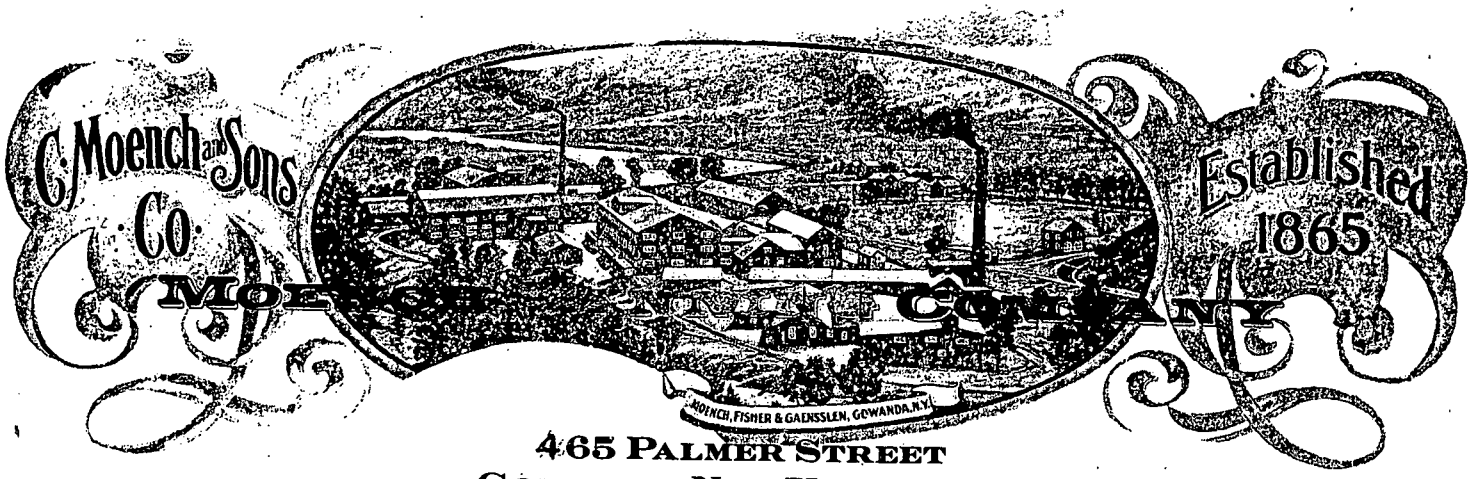
	APR. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	Aug. '10	Apr. '11	Aug. '11	Apr. '12	Aug.'12	Apr.'13	July '13	Apr. '14	Aug. '14	Apr. '15	Aug. '15	Mar. '16	July '16
MW-3DR	804	803	805	805	805	805	805	805	798	800	792	796	801	802	804	804	805	796	788	786	788	794
MW-7D	798	795	796	796	794	795	795	796	795	795	795	795	795	795	794	796	796	795	795	794	795	794
MW-8D	810	810	810	810	810	810	810	810	807	807	788	790	806	806	809	810	809	790	780	780	789	796
MW-1D	819	818	819	821	821	821	822	822	799	813	821	808	814	816	820	818	821	775	759	752	798	797
MW-6D	783	782	785	782	783	782	784	782	783	783	783	782	783	782	783	782	783	782	783	783	783	782
P-6D	792	791	793	793	793	794	793	793	792	792	791	791	791	791	792	792	793	792	791	791	791	788

**MW-8D depth measured at MW8, after April 2011

***Village using deep aquifer for water supply since 2009. Hydrant on often.

A: village back to using surface wtr.


Palmer I/fill; bedrock elev. Water
840
820
800
780
760
740
720
700
water elev.above sea level
Jan-90
Jul-90
Jan-91
Jul-91
Jan-92
Jul-92
Feb-93
Jul-93
Mar-94
Sep-94
Mar-95
Sep-95
Apr-96
Nov-96
Aug-97
Apr-98
Nov-98
Aug-99
Apr-00
Mar-01
Apr.-02
Mar. '03
MAR. '04
Apr. '05
APR. '06
Mar. '07
Mar. '08
Mar. '09
Mar. '10
Apr. '11
Apr. '12
Apr. '13
Apr. '14
Apr. '15
Mar. '16
Axis Title
MW-3DR
MW-7D
MW-8D
MW-1D
MW-6D
P-6D
Village using
Deep Aquifer



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GOWANDA, NEW YORK 14070

TEL. 716-532-2201

FAX 716-532-5518

PALMER STREET LANDFILL
GROUNDWATER MONITORING

TABLE #8
July '16

calibrated by: MB

RECORD OF CALIBRATION:

Instrument:	date	reading b/4 – after	Test
Slope-Water Level Indicator			Probe response to water.
Grace-Conductivity meter	7/11/16	1020	Read standardize liquid & calibrate. zero calibrate.
Cole-Parmer(multi meter)			
Ph---	7/11	4.01 7.03	Calibrate to buffer(s) solutions. ph- 4 ph- 7
Temperature			Calibrate to standard thermometer.

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TABLE #7

revised 8/06

PALMER STREET LANDFILL
GROUNDWATER MONITORING

July '16 Event

EQUIPMENT INVENTORY:

(A) Slope Indicator Co. - Model 51453, water level indicator

✓ (B) W.R. Grace (Dearborn) - Model EP-10, Micromhos meter (conductivity)

✓ (C) Cole-Parmer Instrumentation Co. - Model 5985-80, Ph, temperature °C , with probes.

~~(D) Grundfos Purging System.~~ -Hose, VFD, Generator.

✓ (E) Norton Company - Part #865-3170, Posi-Filter for filtering dissolved metals with filters. And vacuum pump/flask.

✓ (F) Wash bucket (5 gallon) with Alconox soap.

✓ (G)Rinse bucket with D.I. water. -buy 10 gal. distilled at store.
-get 2 gal. lab certified, eqpt. blank.

✓ (H)Rinse bottle with 10% Nitric Acid and water.

✓ (I) five gallon bucket to measure volume purged.

✓ (J) Latex gloves

(K) Required bottles and coolers and ice.

(L)Required field data forms.

(M) Cell Phone

(N) Watch

(O) Head Radio

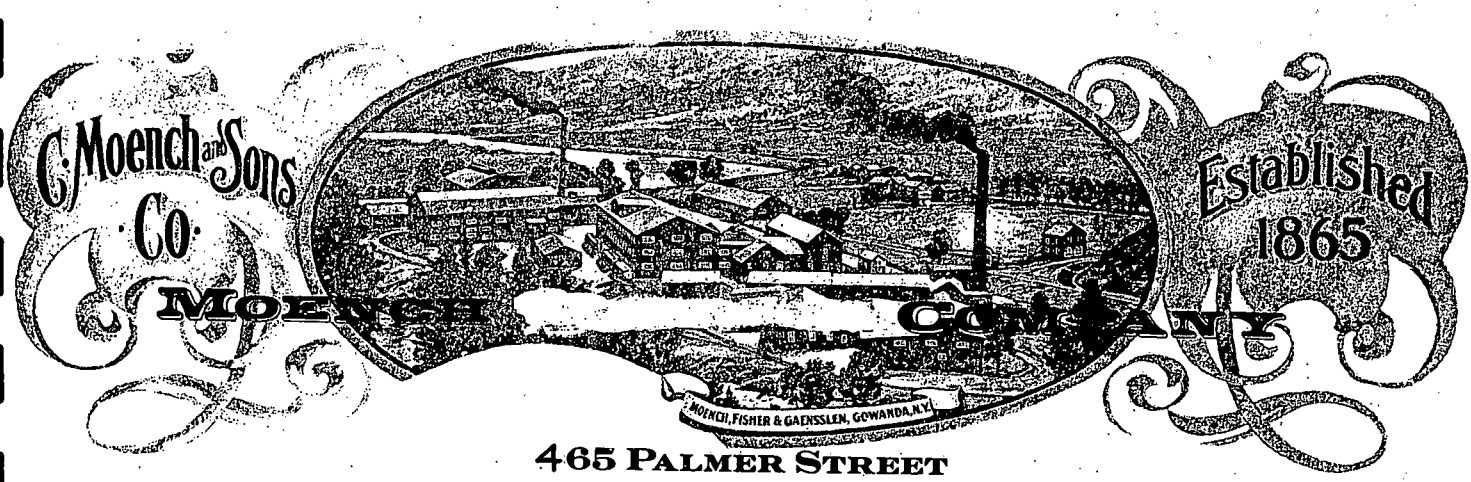
✓ (P) Board to hold Meters & equipment

(Q) Liquid soap/water spray-bees.

(R) Benedryl-bee sting.

6.0 REFERENCES

1. PALMER STREET LANDFILL CLOSURE/POST CLOSURE PLAN (EPA ID. NYDOO2126910), PREPARED BY MALCOLM PIRNIE, INC. REVISED FEBRUARY 1989. REVISED DECEMBER 2006.
2. PALMER STREET LANDFILL, SUPPLEMENTAL HYDROGEOLOGIC INVESTIGATION, PREPARED BY MALCOLM PIRNIE, INC. JANUARY 1989.
3. SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR GROUNDWATER MONITORING - PALMER STREET LANDFILL. PREPARED BY MALCOLM PIRNIE, INC., AUGUST 1989. REVISED 12/2006.
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. COVER SYSTEM PERFORMANCE EVALUATION, PALMER STREET LANDFILL; PREPARED BY MALCOLM PIRNIE, INC. OCTOBER 1995. Second "Evaluation"; 3/99. THIRD EVALUATION; 8/03.(LAST)
7. JULY 27TH, 2006 LETTER FROM GEOMATRIX TO STAN RADON (NYSDEC) DOCUMENTING A JULY 19TH MEETING IN WHICH REVISIONS TO THE GROUNDWATER MONITOIRNG SYSTEM, WERE AGREED UPON.
8. SEPTEMBER 7, 2006 LETTER FROM STAN RADON(NYSDEC) TO JEFFREY SMITH(MOENCH) CONFIRMING AGREEMENT OF REVISED GROUNDWATER MONITORING SYSTEM, AND COVER SYSTEM EVALUATION ELIMINATON.



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APPENDIX "A"

FIELD DATA SHEETS FOR:

July 2016

MONITORING EVENT:
PALMER STREET LANDFILL

WELL DEVELOPMENT/PURGING LOG

(A) !!!

MOENCH COMPANY

PROJECT TITLE: PALMER ST. LANDFILL - GWM

PROJECT NO.: OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH + MIKE BEST

DATE: 7-12-16, 945 - 1000

WELL NO.: MW-3 {USUALLY DRY} (*) (5)

1 TOTAL CASING AND SCREEN LENGTH (ft.) 17.10

2 CASING INTERNAL DIAMETER (in.) 2"

3 WATER LEVEL BELOW TOP OF CASING (ft.) 16.15

4 VOLUME OF WATER IN CASING (gal.)

V = 0.0408 (^{2} x (1 - 3) = .16 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)									
	INIT.									
pH	6.75									
VISUAL-INITIAL TURBIDITY	TURBID									
CONDUCTIVITY	1600									
Temp °C	15.1									

ONLY (1) VOLUME) (2) SOME RECHARGE

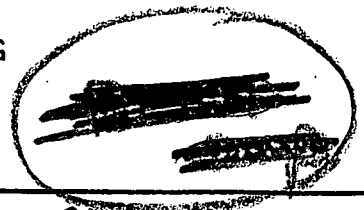
COMMENTS: (*) USUALLY DRY OR JUST MUDDY BOTTOM.

(A) X VERY UNUSUAL TO ~~GET~~ SAMPLE BEING SO DRY

USUALLY NO RECHARGE

Maybe ... NOT USING Aquifer Anymore-

WELL DEVELOPMENT/PURGING LOG



MOENCH CO.

PROJECT TITLE: PALMER St. LANDFILL - GWM

~~PROJECT NO.~~: OF 2 ANNUAL EVENTS.

STAFF: J. Smith & M. BEST

DATE: 7-12-16, 1000

WELL NO.: MW-3D

1	TOTAL CASING AND SCREEN LENGTH (ft.)	67.70
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	18.30
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

$V = 0.0408 (\quad ^2 \times (1 - 3) = 8.3$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	INIT.										
pH	7.69	7.77									
VISUAL-INITIAL TURBIDITY	clear										
CONDUCTIVITY	390	400									
TEMP °C	13.9										

COMMENTS:

GOOD RECHARGE - LIKELY DUE TO VILLAGE NO LONGER USING DEEP AQUIFER

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER St. L/FILL-GW/M TYPE OF SAMPLE: GROUNDWATER - GRAB

~~CLIENT~~: MOENCH CO. LOCATION NO.: MW-3D

~~JOB NO.~~: ~~LAB SAMPLE NO.~~:

WELL DATA: DATE: 7.12.16 TIME: 1000

Casing Diameter (inches): 2" Casing Material: PVC

Screened Interval (ft BGS): Screen Material: PVC

Static Water Level Below TOR (ft): Bottom Depth (ft): 67.70

Elevation Top of Well Riser: 810.73 Datum Ground Surface:

PURGING DATA: DATE: 7/12/16 TIME: Start: 1000 Finish: 1005

Method: SUPER NOVA - Pump 12V. Pumping Rate (gal/min): .5 gpm

Well Volumes Purged ($V=\pi R^2H/231$): Was well purged dry? ___ Yes X No

Standing Volume (gal): Was well purged below sand pack? ___ Yes X 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 ___ No X

Field Personnel: J. SMith/M. BEST

SAMPLING DATA: DATE: 7/12/16 TIME: Start: 1005 Finish: 1012

Method: TEFLON BAILER Sampler: JS & MB

Present Water Level (ft): Air Temperature (°F): 75

Depth of Sample (ft): Weather Conditions: CLOUDY PARTLY

Is sampling equipment dedicated to sample location? Yes * No

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: Finish:

Filtered: * Yes ___ No Cool to 4°C: *

Preservative: ___ H_2SO_4 * HNO_3 ___ NaOH HCl Other

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: X Turbid: Color: ~~yes~~ ?? STRANGE SHALE ?

Contains Sediment: Odor: yes Other:

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

Turbidity (NTU): Other:

REMARKS: SAMPLE/FILTER Equipment: WASH'd w/SOAP + WATER (3X). RINSED IN DISTIL'd WATER. RINSE with 10% NITRIC ACID WASH. FINAL RINSE W/ DISTIL'd WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO. BLIND DUP

PROJECT TITLE: PALMER St. LANDFILL - GWM

PROJECT NO.: OF 2 ANNUAL EVENTS.

STAFF: J. Smith & M. BEST

DATE: 7-12-16, 850

WELL NO.: MW-4SR (3)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	24.92
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	13.05
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (^{2} x (1 - 3) = 2.0 gal.

WELL I.D.	VOL. GAL./FT.
1"	0.04
(2")	(.17)
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	INIT.									
pH	6.44	6.47			(1 1/2 Vol)					
TUR. - INITIAL APPEARANCE	TURBID									
CONDUCTIVITY	1100	1300								
Temp °C	13.1									

COMMENTS:

MUDDY LOOKING VERY BROWN/ORANGE - VERY DRY PRIOR WEATHER.

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER St. LANDFILL-GWM
~~CLIENT~~: MOENCH CO.
~~LOCATION~~: _____

TYPE OF SAMPLE: GROUNDWATER-GRAB
LOCATION NO.: MW-4SR
~~LAB NUMBER~~: _____

WELL DATA: DATE: 7-12-16 TIME: 850

Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): _____ Screen Material: PVC
Static Water Level Below TOR (ft): _____ Bottom Depth (ft): 24.92
Elevation Top of Well Riser: 806.75 AGL Datum Ground Surface: _____

PURGING DATA: DATE: 7/12/16 TIME: Start: 850 Finish: 900

Method: DEDICATED BAILER Pumping Rate (gal/min): 1.0
Well Volumes Purged ($V=\pi R^2H/231$): _____ Was well purged dry? _____ Yes X No
Standing Volume (gal): _____ Was well purged below sand pack? X 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 * No _____
Field Personnel: J. SMITH & M. BEST

SAMPLING DATA: DATE: 7-12-16 TIME: Start: 900 Finish: 913

Method: DEDICATED BAILER Sampler: JS & MB
Present Water Level (ft): _____ Air Temperature (°F): 70
Depth of Sample (ft): _____ Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location? Yes * No _____

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: — Finish: —

Filtered: * Yes _____ No Cool to 4°C: *
Preservative: _____ H_2SO_4 * HNO_3 _____ NaOH HCl Other

PHYSICAL AND CHEMICAL DATA:

Appearance: Clear: _____ Turbid: * Color: BROWN/ORANGE
Contains Sediment: _____ Odor: FINISH Other: _____
Temperature (°C): _____ pH: _____ Specific Conductivity (umhos/cm): _____
Turbidity (NTU): _____ Other: _____

REMARKS: SAMPLE/FILTER EQUIPMENT: WASH w/SOAP + WATER (3X). RINSED With DISTL'd WATER. RINSED With 10% NITRIC ACID WASH. FINAL RINSE w/DISTILL'd WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH & MIKE BEST

DATE: 7-12-16, 915

WELL NO.: MW-4D (4)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	74.94
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	16.60
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

$V = 0.0408 (\ ^{2} \times (1 - 3) = 9.9$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
'PH'	7.75	7.71								
VISUAL-INITIAL TURBIDITY	Clear									
CONDUCTIVITY	600	620								
TEMP. °C	13.4									

COMMENTS:

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. L/F - G.W.M.
MOENCH CO.
2 OF 2 ANNUAL EVENTS

TYPE OF SAMPLE: GROUND WATER
LOCATION NO.: MW-4D

WELL DATA: DATE: 7-12-16 TIME: 915

Casing Diameter (inches): 2"
Casing Material: PVC
Screened Interval (ft BGS):
Screen Material: PVC
Static Water Level Below TOR (ft.):
Bottom Depth (ft.) 74.94
Elevation Top of Well Riser: 805.93
Datum Ground Surface:
Elevation Top of Screen: 72.9

PURGING DATA: DATE: 7-12-16 TIME: Start: 915 Finish: 930

Method: ELECTRIC PUMP - NOT DEDICT'd
Pumping Rate (gal/min): 1-2 gpm
Well Volumes Purged (πr²h/231): (SUPERNOVA)
Was well purged dry? Yes ___ No X
Standing Volume (GAL.)
Was Well purged below sand pack? Yes ___ No X
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 ___ No *

Field Personnel: J.Smith & M. BEST

SAMPLING DATA: DATE: 7/12/16 TIME: Start: 930 Finish: 945

Method: DEDICATED BAILER
Sampler: JS + M.B.
Present Water Level (ft.):
Air Temperature (F°): 75
Depth of Sample (ft.):
Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No
Source and type of water used in field for QC purposes: ALPHA LAB

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: Finish:

Filtered: Yes * No
Cool to 4°C: *
Preservative: H_2SO_4 HNO_3 * NaOH Other HCl

PHYSICAL AND CHEMICAL

Appearance: Clear: * Turbid: Color:
Contains Sediment Odor: FINISH Other:
Temperature (°C): pH Specific Conductivity (μmhos/cm):
Turbidity (NTU): Other:

E. FLASK +/OR

REMARKS: NA - NOT APPLICABLE. TEFLON BAILER USED FOR SAMPLE WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER/ RINSED WITH 10% NITRIC ACID WASH, THEN FINAL RINSE WITH ~~LAB~~ GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - GWM

PROJECT NO.: OF 2 ANNUAL EVENTS.

STAFF: J. Smith & M. BEST

DATE: 7-12-16 , 833

WELL NO.: MW-6 ②

			WELL I.D.	VOL. GAL./FT.
1	TOTAL CASING AND SCREEN LENGTH (ft.)	18.78	1"	0.04
2	CASING INTERNAL DIAMETER (in.)	2"	(2")	(0.17)
3	WATER LEVEL BELOW TOP OF CASING (ft.)	16.95	3"	0.38
4	VOLUME OF WATER IN CASING (gal.)		4"	0.66
			5"	1.04
			6"	1.50
			8"	2.60

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

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	INIT.									
Ph	6.41					ONLY				
TURBIDITY APPEAR=INITIAL	ALMOST CLEAR					Volume NO RECHARGE				
CONDUCTIVITY	1400									
Temp °C	16.4									

COMMENTS:

VERY DRY PRIOR WEATHER

WATER SAMPLING FIELD DATA SHEET

PROJECT: PALMER ST. LANDFILL
CLIENT: MOENCH CO.
~~JOB NO.~~: 2 OF 2 ANNUAL EV.
TYPE OF SAMPLE: GROUNDWATER
LOCATION NO.: MW-6
~~LAB SAMPLE NO.~~:

WELL DATA: DATE: 7/12/16 TIME: 835
Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): Screen Material: PVC
Static Water Level Below TOR (ft): Bottom Depth (ft): 18.78
Elevation Top of Well Riser: 800.48 ASL Datum Ground Surface:

PURGING DATA: DATE: 7-12-16 TIME: Start: 835 Finish: 845
Method: DEDICATED BAILER Pumping Rate (gal/min): 1.0
Well Volumes Purged ($V=\pi R^2H/231$): Was well purged dry? ____ Yes X No
Standing Volume (gal): Was well purged below sand pack? X 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: JS & MB

SAMPLING DATA: DATE: 7/12/16 TIME: Start: 845 Finish: 850
Method: DEDICATED BAILER Sampler: JS & MB
Present Water Level (ft): Air Temperature (°F): 70
Depth of Sample (ft): Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location? Yes X No

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: Finish:
Filtered: * Yes No Cool to 4°C: *
Preservative: ____ H_2SO_4 * HNO_3 ____ NaOH HCl Other

PHYSICAL AND CHEMICAL DATA:
Appearance: Clear: ____ Turbid: * Color: BLACK NAT'L GAS?
Contains Sediment: Odor: ORGANIC Other:
Temperature (°C): pH: Specific Conductivity (µmhos/cm):
Turbidity (NTU): Other:

REMARKS: DEDICATED BAILER FOR SAMPLE, & FILTER EQUIPMNT. WASHED (3X), RINSED with LAB GRADE WATER. RINSED w/ 10% NITRIC ACID WASH. FINAL RINSE D.I. WATER.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH & MIKE BEST

DATE: 7-12-16 / 803

WELL NO.: MW-6D (1)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	37.03
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	18.85
4	VOLUME OF WATER IN CASING (gal.)	

V = 0.0408 (^{2} x (1 - 3) = 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)									
	INIT.									
PH	7.70	7.80	7.77							
VISUAL-INITIAL TURBIDITY	CLEAR									
CONDUCTIVITY	1000	1050								
TEMP. °C	14.7	—								

COMMENTS:

VERY DRY WEATHER - PRIOR

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL
MOENCH CO.
2 OF 2 ANNUAL EVENTS.

TYPE OF SAMPLE: GROUNDWATER
LOCATION NO.: MW-6D

WELL DATA: DATE: 7/12/16 TIME: 803
Casing Diameter (inches): 2 Casing Material: PVC
Screened Interval (ft BGS): NA Screen Material: PVC
Static Water Level Below TOR (ft.): Bottom Depth (ft.) 37.03
Elevation Top of Well Riser: 800.63 Datum Ground Surface:
Elevation Top of Screen: NA

PURGING DATA: DEDICATED DATE: 7/12/16 TIME: Start: 803 Finish: 817
Method: TEFLON BAILER-HAND Pumping Rate (gal/min): ~ 5 gpm
Well Volumes Purged (πR²H/231): Was well purged dry? Yes ____ No X
Standing Volume (GAL.) ____ Was well purged below sand pack? Yes ____ No X
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 * No ____
Field Personnel: JS + MB

SAMPLING DATA: DATE: 7/12/16 TIME: Start: 817 Finish: 832
Method: DEDIC. TEFLON BAILER-HAND Samplers: JS + MB
Present Water Level (ft.): Air Temperature (F°): 70
Depth of Sample (ft.): Weather Conditions: CLOUDY
Is sampling equipment dedicated to sample location: Yes * No ____
Source and type of water used in field for QC purposes: ALPHA LAB

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: ____ Finish: ____
Filtered: Yes * No ____ Cool to 4°C: *
Preservative: H_2SO_4 ____ HNO_3 * NaOH ____ Other HCl

PHYSICAL AND CHEMIC
Appearance: Clear: X Turbid: ____ Color: ____
Contains Sediment ____ Odor: NONE Other: ____
Temperature (°C): ____ pH ____ Specific Conductivity (μmhos/cm): ____
Turbidity (NTU): ____ Other: ____

REMARKS: E. FLASK +/OR TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LABORATORY WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO.

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH & MIKE BEST

DATE: 7-12-16, 11:25

WELL NO.: MW-7D (10)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	41.90
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	6.80
4	VOLUME OF WATER IN CASING (gal.)	

$V = 0.0408 (\quad ^2 \times (1 - 3) = 5.9$ 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)									
	INIT.									
"PH"	7.88	7.90								
VISUAL- INITIAL TURBIDITY	LITTLE turbid									
CONDUCTIVITY	620	580								
TEMP. °C	15.8									

COMMENTS: VERY DRY PRIOR WEATHER

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL — TYPE OF SAMPLE: GROUND WATER
: MOENCH - - - - CO. — LOCATION NO.: MW-7D
~~JOB NO.~~: 2 OF 2 ANNUAL EVENTS — ~~SAMPLE NO.~~: —

WELL DATA: DATE: 7/12/16 — TIME: 1140
Casing Diameter (inches): 2 — Casing Material: PVC
Screened Interval (ft BGS): 34 - 39 — Screen Material: PVC
Static Water Level Below TOR (ft.): — Bottom Depth (ft.) 41.90
Elevation Top of Well Riser: 800.39 — Datum Ground Surface:
Elevation Top of Screen: 763.50

PURGING DATA: DATE: 7/12/16 — TIME: Start: 11:45 Finish: 11:55
Method: TEFLON BAILER - MANUAL — Pumping Rate (gal/min): .5 gpm
Well Volumes Purged (πR²H/231): — Was well purged dry? Yes ___ No X
Standing Volume (GAL.) ___ — Was Well purged below sand pack? Yes ___ No X
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 * No ___
Field Personnel: J. SMITH + BEST

SAMPLING DATA: DATE: 7-12-16 — TIME: Start: 1155 Finish: 1213
Method: TEFLON BAILER — Sampler: JS + MB
Present Water Level (ft.): — Air Temperature (F°): 80
Depth of Sample (ft.): — Weather Conditions: SUNNY
Is sampling equipment dedicated to sample location: Yes * No ___
Source and type of water used in field for QC purposes: ALPHA LAB

PRESERVATION DATA: DATE: 7/5/16 ALPHA — TIME: Start: ___ Finish: ___
Filtered: Yes * No ___ — Cool to 4°C: *
Preservative: H_2SO_4 ___ HNO_3 * NaOH ___ Other HCl

PHYSICAL AND CHEMICAL
Appearance: Clear* ___ Turbid: Little — Color: Slight Tint
Contains Sediment ___ — Odor: NO Other: ___
Temperature (°C): ___ pH ___ — Specific Conductivity (μmhos/cm): ___
Turbidity (NTU): ___ — Other: ___

E. FLASK +/OR
REMARKS: TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LAB. WATER / RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG

MOENCH CO. YEAR -

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: ~~-~~ OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH & MIKE BEST

DATE: 7-12-16 1050

WELL NO.: MW-8D (9)

1	TOTAL CASING AND SCREEN LENGTH (ft.)	127.70
2	CASING INTERNAL DIAMETER (in.)	2"
3	WATER LEVEL BELOW TOP OF CASING (ft.)	25.50
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

$V = 0.0408 (\ ^{2} \times (1 - 3) = 12.3$ gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	INIT.									
"PH"	7.81	7.85								
VISUAL-INITIAL TURBIDITY	clear									
CONDUCTIV.	390	410								
TEMP. °C	13.9									

COMMENTS:

STAND BY HOLE NYSDEC

WATER SAMPLING FIELD DATA SHEETS

PROJECT: PALMER ST. LANDFILL
MOENCH COMPANY
OF 2 ANNUAL EVENTS

TYPE OF SAMPLE: GROUND WATER-GRAB
LOCATION NO.: MW-8D

WELL DATA: DATE: 7/12/16 TIME: 1050
Casing Diameter (inches): 2" Casing Material: PVC
Screened Interval (ft BGS): NA Screen Material: PVC
Static Water Level Below TOR (ft.): Bottom Depth (ft.) 127.70
Elevation Top of Well Riser: 821.89 Datum Ground Surface: —
Elevation Top of Screen: NA

PURGING DATA: DEDICATED DATE: 7/12/16 TIME: Start: 1050 Finish: 1120
Method: ELECTRIC PUMP - SUPER NOVA Pumping Rate (gal/min): 1-2 GPM
Well Volumes Purged (πR²H/231): Was well purged dry? Yes ____ No X
Standing Volume (GAL.) ____ Was well purged below sand pack? Yes ____ No X
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 * No ____
Field Personnel: JS & MB

SAMPLING DATA: DATE: 7/12/16 TIME: Start: 1120 Finish: 1137
Method: DEDICATE PUMP - Sampler: JS & MB
Present Water Level (ft.): Air Temperature (F°): 80
Depth of Sample (ft.): Weather Conditions: SUNNY
Is sampling equipment dedicated to sample location: Yes * No ____
Source and type of water used in field for QC purposes: ALPHA LAB

PRESERVATION DATA: DATE: 7/5/16 ALPHA TIME: Start: ____ Finish: ____
Filtered: Yes * No ____ Cool to 4°C: *
Preservative: H_2SO_4 ____ HNO_3 * NaOH ____ Other HCl

PHYSICAL AND CHEMICAL
Appearance: Clear: X Turbid: ____ Color: ____
Contains Sediment ____ Odor: NO Other: ____
Temperature (°C): ____ pH ____ Specific Conductivity (µmhos/cm): ____
Turbidity (NTU): ____ Other: ____

E. FLASK +/OR

REMARKS: TEFLON BAILER USED FOR SAMPLING WAS WASHED WITH SOAP, RINSED WITH LAB. WATER/RINSED WITH 10% NITRIC WASH THEN FINAL RINSE WITH LAB. GRADE WATER PRIOR TO USE.

* No BS - SAMPLE POOL BY CREEK

WATER SAMPLING FIELD DATA SHEETS

BS-3 (2)

PROJECT: PALMER ST. LANDFILL — TYPE OF SAMPLE: SURFACE/GROUND WATER

MOENCH Co. — LOCATION NO.: BS-3 (BANK SEEP SOUTH OF MW-3)

OF 2 ANNUAL EVENTS

WELL DATA: DATE: 7/12/16 — TIME: 1018

Casing Diameter (inches): NA — Casing Material: N/A

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: NA — Pumping Rate (gal/min): N/A

Well Volumes Purged (πR²H/231): NA — Was well purged dry? Yes ___ No ___

Standing Volume (GAL.) NA — Was well purged below sand pack? Yes ___ No ___

Volume Purged (GAL.) NA

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: J.SMITH & M. BEST

No B/S - POOL BY CREEK

SAMPLING DATA: DATE: 7-12-16 — TIME: Start: 1022 — Finish:

Method: SURFACE WATER GRAB — Sampler: J.SMITH + M. BEST

Present Water Level (ft.): NA — Air Temperature (F°): 78

Depth of Sample (ft.): NA — Weather Conditions: SUNNY

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

Source and type of water used in field for QC purposes: ALPHA LAB

PRESERVATION DATA: DATE: 7/5/16 ALPHA — TIME: Start: — Finish:

Filtered: Yes * No ___ — Cool to 4°C: *

Preservative: H_2SO_4 ___ HNO_3 * NaOH ___ Other * HCl

PHYSICAL AND CHEMICAL

Appearance: Clear: NA Turbid: IRON — Color: RED

Contains Sediment — Odor: NO Other:

Temperature (°C): 11.0 pH 7.07 — Specific Conductivity (µmhos/cm): 700

Turbidity (NTU): — Other:

REMARKS: N/A - NOT APPLIC. E. FLASK +/OR TEFLON BAILER USED FOR SAMPLING/FILTERING, WAS WASHED WITH ALCONOX SOAP RINSED W/ LAB GRADE WATER, RINSED W/ 10% NITRIC WASH, FINAL RINSE WITH LAB GRADE WATER PRIOR TO USE.

WELL DEVELOPMENT/PURGING LOG.

MOENCH COMPANY

PROJECT TITLE: PALMER ST. LANDFILL - G.W.M.

PROJECT NO.: OF 2 ANNUAL EVENTS

STAFF: JEFF SMITH / MIKE BEST

DATE: 7-12-16 - , 1230

WELL NO.: Equipment BLANK (11)

1 TOTAL CASING AND SCREEN LENGTH (ft.) NA

2 CASING INTERNAL DIAMETER (in.) ______

3 WATER LEVEL BELOW TOP OF CASING (ft.) ______

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} x (1 - 3) = NA gal.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	ONLY		?		FM REFRIG					
"PH"	8.25									
VISUAL TURBIDITY	ALWAYS CLEAR									
CONDUCTIVITY	12									
Temp. °C	12.3									

COMMENTS:
D.I. WATER (Q.C) FROM: ALPHA LAB

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Date Rec'd in Lab

ALPHA Job #

Client Information

Client: Moench Company
Address: 465 Palmer St
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@caleres.com

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Jeff Smith
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☒

Other project specific requirements/comments:

Metals samples are filtered by the client in the field.

Please specify Metals or TAL.

ANALYSIS

Sample Filtration

☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)							Sample Specific Comments	Total Bottle
	Site 1 MW-6D	7/12/16	—	GW		X	X							Grab	4
	Site 2 MW-6	"	—	GW		X	X							Grab	4
	Site 3 MW-4SR	"	—	GW		X	X							Grab	4
	Site 4 MW-4D	"	—	GW		X	X							Grab	4
	Site 5 MW-3	"	—	GW		X	X							Grab	4
	Site 6 BLIND DUPLIC	"	—	GW		X	X							Grab	4
	Site 7 MW-3D	"	—	GW		X	X							Grab	4
	Site 8 BS-3	"	—	GW		X	X							Grab	4
	Site 9 MW-8	"	—	GW		X	X							Grab	4
	Site 10 MW-7D	"	—	GW		X	X							Grab	4
						Container Type	V	P							
						Preservative	B	C							

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	7/12/16, 1500		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Client Information

Client: Moench Company
Address: 465 Palmer St
Gowanda, NY 14070
Phone: 716-532-2201
Fax: 716-532-5518
Email: jxsmith@caleres.com

Project Information

Project Name: Palmer Street Landfill Routine Parameter List
Project Location: Gowanda, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Jeff Smith
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☒

Other project specific requirements/comments:

Metals samples are filtered by the client in the field.

Please specify Metals or TAL.

Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	D-Metals (As,Cr,Pb)	Sample Filtration / Preservation	Sample Specific Comments	Total Bottles
Site 11 EQIP. BLNK	7/12/16	—	GW	JS	X	X		Grab	4
~~Site 12~~ NO SAMPLE	—	—	~~GW~~		X	X		~~Grab~~	4
Trip Blank			Water		X	X		Trip Blank	2

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Container Type	V	P					
Preservative	B	C					

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

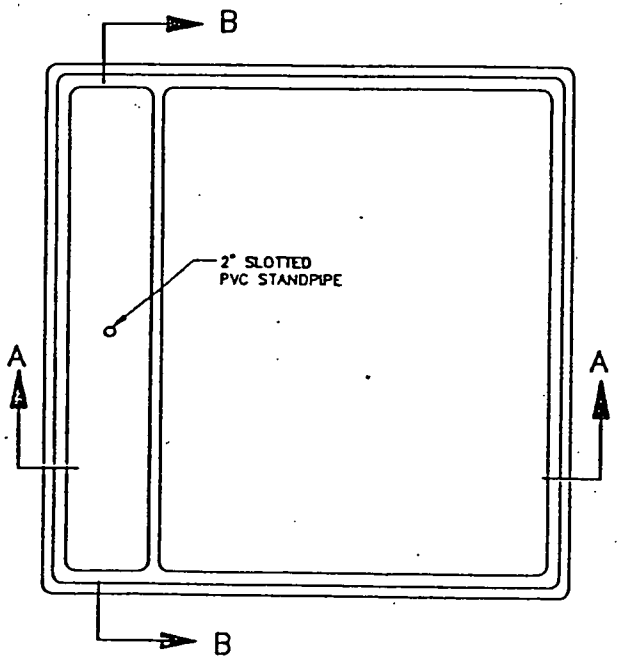
Relinquished By:	Date/Time	Received By:	Date/Time
J. Smith	7/12/16 1500		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

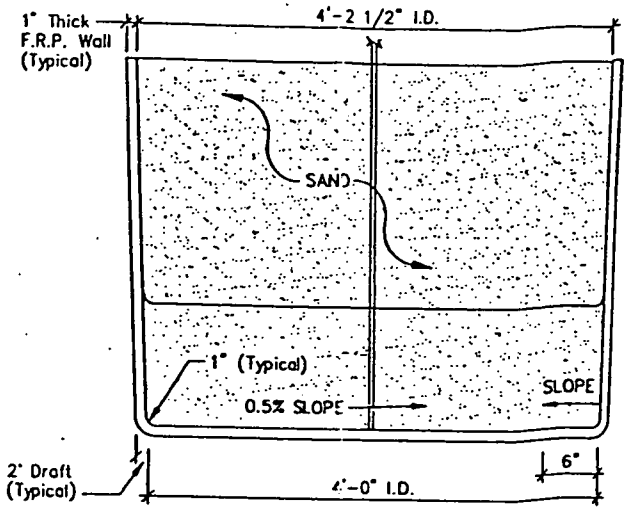
APPENDIX B

INFILTROMETER DESIGN

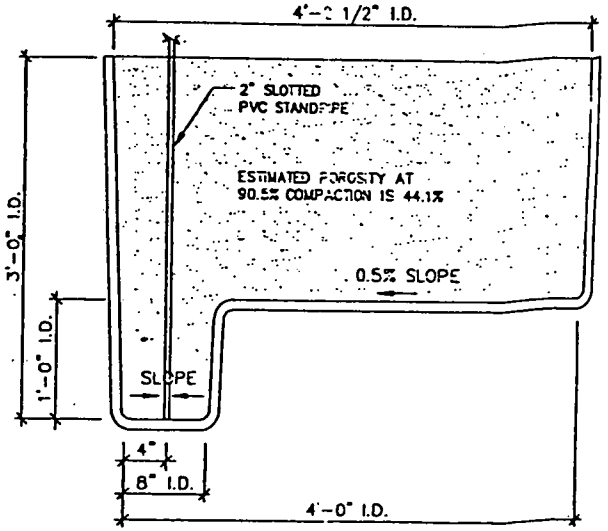


PLAN

SECTION B–B



SECTION A–A

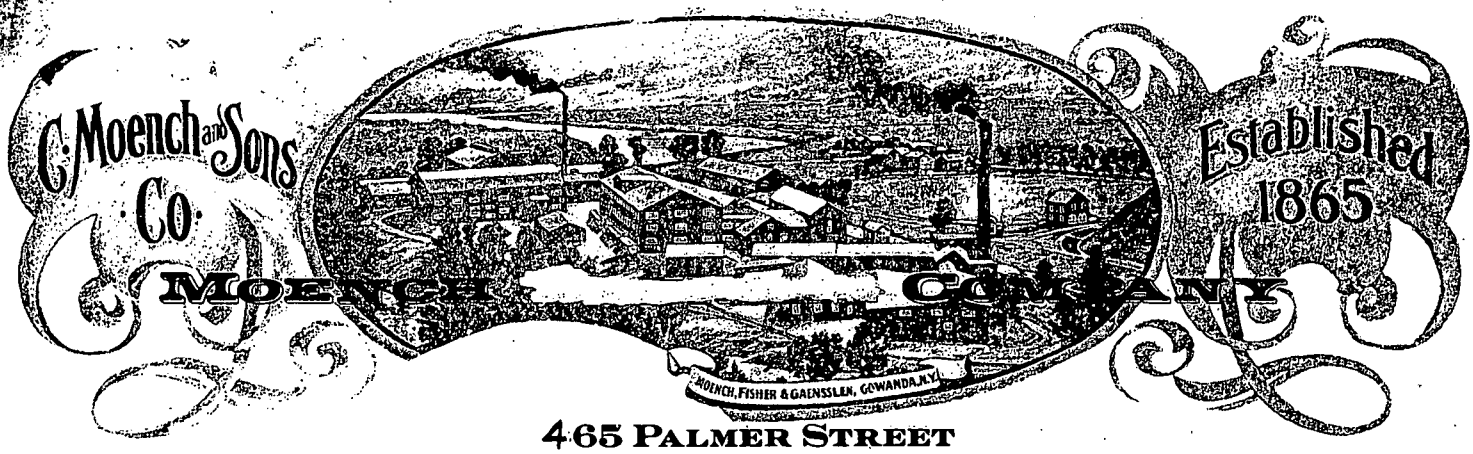


MTC-23-INF

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

INFILTROMETER

MOENCH TANNING COMPANY 3/20



465 PALMER STREET
GOWANDA, NEW YORK 14070

TEL. 716-532-2201 FAX 716-532-5518

APPENDIX "C"

ANALYTICAL REPORT FROM LABORATORY:

FOR July 2016

MONITORING EVENT....

PALMER STREET LANDFILL

ALPHA ANALYTICAL

Palmer L/Fill
7/12/16
Smpl

ANALYTICAL REPORT

Lab Number:	L1621453
Client:	Moench Company 465 Palmer Street Gowanda, NY 14070
ATTN:	Jeff Smith
Phone:	(716) 532-2201
Project Name:	PALMER ST. LF ROUTINE LIST
Project Number:	Not Specified
Report Date:	07/21/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 10:44
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	27		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	94		70-130

Serial_No:07211618:32

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 11:07
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	24		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-03
Client ID: SITE 3 MW-4SR
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 11:31
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	2.5		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-03
Client ID: SITE 3 MW-4SR
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	83		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-04
Client ID: SITE 4 MW-4D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 11:54
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-04
Client ID: SITE 4 MW-4D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	5.2		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	93		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-05
Client ID: SITE 5 MW-3
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 12:18
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-05
Client ID: SITE 5 MW-3
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	18		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-06
Client ID: SITE 6 BLIND DUPLIC
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 12:41
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-06
Client ID: SITE 6 BLIND DUPLIC
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	24		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	94		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-07
Client ID: SITE 7 MW-3D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 13:04
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-07
Client ID: SITE 7 MW-3D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	98		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-08
Client ID: SITE 8 BS-3
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 13:28
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-08
Client ID: SITE 8 BS-3
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	7.8		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-09
Client ID: SITE 9 MW-8D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 13:51
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-09
Client ID: SITE 9 MW-8D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	5.8		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-10
Client ID: SITE 10 MW-7D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 14:15
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-10
Client ID: SITE 10 MW-7D
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	7.7		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-11
Client ID: SITE 11 EQUIPMENT BLANK
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 14:38
Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-11
Client ID: SITE 11 EQUIPMENT BLANK
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Styrene	ND		ug/l	2.5	--	1
Acetone	6.2		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-12
Client ID: TRIP BLANK
Sample Location: GOWANDA, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/18/16 15:01
Analyst: KD

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	--	1
1,1-Dichloroethane	ND		ug/l	2.5	--	1
Chloroform	ND		ug/l	2.5	--	1
2-Chloroethylvinyl ether	ND		ug/l	10	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	2.5	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	2.5	--	1
Ethylbenzene	ND		ug/l	2.5	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	2.5	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.5	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	--	1
Trichloroethene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	2.5	--	1
o-Xylene	ND		ug/l	2.5	--	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	--	1

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-12
Client ID: TRIP BLANK
Sample Location: GOWANDA, NY

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Styrene	ND		ug/l	2.5	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-01
Client ID: SITE 1 MW-6D
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.005		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 01:37	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	-	1	07/14/16 09:05	07/15/16 01:37	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 01:37	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-02
Client ID: SITE 2 MW-6
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.065		mg/l	0.005	–	1	07/14/16 09:05	07/15/16 02:21	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.0100	–	1	07/14/16 09:05	07/15/16 02:21	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	–	1	07/14/16 09:05	07/15/16 02:21	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-03
Client ID: SITE 3 MW-4SR
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.009		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 02:25	EPA 3005A	19,200.7	FB
Chromium, Dissolved	0.02		mg/l	0.01	-	1	07/14/16 09:05	07/15/16 02:25	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 02:25	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-04
Client ID: SITE 4 MW-4D
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	ND		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 02:30	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	-	1	07/14/16 09:05	07/15/16 02:30	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 02:30	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-05
Client ID: SITE 5 MW-3
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.009		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 02:34	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	-	1	07/14/16 09:05	07/15/16 02:34	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 02:34	EPA 3005A	19,200.7	FB

Project Name:	PALMER ST. LF ROUTINE LIST	**Lab Number:**	L1621453
Project Number:	Not Specified	**Report Date:**	07/21/16

SAMPLE RESULTS

Lab ID:	L1621453-06	Date Collected:	07/12/16 00:00
Client ID:	SITE 6 BLIND DUPLIC	Date Received:	07/12/16
Sample Location:	GOWANDA, NY	Field Prep:	Field Filtered (Dissolved Metals)
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	ND		mg/l	0.005	–	1	07/14/16 09:05	07/15/16 02:39	EPA 3005A	19,200.7	FB
Chromium, Dissolved	0.02		mg/l	0.01	–	1	07/14/16 09:05	07/15/16 02:39	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	–	1	07/14/16 09:05	07/15/16 02:39	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Lab Number: L1621453
Project Number: Not Specified
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-07
Client ID: SITE 7 MW-3D
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.005		mg/l	0.005	--	1	07/14/16 09:05	07/15/16 02:43	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	--	1	07/14/16 09:05	07/15/16 02:43	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	--	1	07/14/16 09:05	07/15/16 02:43	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-08
Client ID: SITE 8 BS-3
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.012		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 03:06	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.0100	-	1	07/14/16 09:05	07/15/16 03:06	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 03:06	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified

Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-09
Client ID: SITE 9 MW-8D
Sample Location: GOWANDA, NY
Matrix: Water

Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.006		mg/l	0.005	--	1	07/14/16 09:05	07/15/16 03:10	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	--	1	07/14/16 09:05	07/15/16 03:10	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	--	1	07/14/16 09:05	07/15/16 03:10	EPA 3005A	19,200.7	FB

Project Name: PALMER ST. LF ROUTINE LIST
Project Number: Not Specified
Lab Number: L1621453
Report Date: 07/21/16

SAMPLE RESULTS

Lab ID: L1621453-10
Client ID: SITE 10 MW-7D
Sample Location: GOWANDA, NY
Matrix: Water
Date Collected: 07/12/16 00:00
Date Received: 07/12/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	ND		mg/l	0.005	-	1	07/14/16 09:05	07/15/16 03:14	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	-	1	07/14/16 09:05	07/15/16 03:14	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	-	1	07/14/16 09:05	07/15/16 03:14	EPA 3005A	19,200.7	FB

Project Name:	PALMER ST. LF ROUTINE LIST	**Lab Number:**	L1621453
Project Number:	Not Specified	**Report Date:**	07/21/16

SAMPLE RESULTS

Lab ID:	L1621453-11	Date Collected:	07/12/16 00:00
Client ID:	SITE 11 EQUIPMENT BLANK	Date Received:	07/12/16
Sample Location:	GOWANDA, NY	Field Prep:	Field Filtered (Dissolved Metals)
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	ND		mg/l	0.005	–	1	07/14/16 09:05	07/15/16 03:19	EPA 3005A	19,200.7	FB
Chromium, Dissolved	ND		mg/l	0.01	–	1	07/14/16 09:05	07/15/16 03:19	EPA 3005A	19,200.7	FB
Lead, Dissolved	ND		mg/l	0.010	–	1	07/14/16 09:05	07/15/16 03:19	EPA 3005A	19,200.7	FB

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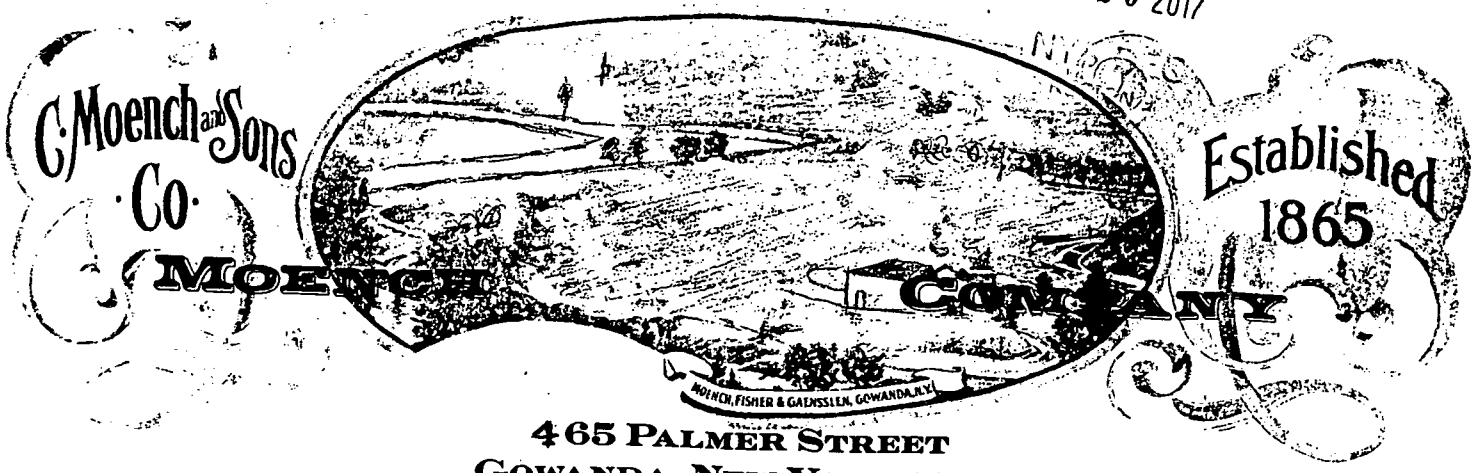

465 PALMER STREET
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ANNUAL GROUNDWATER QUALITY MONITORING REPORT.
FOR CALENDAR YEAR 2016
AT PALMER STREET LANDFILL.

MOENCH COMPANY
GOWANDA, NEW YORK 14070

Jeffrey Smith
Site Manager

JAN-17

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No Longer

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1.0 INTRODUCTION

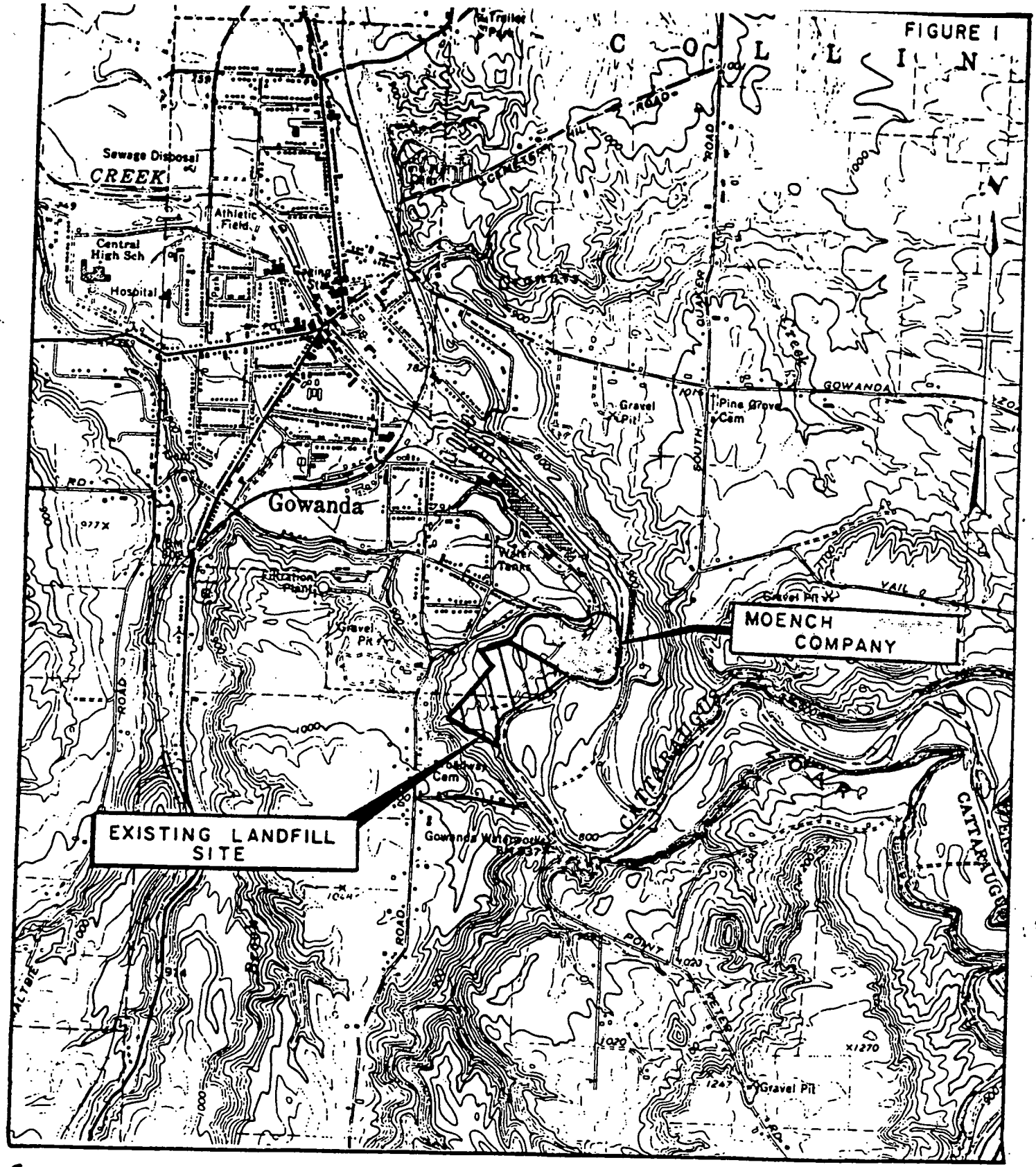
1.1 BACKGROUND

THE MOENCH COMPANY, A DIVISION OF CALERES *5*, HEADQUARTERED IN ST. LOUIS, MO., THE LANDFILLIS LOCATED NEAR THE SOUTHEAST CORNER OF THE VILLAGE OF GOWANDA, CATTARAUGUS COUNTY, NEW YORK, 14070(FIGURE 1). THE PALMER STREET LANDFILL, WHICH WAS OPERATED BY MOENCH TANNING FROM 1900 THROUGH JULY 1983, LIES IMMEDIATELY SOUTHWEST OF THE FORMER SITE COMPLEX ON AN APPROXIMATELY 25-ACRE, PARCEL OF LAND. A VARIETY OF WASTE 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(1983). ACCORDINGLY, THE CLOSURE/POST-CLOSURE PLAN (REFERENCE 1), IS BEING PERFORMED. THE LONG-TERM POST CLOSURE MONITORING PROGRAM HAS BEEN APPROVED & IMPLEMENTED.
(JULY 1993, REVISED MARCH 1994; REVISED DECEMBER 2006.
THE ENTIRE MOENCH OPERATION WAS TERMINATED IN 1992. All BUILDINGS WERE DEMOLISHED, EXCEPT FOR A SMALL OFFICE AND MAINTAINANCE SHOP.

1.2 PUPOSE AND SCOPE

SAMPLES ASSOCIATED WITH TWO ROUNDS OF WATER QUALITY MONITORING, FOR THE 2016 CALENDAR YEAR, WERE COLLECTED IN MARCH & JULY OF 2016, FOR THE LANDFILL. THE PURPOSE OF THIS REPORT IS TO PROVIDE A SUMMARY OF THE DATA GENERATED, AND GENERAL TRENDS,
FOR THE PALMER STREET LANDFILL DURING 2016 IT SHOULD BE NOTED THAT THE SAMPLING LOCATIONS WERE MODIFIED IN 2006,
THE RESULTS OF A MEETING WITH NYSDEC9 AND OUR ENVIRONMENTAL CONSULTANTS. THE NEW DETECTION MONITORING SYSTEM BETTER REPRESNETS POTENTIAL PARAMETER MIGRATION. (REF# 7 & 8)



{FIGURE 1}

{2016 Smpl}

NOTE:
TOPOGRAPHY TAKEN FROM 1963 GOWANDA, N.Y.
U.S.G.S. QUADRANGLE 7.5 MIN. SERIES
SCALE: 1" = 2000'

QUADRANGLE LOCATION

SITE LOCATION MAP
PALMER STREET LANDFILL
GOWANDA, N.Y.

6-94

MOENCH CO.

2.0 MONITORING SYSTEM

2.1 REVISED MONITORING SYSTEM(8/06)

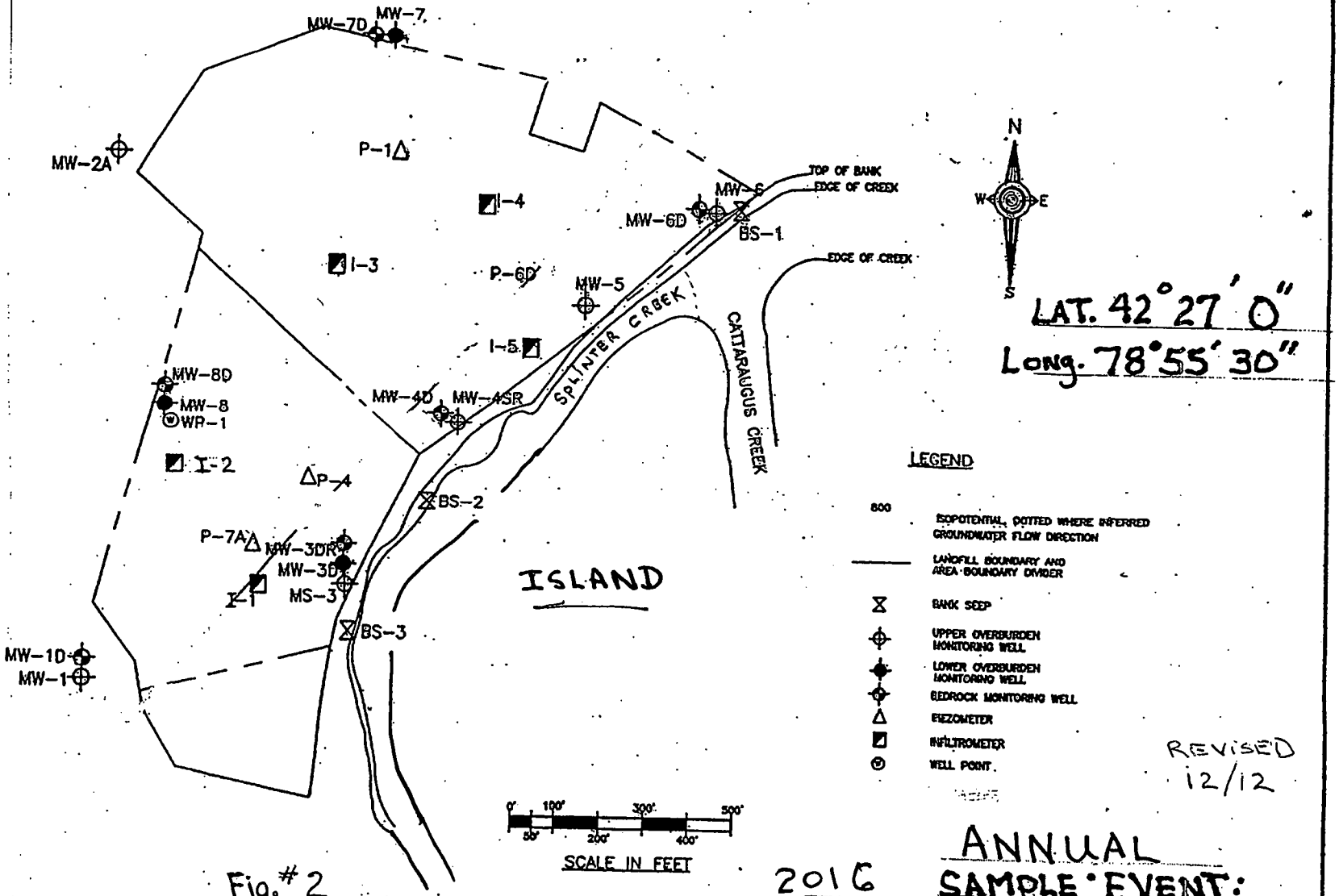
IN JULY 2006, A MEETING WITH NEW YORK STATE DEPARTMENTAL CONSERVATION, GEOMATRIX CONSULTANT, AND MOENCH COMPANY, RESULTED IN A RECONFIGURING OF THE DETECTION MONITORING SYSTEM. THIS WAS DONE AFTER CONSIDERING THE THREE PRIOR "COVER SYSTEM PERFORMANCE MONITORING SYSTEM" RESULTS. THE DETECTION MONITORING SYSTEM IS NOW AS FOLLOWS:

DOWNGRADIENT WELLS (screened in waste)		UPGRADIENT WELLS	BANK SEEPS
OVERBURDEN	BEDROCK		
MW-3	MW-3D	MW-7D	BS-1
MW-4SR	MW-4D	MW-8D	BS-2
MW-5	MW-6D		BS-3
MW-6			

NINE(9) GROUNDWATER MONITORING WELLS, AT THE PALMER STREET LANDFILL, WERE EVALUATED IN 2016, IN ACCORDANCE WITH THE LONG TERM POST CLOSURE MONITORING PLAN.(REF. #1) NYSDEC HAS APPROVED THIS PLAN.

IN ADDITION TO THE WELLS, NYSDEC ALSO REQUIRES THE MONTORING OF THREE(3); BS-1, BS-2, BS-3. THE ABILITY TO OBTAIN BANK SEEPS VARIES DUE TO WET/DRY WEATHER. BANKSEEP SAMPLE WAS AVAILABLE ONLY AT BS-3, FOR THE MARCH & JULY SAMPLES.

TO AID IN THE EVALUATION OF THE COVER SYSTEM PERFORMANCE, LEVELS FROM FIVE(5) INFILTROMETERS, ARE ALSO MEASURED. LOCATIONS OF THE MONITORING POINTS ARE SHOWN ON FIGURE #2. THESE CONTINUE TO THE EXTREME EFFECTIVENESS OF THE COVER SYSTEM.



LAT. 42° 27' 0"
Long. 78° 55' 30"

REVISED
12/12

Fig. # 2

2016 ANNUAL SAMPLE EVENT:

AMEX Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

DATE	PROJ. NO.
	8104
FILE NO.	DWG. NO.
N/A	FIGURE 1.2

3.0 MONITORING METHODS

3.1 GROUNDWATER MONITORING:

SAMPLES COLLECTED DURING THE TWO MONITORING EVENTS, FOR THE LANDFILL, WERE COLLECTED BY MOENCH COMPANY PERSONNEL, IN 2016. THE ANALYTICAL WORK WAS PERFORMED BY ALPHA LABORATORIES, OF TONAWANDAA, NEW YORK. THE ANALYSIS WAS PERFORMED IN ACCORDANCE WITH THE SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR THE PALMER ST. LANDFILL.(REFERENCE 3).

LABORATORY ANALYSES WERE PERFORMED IN ACCORDANCE WITH THE USEPA 200.7, FOR METALS, AND VOC 8260.(REFERENCE 4). THE MONITORING PARAMETERS ARE LISTED IN TABLE 1. SAMPLES WERE COLLECTED FROM EACH OF THE, 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 4). GROUNDWATER ELEVATIONS WERE ALSO MEASURED IN THE PIEZOMETERS, INFILTROMETERS, AND WELLS ON-SITE. ALL WELLS WERE "DEVELOPED" IN YEAR(2012); CLEARED OF SEDIMENT.

IN JULY OF 2011, MANY UNECESSARY AND OBSELETE WELLS, PIEZOMETERS, LYSIMETERS AND A WELL POINT WERE REMOVED FROM THE LANDFILL. THIS WAS DONE WITHIN AN AGREEMENT WITH NYSDEC-9. NEW YORK STATE PROCEDURES WERE FOLLOWED.

FIELD SAMPLES WERE COLLECTED AND MEASURED FOR THE FIELD PARAMETERS IDENTIFIED IN TABLE 1. THE FIELD MEASUREMENTS ARE SUMMARIZED IN TABLE 5.

3.2 INFILTROMETER MONITORING

FIVE INFILTROMETERS HAVE BEEN INSTALLED(1991) BENEATH THE LANDFILL CAP TO AID IN THE ASSESSMENT OF PERFORMANCE OF THE CAP. DURING EACH SEMIANNUAL EVENT, WATER LEVELS IN THE INFILTROMETER ARE MEASURED AND THE AMOUNT OF WATER INFILTRATING IS CALCULATED.

THE CALCULATED INFILTRATION RATES ARE PRESENTED ON TABLE 2 & 3. CALCULATED INFILTRATION RATES ARE USUALLY WITHIN THE DESIGNED INFILTRATION RATE OF 1X10(-7) CM/SEC, EXCEPT ARE NOTED ON THE TABLE. A SCHEMATIC SHOWING THE DESIGN AND DIMENSIONS OF THE INFILTROMETERS IS PRESENTED IN ATTACHMENT A.

TABLE 1

MOENCH COMPANY
PALMER STREET LANDFILL

ROUTINE GROUNDWATER QUALITY MONITORING PARAMETERS

Soluble Arsenic
Soluble Chromium
Soluble Lead

Volatile Organics[2][3]

pH[1]

Conductivity[1]
Turbidity[1] -visual only
Groundwater Elevation[1]
Temperature[1]

All samples collected for analysis of soluble metals will be pressure-filtered in the field immediately upon sample collection.

NOTES:

1. All field parameters (i.e., pH, specific conductance, temperature and turbidity) will be measured in the field. No analysis of these parameters will be required by the laboratory.

2. Volatile organic compounds will be those compounds determined by SW-846, Method 8260.

TABLE # 2

MOENCH COMPANY
PALMER STREET LANDFILL
MAR. 23 MONITORING EVENT
2016
INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft) 3-23-16	Static Water Level (ft) 7-14-15	Δ Depth-gal (ft)	# Days Between Readings (#)	Infiltration Rate gal/day.ft²	Infiltration Rate (cm/sec)	Approx. Total Rainfall This Period (ft)	Infiltration (%)
I-1 (A)	4.30	4.67	.37' - 3.1g	253	.0005	2.1×10^{-8}	3.32	2.0 %
I-2	7.20	7.20	—	—	—	—	—	—
I-3	6.80	6.19	NEG.	—	—	—	—	—
I-4	6.35	6.98	.63' - 5.3g	253	.0008	3.8×10^{-8}	3.32	3.4 %
I-5	7.10	6.95	NEG	—	—	—	—	—

Note:
** Negative ΔD precludes calculation of meaningful data.

(A) I-1 OFTEN FLOODED BY NATURAL SPRINGS & WASH PONDS, UPGRADIENT.

[redacted]

* NO MEASURABLE INFILTRATION

TABLE ~~X~~ 3

MOENCH [redacted] COMPANY
PALMER STREET LANDFILL
7-8-16 MONITORING EVENT

INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft) 3-23-16	Static Water Level (ft) 7-8-16	Δ Depth - gal. (ft)	# Days Between Readings (#)	Infiltration Rate gal/day.ft²	Infiltration Rate (cm/sec)	Approx. Total Rainfall This Period (ft)	Infiltration (%)
I-1 Ⓐ	4.30	6.50	NEG.	107	—	—	.73	—
I-2	7.20	7.20	No chg.	"	—	—	"	—
I-3	6.80	7.25	NEG.	"	—	—	"	—
I-4	6.35	6.40	NEG.	"	—	—	"	—
I-5	7.10	7.13	NEG.	"	—	—	"	—

Note:
** Negative ΔD precludes calculation of meaningful data.

Ⓐ I-1 OFTEN FLOODED BY NATURAL SPRINGS & WASH PONDS, UPGRADIENT.

TABLE #4
PALMER STREET LANDFILL
SUMMARY OF GROUNDWATER ELEVATIONS(1)

	EVENT	
	MAR. 16, 2016	July 8, 2016
MW-1	821.90	820.85
MW-1D	798.32	797.52
MW-2A	807.77	805.92
MW-3	795.11	794.66
MW-3D	787.93	792.43
MW-3DR	787.62	794.37
MW-4SR	794.60	793.70
MW-4D	788.48	789.33
MW-5	DRY	DRY
MW-6	785.93	783.53
MW-6D	783.03	781.78
MW-7	793.60	793.20
MW-7D	794.54	793.59
MW-8/D	DRY/789.39	DRY/790.39
P-1	795.35	794.45
P-4	798.34	798.14
P-6D	790.60	787.64
P-7A	797.31	797.22
WP-1	813.66	812.81

Notes:
(1) Measured in feet above sea level.
MW= Monitoring Wells P=Piezometers. WP=Well Piont.

reference to figure and

4.0 GROUNDWATER QUALITY MONITORING RESULTS

4.1 EVALUATION OF GROUNDWATER ELEVATION DATA:

GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN AT ALL ACCESSIBLE ONSITE MONITORING POINTS DURING THE TWO ANNUAL 2016 MONITORING EVENTS. THE DATA IS SUMMARIZED ON TABLE #4.

PLOTS OF THE GROUNDWATER ELEVATIONS MEASURED IN THE MONITORING WELLS WITH RESPECT TO TIME, ARE PRESENTED IN FIGURE 3, 4, & 5, FOR THE "SHALLOW OVERBURDEN, DEEP OVERBURDEN AND BEDROCK WELLS, RESPECTIVELY. AS SHOWN IN FIGURES 3, AND 4, OVERBURDEN GROUNDWATER ELEVATIONS WERE GENERALLY CONSISTENT THROUGHOUT THE MONITORING PERIOD. IN AUGUST 2009, A SEVERE FLOOD CONTAMINATED THE VILLAGE'S WATER RESERVIOR.THROUGHOUT THE PAST 7 YEARS THE VILLAGE HAS USED ITS' DEEP WELL AQUIFER FOR WATER. THIS GREATLY REDUCED THE BEDROCK WATER LEVELS. RECENTLY, THEY BEGAN USING THE RESERVIOR AGAIN, RESULTING IN INCREASED WATER LEVEL.

4.2 THE GROUNDWATER AND SURFACE WATER QUALITY RESULTS FOR THE TWO MONITORINGS EVENTS, AT THE PALMER STREET LANDFILL, ARE PRESENTED IN TABLES #5 THROUGH #7.

COMPARISON OF THE MONITORING DATA TO THE NYSDEC CLASS "GA" GROUNDWATER QUALITY STANDARDS/GUIDANCE VALUES ARE PRESENTED IN THE TABLES.

BOTH THE SOIL AND WASTE AT THE PALMER STREET LANDFILL CONTAIN METALS-OF-INTEREST AS A COMPONENT OF THE SOIL OR WASTE PARTICLES (REFERENCE 5). THEREFORE, THE SEDIMENT (OR TURBIDITY) CONTENT OF ANY GROUNDWATER OR SURFACE WATER QUALITY SAMPLES WILL DIRECTLY IMPACT THE TOTAL METAL CONCENTRATION OF THE SAMPLES. THE TURBIDITY CONTENT OF THE GROUNDWATER 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 NO LONGER ANALYZED FOR GROUNDWATER QUALITY STANDARDS OR EVALUATION OF GROUNDWATER QUALITY. IMPACTS WILL BE BASED ON SOLUBLE METALS CONCENTRATION. BARIUM IS NO LONGER REVELANT AS IT IS IN NATIVE SOIL 2016 ANNUAL SUMMARIES AS FOLLOWS:

--THERE WAS NO DETECTION OF SOLUBLE METALS, EXCEPT A SLIGHT DETECTION OF ARSENIC AT MW-6; SCREENED IN THE WASTE, AND IN THE NATIVE SOIL.
---THERE WAS NO DETECTION OF VOCs, EXCEPT A SLIGHT ACETONE; MW-4SR & MW-3D, IN THE MARCH SAMPLE.
--ACETONE WAS DETECTED AT ALMOST ALL LOCATIONS IN THE JULY SAMPLE, EVEN THE EQUIPMENT BLANK, WHICH USSES "DI" WATER. LAB CONTAMINATION IS LIKELY.
---'Ph" CONTINUES TO TREND BELOW NEUTRAL(7.0), AT MW-4S, MW-6, AND MW-3.
A LOGICAL EXPLAINATION??

TABLE ~~X~~ 5

MOENCH COMPANY
PALMER STREET LANDFILL
MAR. 23, 2016 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS — INITIAL

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity NA	Sample Appearance	Sample Odor
* MW-3	3/23/16	10:10	No sample		Dry	NA	—	—
*** MW-3D	3/23/16	10:10	12.5	8.15	446	"	Clear	NO
* MW-4SR	3/23/16	9:00	10.9	6.67	750	"	Black	~~Organic~~
*** MW-4D	3/23/16	9:45	12.6	8.10	690	"	Clear	NO
* MW-5	"	—	NO	Sample -	Dry)	"	—	—
* MW-6	3/23/16	8:15	13.1	6.50	1500	"	Black	NO
*** MW-6D	3/23/16	8:07	13.9	8.10	1100	"	Clear	NO
*** MW-7D	3/23/16	11:20	9.3	8.10	650	"	Clear	NO
*** MW-8D	3/23/16	10:45	12.2	8.10	540	"	Clear	Slight
BS-1	3/23/16	8:50	(No sample -		No seep)	"	—	—
BS-2	3/23/16	10:10	(No	Sample -	No seep)	"	—	—
BS-3	3/23/16	10:31	9.0	7.01	800	"	Red-Iron	NO

6.5-8.5 (Std)

NOTES:

(1) Conductivity readings corrected to 25°C.
(2) Blind Duplicate MW-4D
(3) MW-7D is apparent hydraulically upgradient bedrock well.

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

TABLE X S

MOENCH COMPANY
PALMER STREET LANDFILL
7-12-16 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS — INITIAL

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance[1] (umhos/cm)	Turbidity NA	Sample Appearance	Sample Odor
* MW-3	7-12-16	945	15.1	6.75	1600	NA	TURBID	ORGANIC
*** MW-3D	"	1000	13.9	7.77	400	"	CLEAR	SHALE ?
* MW-4SR	"	850	13.1	6.47	1300	"	TURBID	FINISH
*** MW-4D	"	915	13.4	7.71	620	"	Clear	"
* MW-5	"	—	—	—	—	"	—	—
* MW-6	"	833	16.4	6.41	1400	"	ALMOST CLR	ORGANIC METHANE
*** MW-6D	"	803	14.7	7.77	1050	"	Clear	NONE
*** MW-7D	"	1125	15.8	7.90	580	"	SL. TURB	NO
** MW-8D	"	1050	13.9	7.85	410	"	CLear	NO
BS-1	"	NO SMPL	—	—	—	"	—	—
BS-2	"	" "	—	—	—	"	—	—
(A) BS-3	"	1018	11.0	7.07	700	"	RED	NO

6.5-8.5 (STD)

NOTES:
(1) Conductivity readings corrected to 25°C.
(2) Blind Duplicate MW-4SR.
(3) MW-7D is apparent hydraulically upgradient bedrock well.

(A) NO BANK Seep — SAMPLED POOL BY CREEK.

NO SMPL AVAIL - MW5, BS1, BS2

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

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
3/23/16 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

	Quantitation Limit	** MW-3	MW-3D	** MW-4SR	MW4D	** MW-5	** MW-6	MW-6D	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	Dry	ND	.007	ND	Dry	.069	ND	.025mg/L
Chromium - Soluble	0.005	ND	ND	.01	ND	ND	ND	ND	.05
Lead - Soluble	0.005	Sample	ND	ND	ND	Sample	ND	ND	.025
VOLATILES mg/L		—	ND		ND		ND	—	
ACETONE		—	.330	.250	"	—	"	.064	GUID. VALUE = .05mg/L
		—	—		"	—	"	—	
		—	—		"	—	"	—	
						—	"		

** Screened in Waste/Overburden.

Blind Duplicate_____

TABLE 5

MOENCH COMPANY
PALMER STREET LANDFILL
MAR. 23, 2016 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

MW-4D

	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-2	BS-3	Blind Duplic		Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	ND	ND	ND	No	.006	ND		.025mg/l
Chromium - Soluble	0.005	ND	ND	Bank	Bank	ND	ND		.05
Lead - Soluble	0.005	ND	ND	Seep	Seep	ND	ND		.025
VOLATILES mg/L		ND	ND	—	—	ND	ND		
ACETONE		"	"	—	—	"	—		GUID. VALUE = .05 mg/L
		"	"	—	—	"	—		
		"	"	—	—	"	—		
		"	"	—	—	"	—		

TABLE 6

MOENCH COMPANY
PALMER STREET LANDFILL
July 12, 2016 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS

	Quantitation Limit	** MW-3	MW-3D	** MW-4SR	MW4D	** MW-5	** MW-6	MW-6D	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	.009	.005	.009	ND	D	.065	.005	.025mg/l
Chromium - Soluble	0.005	ND	"	.02	ND	RY	ND	ND	.05
Lead - Soluble	0.005	ND	"	ND	ND	N	ND	ND	.025
						O			
						S			
Volatiles mg/L						A			
ACETONE		.018	.098	.083	.005	M	.024	.027	GuiD. VALUE = .05mg/L
CHLOR BENZ		—	—	.003	—	P	—	—	
						L			
						E			

** Screened in Waste/Overburden.

Blind Duplicate_____

TABLE ~~8~~ 6

MOENCH COMPANY
PALMER STREET LANDFILL
July 12, 2016 MONITORING EVENT[1]

SUMMARY OF ANALYTICAL RESULTS 45r

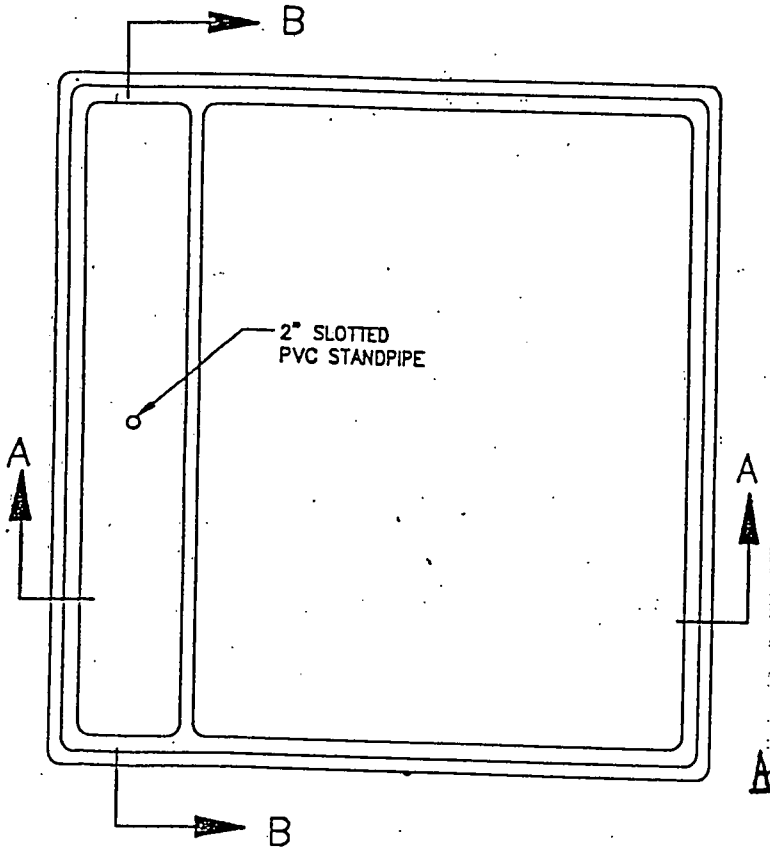
	Quantitation Limit	MW-7D	MW-8D	BS-1	BS-2	BS-3	Blind Duplic	EQPT BLANK	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	ND	.006	NO SMPL	NO SMPL	.012	ND	ND	.025mg/l
Chromium - Soluble	0.005	ND	ND			ND	.02	ND	.05
Lead - Soluble	0.005	ND	ND			ND	ND	ND	.025

VOLATILES mg/L									
ACETONE		.008	.006	NA	NA	.008	.024	.006	GUID. VALUE = .05 mg/L

ATTACHMENT A

INFILTROMETER DESIGN

PALMER STREET LANDFILL
GROUNDWATER MONITORING REPORT...
MARCH & July '16 SAMPLING EVENT..



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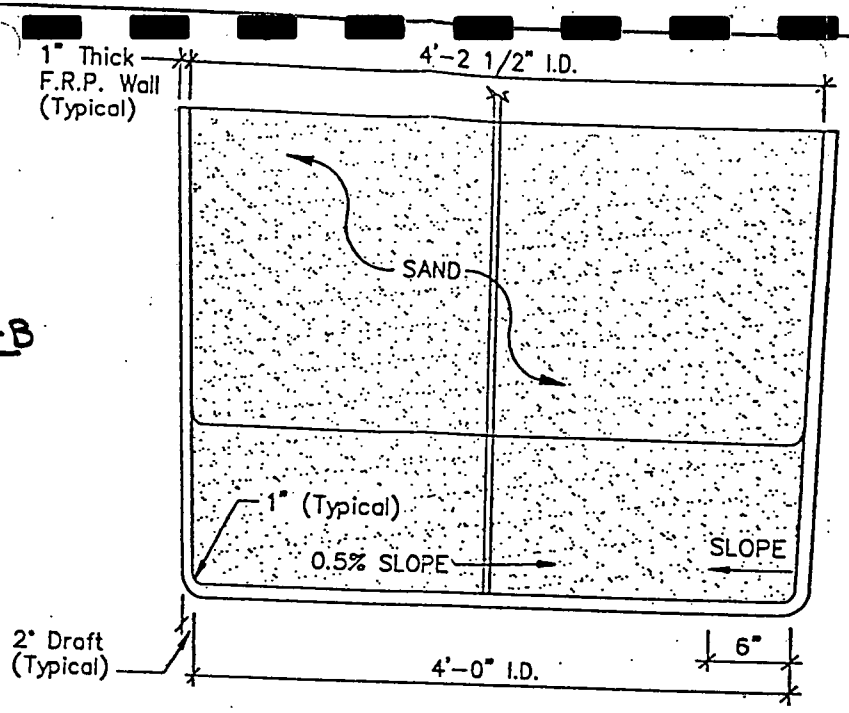
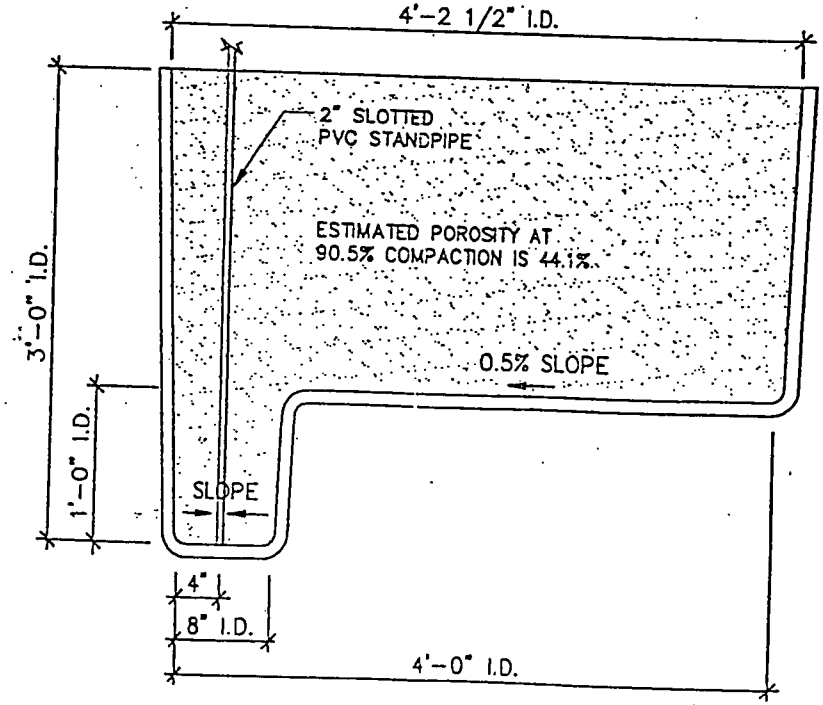


B-B



A-A

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

INFILTROMETER

ATTACHMENT B

GROUNDWATER ELEVATION
DATA & GRAPHES

MONITORING EVENTS MARCH + JULY '16

PALMER STREET LANDFILL
FIGURE #3 MOENCH COMPANY
GROUNDWATER ELEVATION vs TIME (FEET ABOVE SEA LEVEL)
SHALLOW OVERBURDEN MONITOR WELLS

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Oct-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95
MW-1	818	819	817	817	819	817	818	818	819	820	818	820	820	821	819	820	821	821	822	822	823	822	821
MW-3	796	796	794	793	794	793	792	792	793	794	793	793	794	794	793	794	794	794	794	794	794	793	793
MW-5	785	785	784	784	788	784	782	782	783	784	784	783	783	784	782	783	788	783	783	784	784	784	784
MW-6	784	784	783	784	785	784	784	784	784	784	784	783	784	784	784	784	784	783	783	784	784	783	783
MW-7S	795	795	793	795	795	794	792	792	793	793	792	792	793	793	792	793	788	792	791	792	794	791	791
MW-4SR																787	792	791	789	791	791	790	790

ptrgwelv.xdsx.xds

FIG # 3

	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Fig. #3 Apr-00	Sep-00	Mar-'01	Aug'01	Mar. '02	Fig. #3 Aug. '02	Mar. '03	Aug. '03	Mar. '04	Aug. '04
MW-1	821	821	821	822	822	821	821	821	821	821	821	819	820	822	821	822	820	821	820	821	821	821	821
MW-3	794	796	799	798	794	794	794	800	794	794	794	794	793	794	794	796	794	795	796	794	796	795	794
MW-5	782	DRY	DRY	DRY	787	787	787	787	DRY	DRY	DRY	DRY	DRY	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
MW-6	784	784	783	787	785	785	784	784	784	783	784	783	783	785	784	783	783	785	784	788	788	785	784
MW-7S	793	794	792	794	793	792	793	793	792	792	793	793	791	794	792	794	793	794	793	793	794	794	792
MW-4SR	790	790	796	791	792	791	793	793	791	790	791	790	790	794	792	794	793	795	793	797	799	794	794

ptrgwelv.xdsx.xds

FIG.#3 Fig. #3

	Mar. '06	Aug. '06	Mar. '07	July '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Mar. '15	July '15	Mar. '16	July '16
MW-1	822	821	822	821	822	821	822	821	822	821	821	821	822	821	821	822	821	822	822	822	822	821
MW-3	794	dry	dry	dry	dry	794	795	dry	dry	dry			dry	dry	dry	795	795	794	795	795	795	795
MW-5	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry			dry	dry	dry	dry	dry	dry	787	dry	dry	dry
MW-6	785	784	787	dry	786	784	788	783	785	784	786	784	788	783	785	784	788	784	786	785	788	784
MW-7S	795	794	795	794	794	794	794	793	794	791	793	790			no more	no more	no more	no more	no more	no more	no more	no more
MW-4SR	794	793	794	794	795	794	794	794	795	794	795	794	794	792	794	793	794	793	795	794	795	794

Ptrgwelv

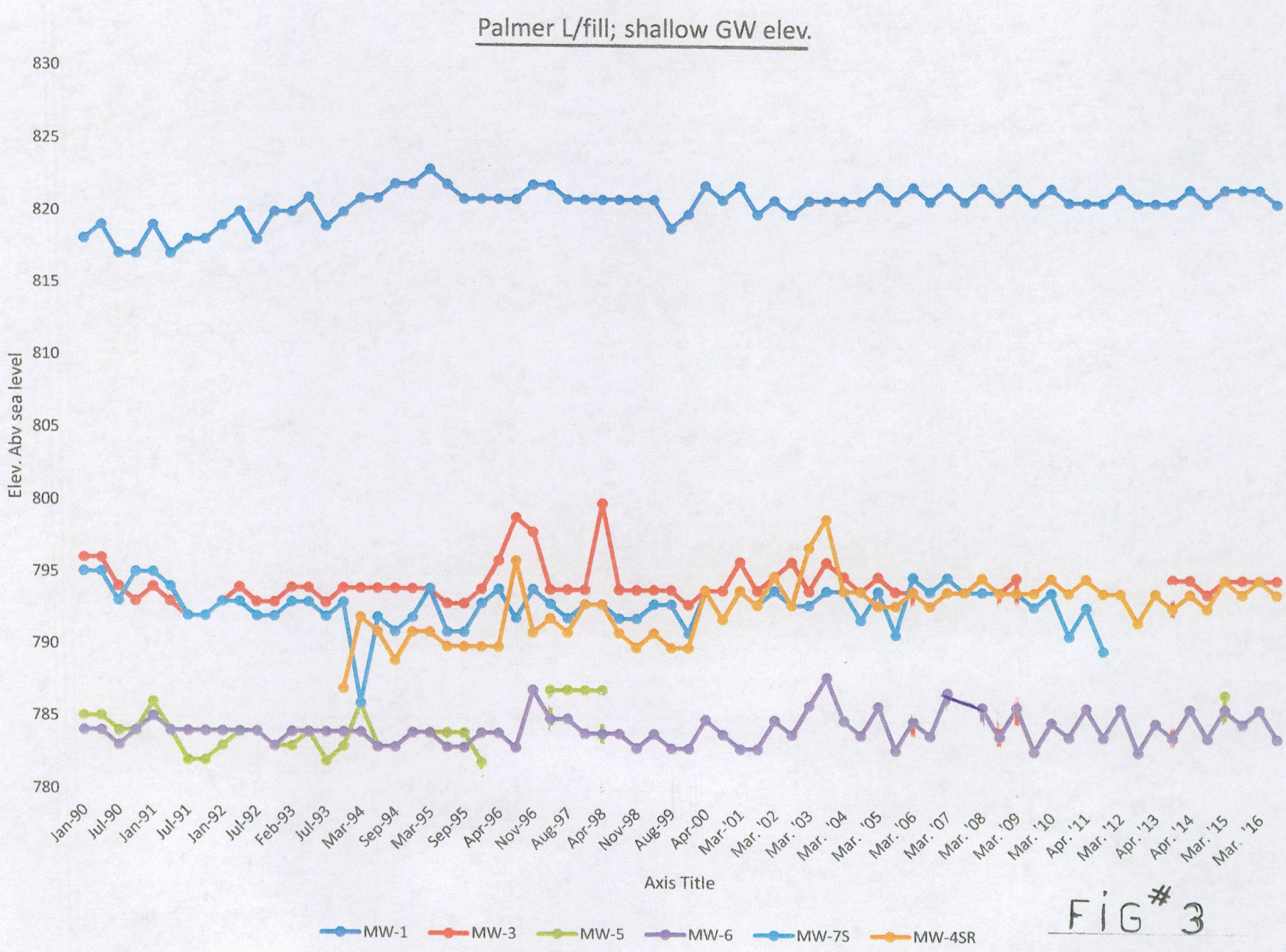


FIG # 3

PIRGWELV

	Figure #4			MOENCH COMPANY																			
				GROUNDWATER ELEVATION vs TIME(FEET ABOVE SEA LEVEL)							Dec. '16												
				DEEP OVERBURDEN MONITOR WELLSS																		Fig. #4		
	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Oct-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
MW-3D	777	777	777	777	778	778	779	778	778	779	779	781	784	787	789	791	792	793	795	797	798	797	797	797
MW-7	794	793	793	793	794	793	793	794	793	792	793	794	793	792	792	793	792	791	793	794	793	792	794	794
MW-4D																787	790	789	791	792	793	793	793	788

Fig #4

																	Fig. #4								
	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar-'01	Aug-'01	Mar. '02	Aug. '02	Mar. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05
MW-3D	799	801	799	799	799	799	794	798	797	798	799	799	799	800	800	800	801	801	800	801	801	801	801	801
MW-7	794	794	794	794	794	795	794	795	796	794	793	795	794	795	794	792	794	793	794	795	795	796	795	795
MW-4D	795	794	794	795	795	795	795	794	793	794	794	795	795	795	796	796	789	795	796	795	796	796	797	795

			Fig. #4																				
	Mar. '06	Aug. '06	Mar. '07	July '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	Jul.' 10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Mar. '15	July '15	Mar. '16	July '16
MW-3D	801	801	801	801	802	802	801	802	797	802	792	799	798	800	801	801	802	797	791	789	788	792
MW-7	795	794	795	794	795	794	795	794	795	795	794	794	794	795	794	795	795	795	794	794	794	793
MW-4D	796	796	796	796	797	796	796	796	794	794	792	792	793	795	796	795	797	794	792	791	785	789

Plmrgw2

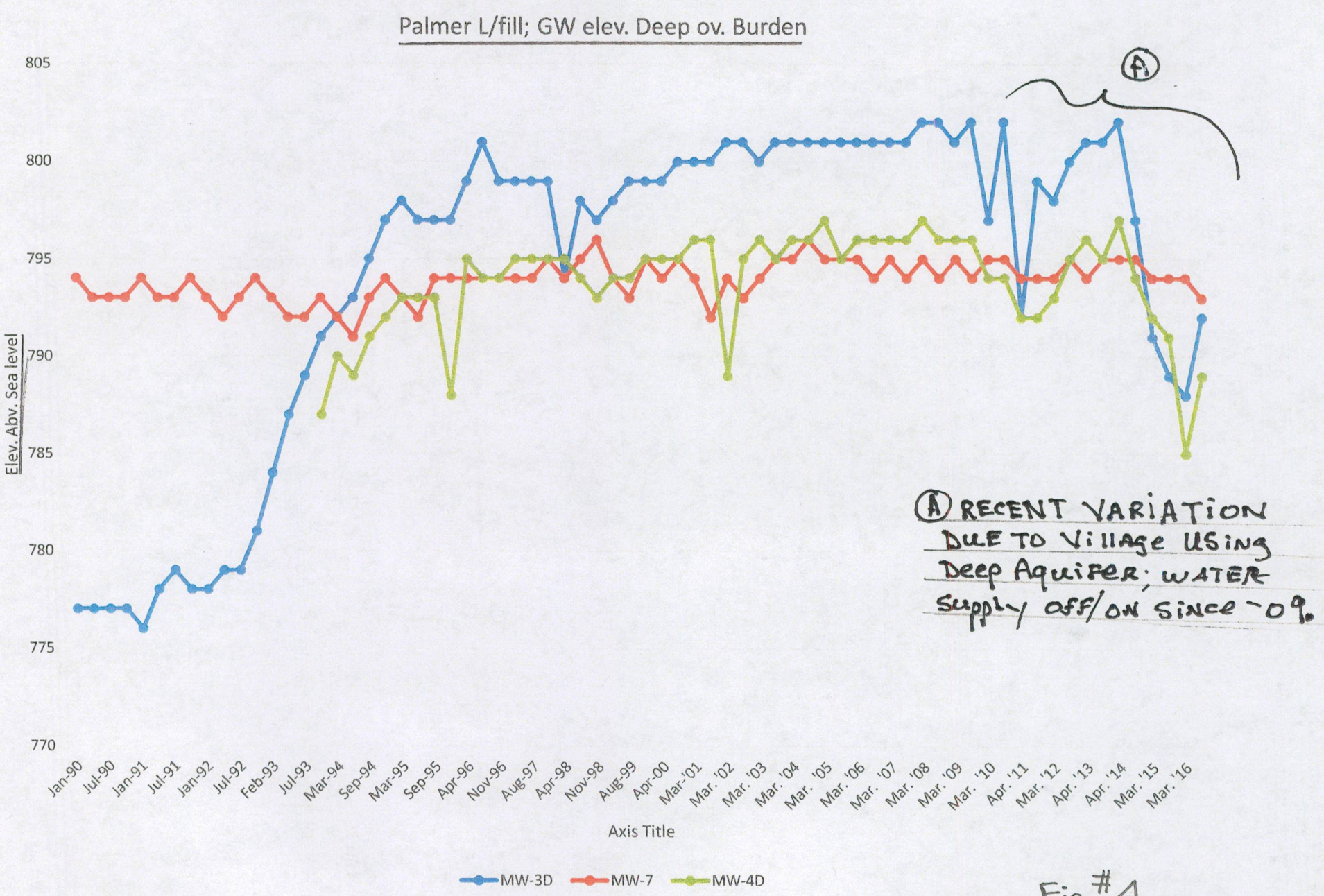


Fig #4

PlmrgW2

PLMRGW3.xlsx.xls

PALMER STREET LANDFILL
MOENCH COMPANY
GROUNDWATER ELEVATION vs TIME
BEDROCK MONITOR WELLS & PIEZOMETERS

(FIG.#5)

DEC. '16
FIG. #5

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Oct-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
MW-3DR	773	773	773	773	772	775	787	775	777	777	778	783	788	789	792	794	797	797	799	799	800	800	799	798
MW-7D	795	794	794	795	795	794	794	795	793	792	792	793	793	792	790	793	792	791	793	794	794	793	794	795
MW-8D	766	766	767	767	763	770	773	771	773	772	776	788	790	794	796	798	802	803	804	804	805	805	804	805
MW-1D					743	762	765	752	758	758	776	795	798	801	802	807	811	810	810	813	814	809	810	812
MW-6D					783	781	787	781	781	781	782	782	781	781	781	782	784	780	782	782	784	781	781	779
P-6D					790	790	790	790	790	790	790	789	789	789	789	789	789	785	789	789	789	790	790	788

PLMRGW3.xlsx.xls

Dec. '16
(FIG #5)
Fig. #5
Dec '16

	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar-01	Aug-01	Apr.-02	Aug.-02	Mar. '03	Aug. '03	MAR. '04	AUG. '04	Apr. '05	Aug. '05
MW-3DR	801	800	801	801	802	802	803	799	799	801	801	801	802	803	803	800	803	803	802	803	804	803	803	803
MW-7D	795	794	794	795	795	796	796	795	795	795	795	795	795	795	797	796	796	796	796	796	797	796	796	796
MW-8D	805	805	805	806	807	808	809	800	803	805	807	806	808	808	809	808	809	809	808	809	809	809	809	809
MW-1D	813	813	814	815	818	816	818	795	806	813	818	814	816	816	818	817	819	819	817	818	818	819	818	819
MW-6D	782	782	783	782	782	783	782	781	782	783	781	781	783	783	783	782	783	782	784	782	783	780	784	782
P-6D	790	790	791	791	791	791	792	792	790	791	791	791	792	792	792	792	793	793	793	792	793	792	792	792

Fig. #5

PLMRGW3.xlsx.xls

FIG. #5

	APR. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	Aug. '10	Apr. '11	Aug. '11	Apr. '12	Aug.'12	Apr.'13	July '13	Apr. '14	Aug. '14	Apr. '15	Aug. '15	Mar. '16	July '16
MW-3DR	804	803	805	805	805	805	805	805	798	800	792	798	801	802	804	804	805	796	788	786	788	794
MW-7D	796	795	796	796	794	795	795	796	795	795	795	795	795	795	794	796	796	795	795	794	795	794
MW-8D	810	810	810	810	810	810	810	810	807	807	788	790	808	806	809	810	809	790	790	780	789	796
MW-1D	819	818	819	821	821	821	822	822	799	813	821	806	814	816	820	818	821	775	759	752	798	797
MW-6D	783	782	785	782	783	782	784	782	783	783	783	782	783	782	783	782	783	782	783	783	783	782
P-6D	792	791	793	793	793	794	793	793	792	792	791	791	791	791	792	792	793	792	791	791	791	788

**MW-8D depth measured at MW8, after April 2011

***Village using deep aquifer for water supply since 2009. Hydrant on often.

A: village back to using surface wtr.

Plmrgw3

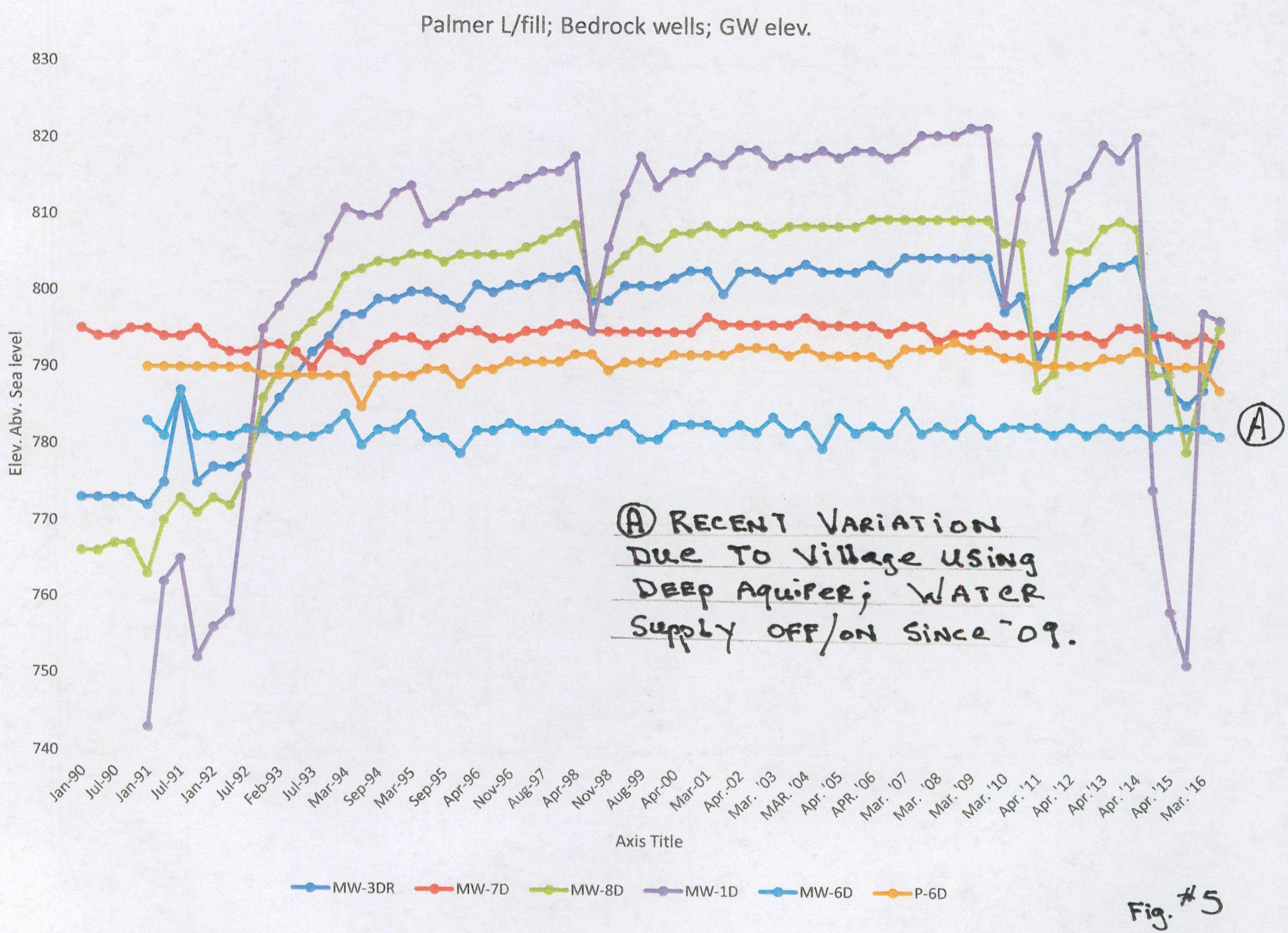


Fig. #5

Plmrgw3

5.0 GROUNDWATER FLOW

A WATER TABLE ISOPOTENTIAL MAP, BEDROCK ISOPOTENTIAL MAP AND A BEDROCK WATER LEVEL HYDROGRAPH HAVE BEEN PREPARED FOR THE PALMER STREET LANDFILL AND ARE PRESENTED IN FIGURES 3,4 AND 5, RESPECTIVELY. GROUNDWATER ELEVATIONS MEASURED THROUGH 2016 WERE USED IN PREPARING THE WATER TABLE AND BEDROCK ISOPOTENTIAL MAP INDICATED THAT THE SHALLOW GROUNDWATER FLOW IS PRIMARILY TO THE EAST TOWARD CATTARAUGUS CREEK. THE BEDROCK ISOPOTENTIAL MAP AND THE BEDROCK WATER LEVEL HYDROGRAPH ILLUSTRATE A "LEVELING OFF" AFTER THREE YEARS ('92-'94) OF RISING LEVELS AT WELLS MW-1D, MW-3DR AND MW-8D. MW-1D AND MW-8D, WHICH WERE FORMERLY DOWNGRADIENT WELLS ARE NOW UPGRADIENT OF THE LANDFILL.

AS PREVIOUSLY MENTIONES, DUE TO FLOOD DAMAGE TO THE VILLAGE RESERVIOR,(8/09) THE VILLAGE was OBTAINING ITS' WATER SUPPLY FROM THE DEEP WELLS. THESE WELLS TAP THE DEEP AQUIFER. THE VILLAGE HAS GONE BACK & FORTH USING THE AQUIFER. THIS PAST YEAR THEY STARTED TO USE THE RESERVIOR AGAIN, AND WATER IS RISING AGAIN. THIS RESULTS IN A RETURN TO NORMAL FLOW TO THE NE.

AS MENTIONED PRIOR, MANY UNUSED WELLS, PIEZOMETERS, LYSIMETERS AND A WELL POINT WERE REMOVED IN 2011. NONE OF THESE WILL EFFECT THE EVALUATION OF GROUNDWATER FLOW.

THE WEATHER THROUGHOUT 2016 WAS EXTREMELY DRY..

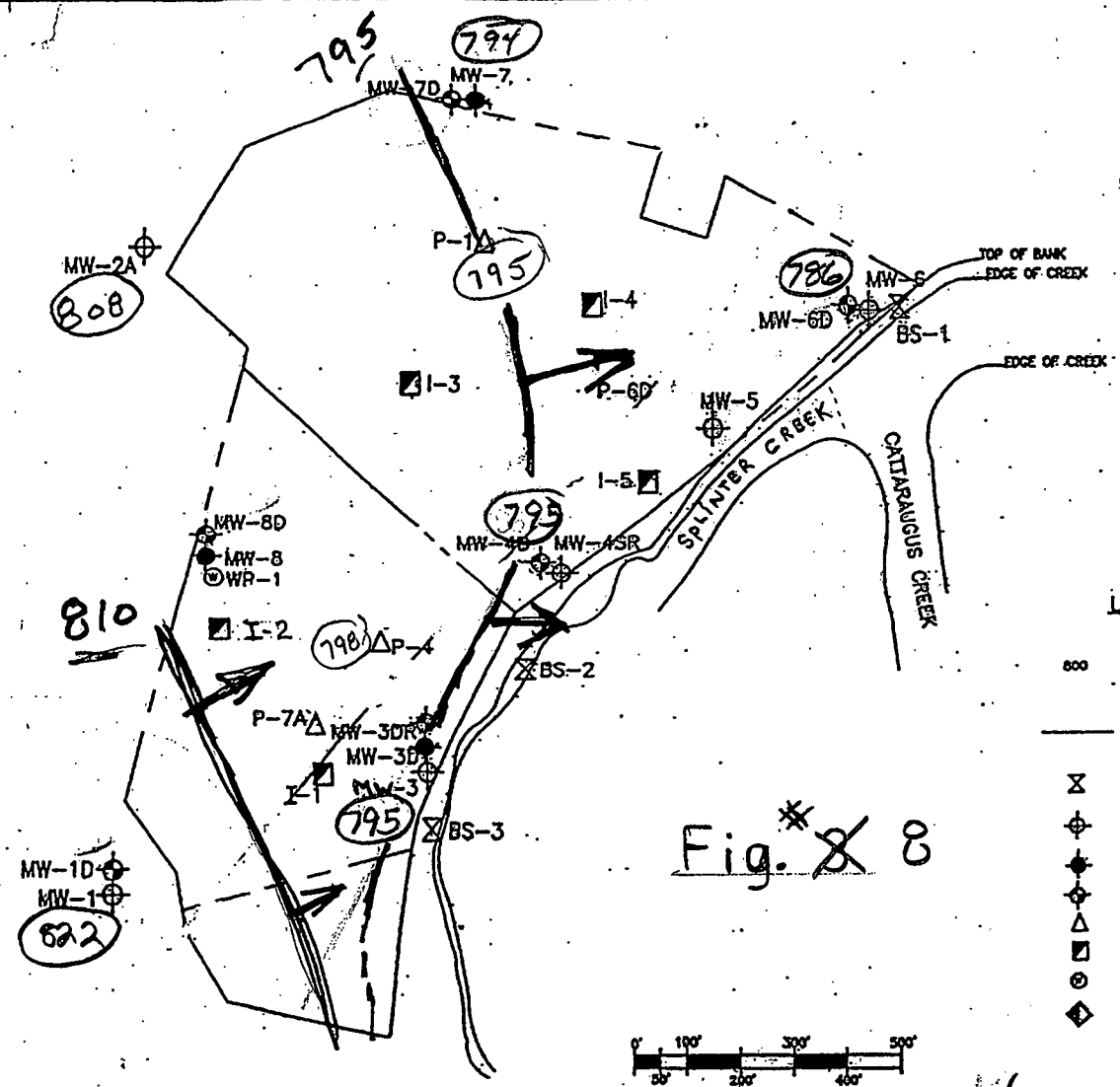


Fig. 8

3/16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

WATERTABLE ISOPOTENTIAL MAP.

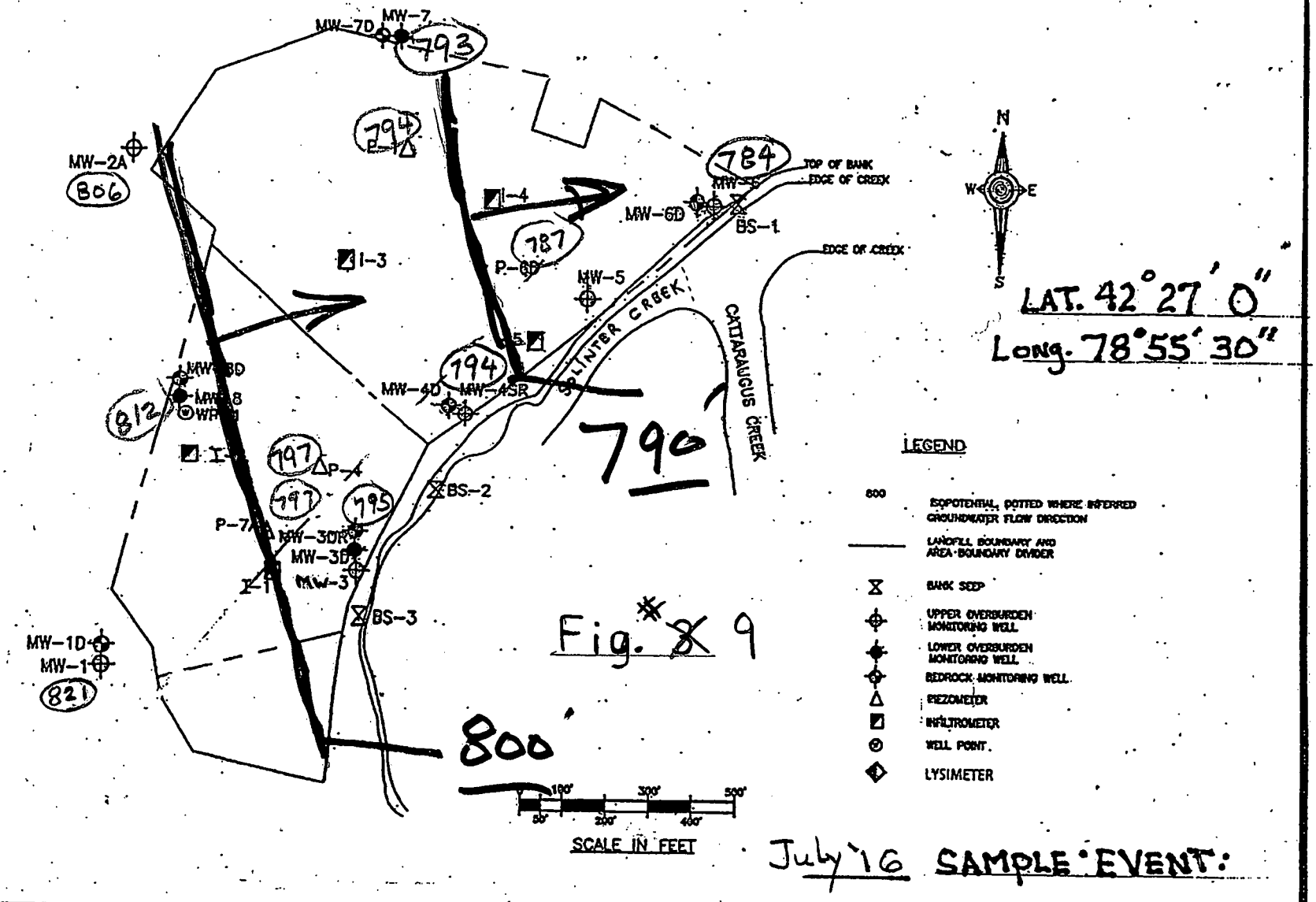


Fig. 9

July '16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

WATERTABLE ISOPOTENTIAL MAP.

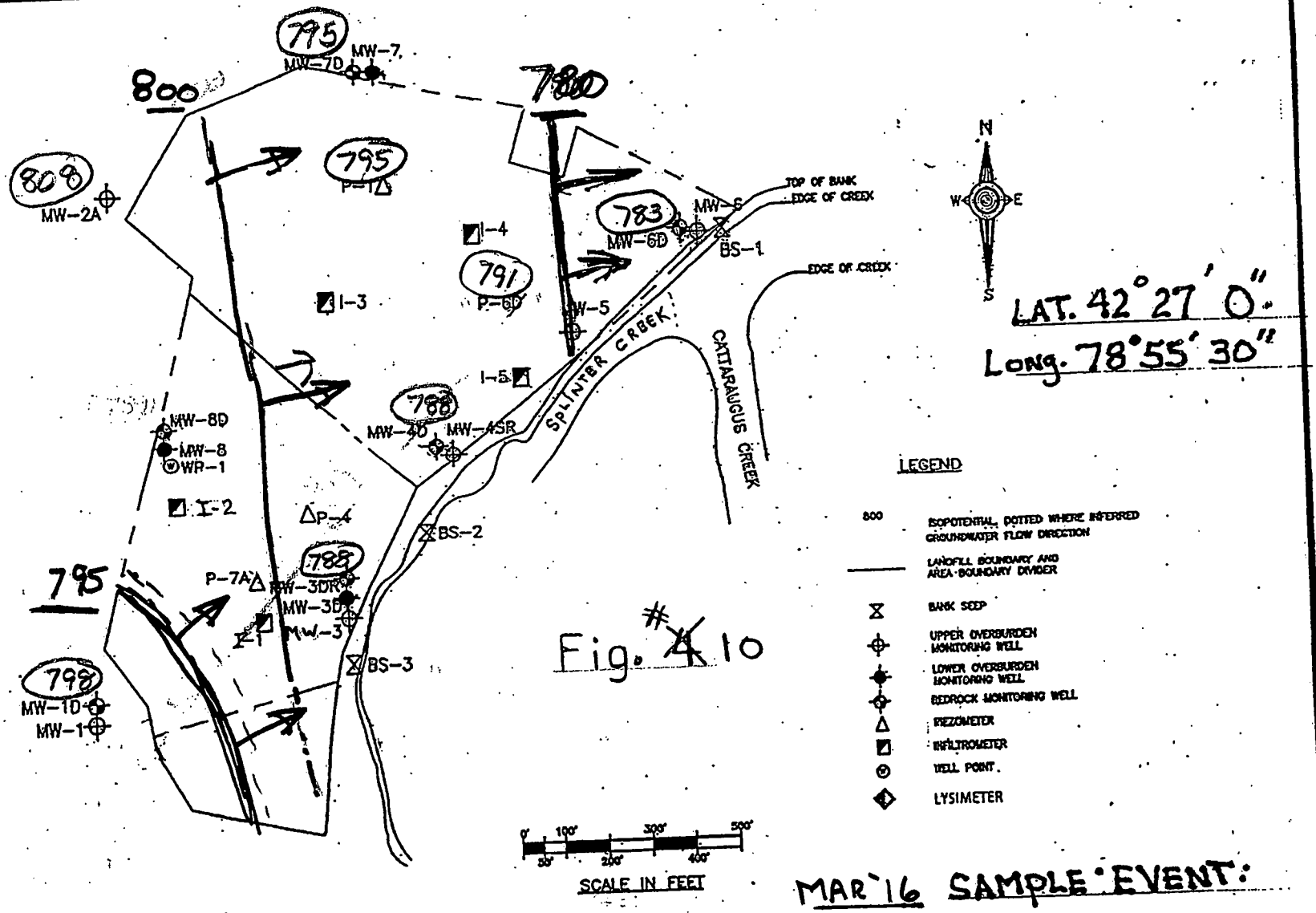


Fig. #10

MAR'16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

BEDROCK ISOPOTENTIAL MAP.

MOENCH COMPANY
DIVISION OF CALERES*5*
465 PALMER ST.
GOWANDA, NEW YORK 14070
PHONE: 716-532-2201

January 12, 2017

Mr. Stanley Radon, Engineer Geologist 2
N.Y. State Dept. of Environmental Conservation
270 Michigan Ave.
Buffalo, New York 14203-2999

Re: Annual 2016 Palmer St. Landfill Report

Enclosed is the written 2016, Annual Report, Groundwater quality. A PDF file has been previously Sent to you. The results continue to show that the Landfill has negligible effect on the environmental, as there are minimal detections of parameters. See page #4.

We have eliminated the graphs for Specific Conductivity, as their results are minimal, for the past 20 years. We will continue to measure and record for the semi-annual sampling.

The deep wells continue to recover, as the Village of Gowanda, has resumed using its' reservoir.

The "pH" in MW-6, MW-3, and MW4sr, continue to trend Acidic.

Acetone is the only VOC detected, and is a "guidance value" parameter. Also, a common lab contaminant, and naturally in many medicines & liquor.

Moench/Caleres is requesting that the Palmer St. Landfill be sampled only in the summer/dry month, when any detection is likely.

Please call if you have any questions.

Sincerely,

Jeffrey Smith
Site Manager

Cc: Alecia Jaruzel-Caleres; St. Louis, Mo.
* Emily Schultz-Caleres, St. Louis, Mo.
* Richard Frappa-GEI Consultants
Amherst, NY

* Summary of Report

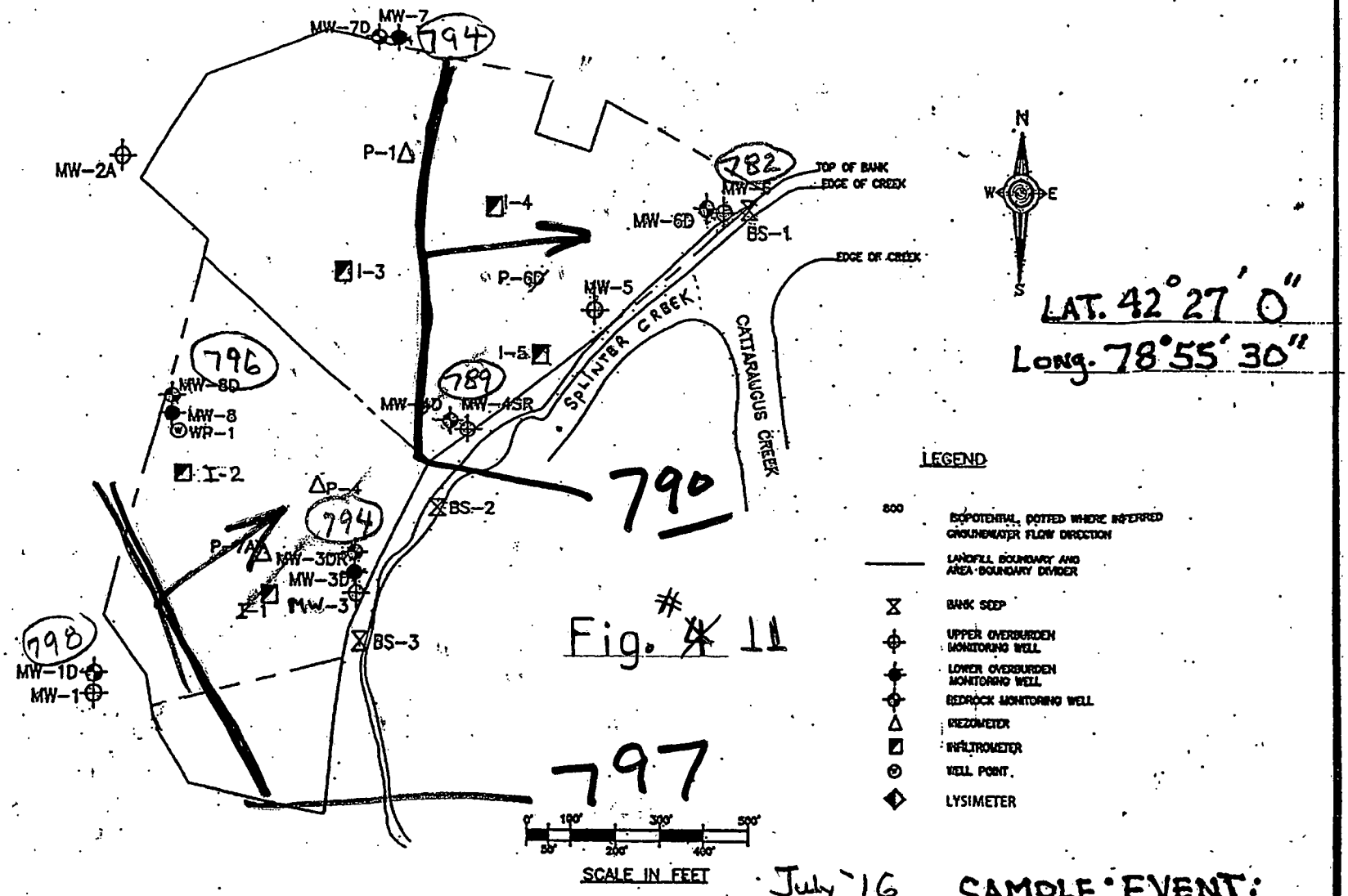


Fig. # 11

July '16 SAMPLE EVENT:

GEI Consultants, Inc.
Williamsville, NY

PALMER STREET LANDFILL

SITE PLAN

BEDROCK ISOPOTENTIAL MAP.

6.0 REFERENCES

1. PALMER STREET LANDFILL CLOSURE/POST CLOSURE PLAN (EPA ID. NYDOO2126910), PREPARED BY MALCOLM PIRNIE, INC. REVISED FEBRUARY 1989, July 1993, Dec. 2006.
2. PALMER STREET LANDFILL, SUPPLEMENTAL HYDROGEOLOGIC INVESTIGATION, PREPARED BY MALCOLM PIRNIE, INC. JANUARY 1989.
3. SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR GROUNDWATER MONITORING - PALMER STREET LANDFILL. PREPARED BY MALCOLM PIRNIE, INC., AUGUST 1989. REVISED-7/93, 8/94, 12/06.
4. TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/ CHEMICAL METHODS, USEPA 200.7, FOR METALS, AND VOC 8260.
5. PALMER STREET LANDFILL, EVALUATION OF ALTERNATIVE COVER SYSTEMS, PREPARED BY MALCOLM PIRNIE, INC., JANUARY 1989.
6. COVER SYSTEM PERFORMANCE EVALUATION, PALMER STREET LANDFILL; PREPARED BY MALCOLM PIRNIE, INC. OCTOBER 1995 & FEBRUARY 1999. THIRD EVALUATION(8/03) PERFORMED BY GEOMATRIX CONSULTANTS. Report Feb. 2004.
7. FORMER TANNERY PLANT SITE, WELL INSTALLATION REPORT; PREPARED BY BENCHMARK ENVIRONMENTAL ENGINEERING SCIENCE CO., AUGUST 2000.
8. (previously #3) Letter to Mr. Jeffrey Smith, Moench Tanning Co., from New York State Dept. of Environmental Conservation, dated A August 31, 1993.
9. JULY 27TH, 2006 LETTER FROM GEOMATRIX TO STAN RADON(NYSDEC9), DOCUMENTING A JULY 19TH MEETING IN WHICH REVISIONS TO THE GROUNDWATER MONITORING SYSTEM WERE AGREED UPON.
10. SEPTEMBER 7TH, 2006 LETTER FROM STAN RADON(NYSDEC9), TO JEFFREY SMITH(MOENCH), CONFIRMING THE AGREEMENT TO REVISED GROUNDWATER MONITORING SYSTEM, AND COVER SYSTEM EVALUATION ELIMINATION.

ATTACHMENT B1

PALMER ST. LANDFILL

FIELD MEASUREMENT TRENDS

MONITORING EVENTS MARCH `16
JULY `16

PALMER ST L/F, MOENCH COMPANY
"PH" vs TIME
MONITOR POINTS & BANK SEEP
Fig.#8
Dec. '16

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
MW-1D	8.2	7.5	7.7	7.9	7.4	7.9	7.8	8	7.8	7.9	7.6	8	8.3	8.3	7.3	7.5	7	7.1	7	6.9	7.2	7.2	7.1	7.2
P-6D	START 94																7.3		7.1	7	7.7	7.7	7.7	7.6
MW-3DR	8.3	8	7.2	8.1	7.5	8	8.5	8.2	8.4	8	8.2	7.8	7.7	8.8	7.6	8	7.2	7.2	7.2	7	7.6	7.6	7.5	7.7
MW-5	7	7.3	7	7	7.2	7	7	7.1	7.3	7.1	7	6.9	7.3	7.4	6.8	7.2								
MW-6D	6.6	6.7	6.7	6.7	6.7	6.7	8	6.9	6.9	6.7	6.7	6.5	6.9	7	6.6	6.7	7.1	7.4	7.5	7.2	7.6	7.6	7.5	7.8
MW-4SR																								
MW-4D	6.8				6.9	7	6.8										7.2	7.2	7.5	7	7.7	7.7	7.4	7.4
MW-3																								
MW-3D																								
MW-6																								

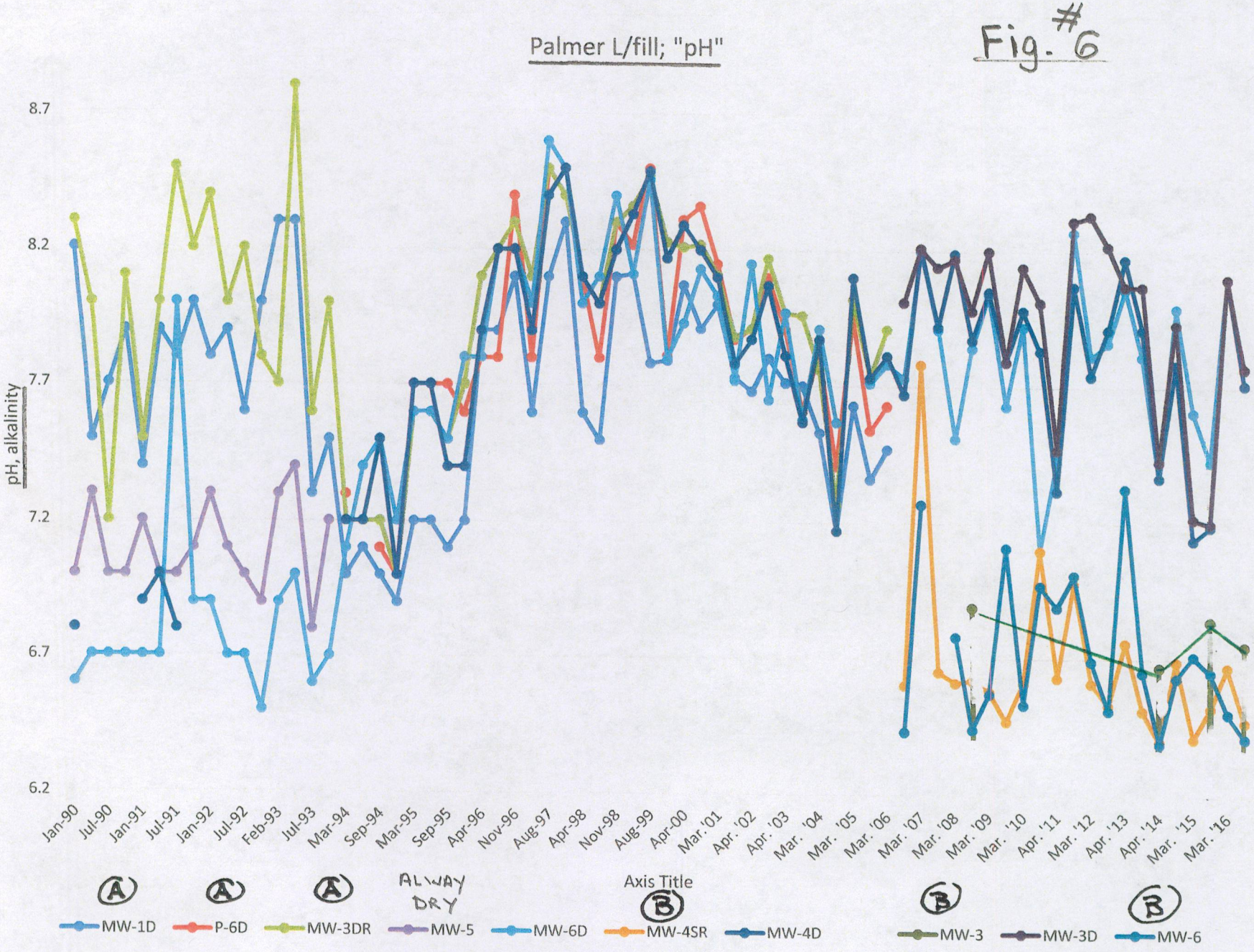
Fig #6

	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05
MW-1D	7.9	7.9	8.1	7.6	8.1	8.3	7.6	7.5	8.1	8.11	7.78	7.79	8.07	7.91	8	7.73	7.68	7.8	7.71	7.7	7.53	7.17	7.63	7.38
P-6D	7.8	7.8	8.4	7.8	8.5	8.4	8.1	7.8	8.3	8.22	8.5	7.81	8.31	8.36	8.15	7.87	7.91	8.1	7.91	7.81	7.82	7.41	7.95	7.54
MW-3DR	8.1	8.2	8.3	8.1	8.5	8.4	8.1	8	8.3	8.36	8.47	8.23	8.21	8.22	8.11	7.88	7.91	8.17	7.97	7.96	7.76	7.27	8.02	7.73
MW-5																								
MW-6D	7.8	8.2	8.2	8	8.6	8.5	8	8.1	8.4	8.11	8.48	7.8	7.93	8.13	8.03	7.72	8.15	7.65	7.97	7.58	7.91	7.57		7.71
MW-4SR																								
MW-4D	7.9	8.2	8.2	7.9	8.4	8.5	8.1	8	8.2	8.33	8.49	8.17	8.29	8.2	8.1	7.78	7.87	8.07	7.81	7.57	7.87	7.17	8.1	7.73
MW-3																								
MW-3D																								
MW-6																								

	Mar. '06	Aug. '06	Mar. '07	July '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Mar. '15	July '15	Mar. '16	July '16
MW-1D	7.47									no more	no more	no more	no more	no more	no more	no more	no more	no more	no more	no more	no more	no more
P-6D	7.63									" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
MW-3DR	7.91									" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
MW-5										" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
MW-6D	7.78	7.73	8.2	7.91	7.51	7.84	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
MW-4SR		6.6	7.78	6.65	6.81	6.62	8.04	7.83	7.92	7.1	7.43	8.27	7.81	7.86	8.06	7.81	7.37	7.99	7.61	7.43	8.1	7.77
MW-4D	7.81	7.67	8.21	7.92	8.19	7.87	6.58	6.47	6.61	7.1	6.63	6.98	6.61	6.53	6.76	6.51	6.4	6.69	6.41	6.52	6.67	6.47
	new sample locat.						8.05	7.79	7.98	7.83	7.32	8.07	7.74	7.91	8.17	7.91	7.37	7.78	7.14	7.19	8.1	7.71
MW-3																						
MW-3D		8.01	8.21	8.14	8.17	7.98	dry	dry	dry	dry	dry	dry			dry	2.83	6.67	dry	dry	6.84	dry	6.75
MW-6		6.43	7.27		6.78	6.44	6.2	7.79	8.14	8.01	7.47	8.31	8.33	8.22	8.07	8.07	7.43	7.93	7.22	7.2	8.1	7.77
							6.57	7.11	6.53	6.97	6.89	7.01	6.69	6.51	7.33	6.65	6.39	6.63	6.71	6.65	6.5	6.41

Plmrgw4

Fig. #6



(A) NOT SAMPLED SINCE ~05.

(B) ACIDIC TREND?

Plmrgw4

PALMER ST L/F, MOENCH COMPANY
"PH" vs TIME
MONITOR POINTS & BANK SEEPS

FIG.#6 Dec. '16

	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95
P-6B																								
MW-7D	7.7	7.8	7.9	8	7.5	7.8	7.8	7.8	7.8	8.2	8.2	7.9	7.8	8.3	7.8	8.3	7.1	7.1	7	7	7.1	7.1	7.2	7.2
MW-8D	10	9.2	9	9.5	9	9.3	9.1	8.6	8.6	8.7	8.8	8.6	8.8	8.6	8.1		7.1	7.2	7.1	7	7.6	7.6	7.4	7.6
BS-1	7.1	7.3	6.7	6.9	7.4	7			8.5	7.7	7.6	7.8	8.1	7.5		8.1	7.7	7.1	7.8				7.8	
BS-3	7	7.3	7.1	7.3	7.1	7.3		7.9	7.6	7.2	7.1	7.4	7.1	7.8		7.9	7.3	6.8	6.8	6.9	6.7	7.3	6.9	7.3
BS-2																								

Fig. #8

Figure #8

	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. ;02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05
P-6B	7.6	7.8	8.2	7.8	8.4	8.4	7.9	7.1	8.3	8.1	8.16	7.87	8.41	8.32	8.36	7.58	8.12	8.21	7.76	7.68	7.9	7.13	7.79	7.81
MW-7D	7.9	8.2	8.2	7.8	8.4	8.4	8	8	8.2	8.4	8.48	7.93	8.32	8.12	8.05	7.78	8.13	8.14	7.85	8.11	7.97	7.62	8.03	7.66
MW-8D			8.2		8.5		8.2	7.9				8.08	8.44			7.83	7.94			7.67		7.4		7.71
BS-1	7		9	7	8.2	8.3	8.2	7.8	7.9	7.83	8.45	7.9	7.47	7.87	7.45	7.38	7.61	7.42	7.16	7.62	7.25	6.9	7.03	7.9
BS-3	8.1		8.3	8.2	8.3	8.1	7.4	7.9	7.5	7.64	8.3	7.66	7.78	7.42	8.67	7.4	7.71	7.6	8.05	7.8	7.96	7.16	7.37	7.57
BS-2																								

Fig #6

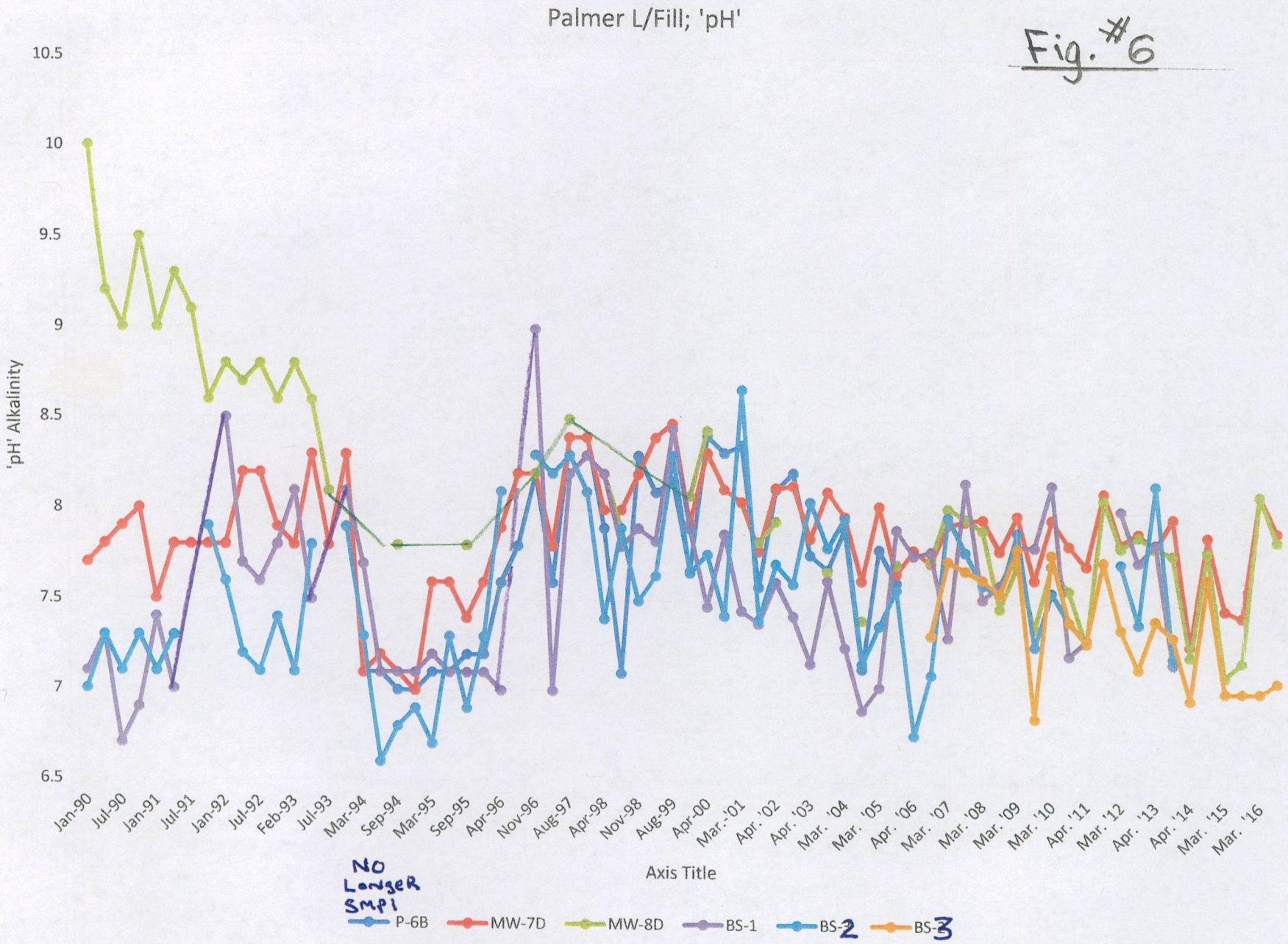
Figure #8

	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Mar. '15	July '15	Mar. '16	July '16
P-6B									no longer						no more	no more	no more	no more	no more	no more	no more	no more
MW-7D	7.79	7.72	7.93	7.95	7.96	7.79	7.98	7.63	7.96	7.82	7.71	8.11	7.83	7.89	7.81	7.97	7.27	7.87	7.47	7.43	8.1	7.9
MW-8D		7.73	8.02	7.96	7.9	7.47	7.71	7.36	7.71	7.57	7.28	8.07	7.81	7.87	7.81	7.77	7.21	7.79	7.1	7.18	8.1	7.85
BS-1	7.76	7.78	7.31	8.16	7.52	7.6	7.81	7.81	8.15	7.21	7.3		8.01	7.73	7.83	7.17	no smpl	no smpl	no smpl	no smpl	no smpl	no smpl
BS-3	6.76	7.1	7.97	7.78	7.6	7.55	7.89	7.26	7.56	7.4	7.3		7.72	7.39	8.15	7.2	no smpl	no smpl	no smpl	no smpl	no smpl	no smpl
BS-2		7.32	7.73	7.68	7.63	7.55	7.8	6.86	7.77	7.4	7.29	7.73	7.38	7.14	7.41	7.32	6.97	7.64	7.01	7.01	7.01	7.07

Bank Seep samples often creek samples , if no BS avail.

Plmr5ph

Fig. #6



Plmr 5ph

SPECIFIC CONDUCTIVITY DECEMBER 2016 Fig # 7

MOENCH WILL NO LONGER CHART & GRAPH SPECIFIC CONDUCTIVITY, AS IT HAS BEEN AT " MINIMAL "LEVELS FOR 20+ YEARS. IT IS NOT A REVELANT INDICATOR OF CONCERN.

WE WILL, HOWEVER, CONTINUE TO RECORD THE SAMPLE AT EACH INDIVIDUAL WELL, IN THE SEMI-ANNUAL, EVENT, AND NOTE ANY SIGNIFICANT INCREASE.

JEFFREY SMITH

SITE MANAGER

MOENCH CO.

Gowanda, NY

4.3 RATE OF CONTAMINANT MIGRATION

Contaminant migration and potential environmental impacts for the Palmer Street Landfill are discussed in detail in the report entitled "Palmer Street Landfill - Evaluation of Alternative Cover Systems" prepared by Malcolm Pirnie, Inc., January 1989 (Reference 7). As described in the above-mentioned report, groundwater migrates from the landfill through the shallow water-bearing zone along both the eastern and northern boundaries of the waste/fill area. A reasonable assumption in determining the rate of contaminant migration across the site is the rate of contaminant migration is equivalent to the rate at which groundwater leaves the site. This latter calculation can be performed through the application of Darcy's Law which is expressed as:

$$V = \frac{ki}{\theta}$$

where: V = velocity of shallow groundwater flow (feet/day)
k = hydraulic conductivity of the shallow water bearing zone (feet/day)
i = hydraulic gradient (dimensionless)
θ = average porosity of the shallow water bearing zone (dimensionless

Values for k and θ were previously determined (see Reference 2) as 4.1 ft/day and 0.35, respectively. The hydraulic gradient (i) is measured perpendicular to the primary direction of groundwater flow (viz., to the east toward Cattaraugus Creek - see Section 5.0) using average water level elevations as measured in MW-1 and MW-3 and elevation as measured in MW-2A and MW-5 during the 1993 monitoring year. The hydraulic gradient for MW-1 and MW-3 is thus:

$$\frac{\Delta H}{\Delta X} = \frac{26.3}{600} = 0.044$$

where

Δ H = difference in average groundwater elevations between MW-1 and MW-3 (feet)
Δ X = distance between MW-1 and MW-3 (feet)

Upon inserting this value into the Darcy's Law expression for velocity, the following result is obtained:

Eq. 6

$$V = \frac{Ki}{\theta} \quad \frac{(4.1)(0.044)}{0.35} = 0.52 \text{ ft/day}$$

Thus, the rate of contaminant migration across the site is approximately 0.52 feet/day between monitoring wells MW-1 and MW-3.

The hydraulic gradient for MW-2A and MW-5 is as follows:

$$\frac{\Delta H}{\Delta X} = \frac{24.5}{1085} = 0.022$$

Δ H = difference in average groundwater elevations between MW-2A and MW-5 (feet)

Δ X = distance between MW-2A and MW-5 (feet)

$$V = \frac{Ki}{\theta} \quad \frac{(4.1)(0.022)}{0.35} = 0.26 \text{ ft/day}.$$

The rate of contaminant migration across the site is approximately 0.26 ft/day between monitoring wells MW-2A and MW-5.

ATTACHMENT C

SOLUBLE METALS CONCENTRATION VS. TIME

MONITORING EVENTS: MARCH 2016
JULY 2016

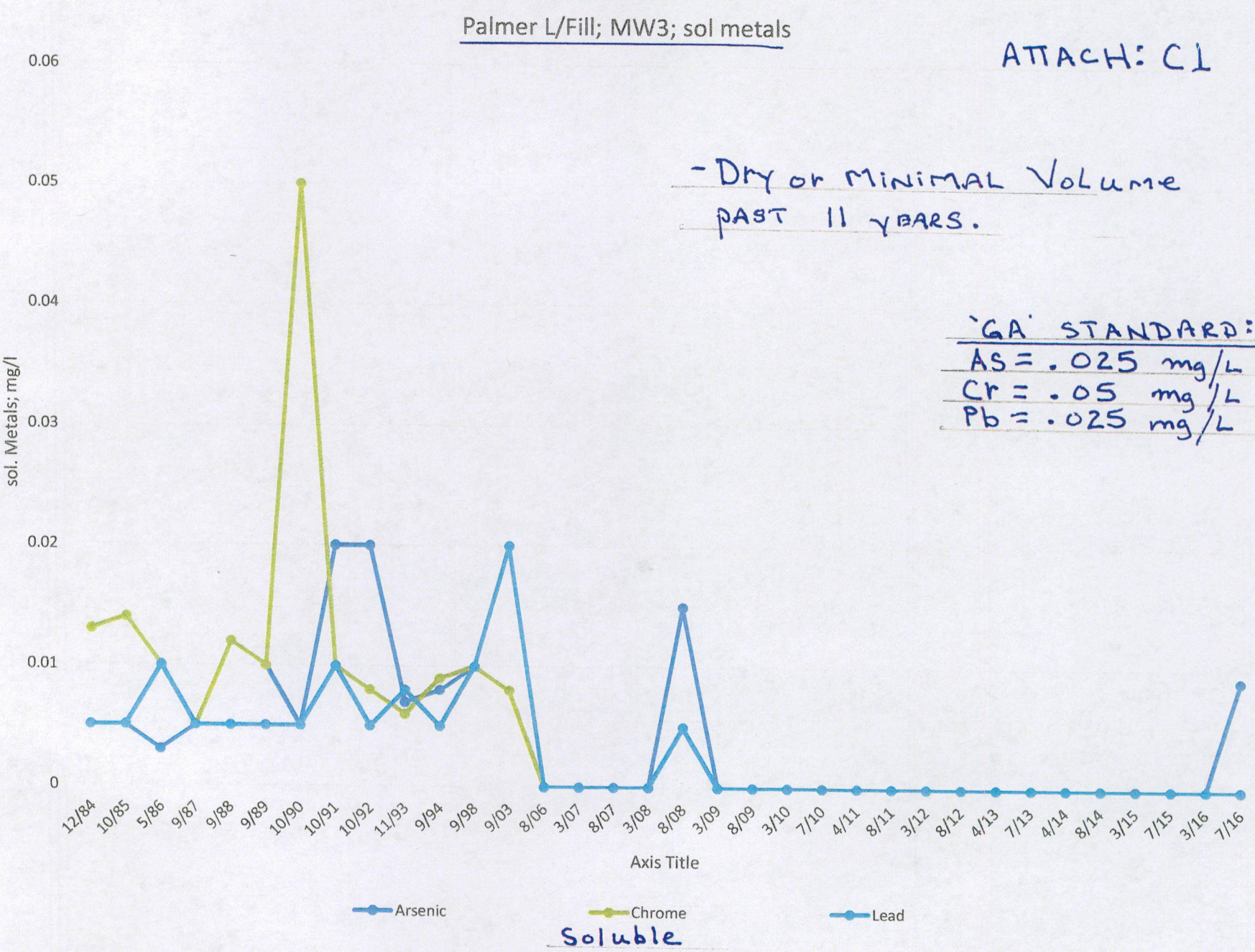
			PALMER ST. LANDFILL; MOENCH COMPANY							ATTAACHMENT C1			Dec. '16		
			MW-3 SOLUBLE METALS vs. TIME*** SCREENED IN WASTE***												
	12/84	10/85	5/86	9/87	9/88	9/89	10/90	10/91	10/92	11/93	9/94	9/98	9/03	8/06	3/07
Arsenic	0.005	0.005	0.003	0.005	0.012	0.01	0.005	0.02	0.02	0.007	0.008	0.01	0.02	dry	dry
(soluble)												l.t.	l.t.		
Chrome	0.013	0.014	0.01	0.005	0.012	0.01	0.05	0.01	0.008	0.006	0.009	0.01	0.008	dry	dry
(soluble)												l.t.			
Lead	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.01	0.005	0.008	0.005	0.01	0.02	dry	dry
(soluble)												l.t.	l.t.		

							Attach; C1								
	8/07	3/08	8/08	3/09	8/09	3/10	7/10	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14
Arsenic	dry	dry	0.015	dry	dry	dry	dry	dry	dry	dry	dry	dry	<.005	<.005	dry
(soluble)															
Chrome	dry	dry	0.005	dry	dry	dry	dry	dry	dry	dry	dry	dry	<.005	<.005	dry
(soluble)			l.t.												
Lead	dry	dry	0.005	dry	dry	dry	dry	dry	dry	dry	dry	dry	<.005	<.005	dry
(soluble)			l.t.												

	3/15	7/15	3/16	7/16
Arsenic	dry	dry	dry	0.009
(soluble)				
Chrome	dry	dry	dry	<.005
(soluble)				
Lead	dry	dry	dry	<.005
(soluble)				

DRY OR INADEQUATE VOLUME PAST 11 YEARS.

Plmr.MTL.MW3



ATTACH: C1

- Dry or Minimal Volume past 11 years.

'GA' STANDARD:
As = .025 mg/L
Cr = .05 mg/L
Pb = .025 mg/L

Soluble

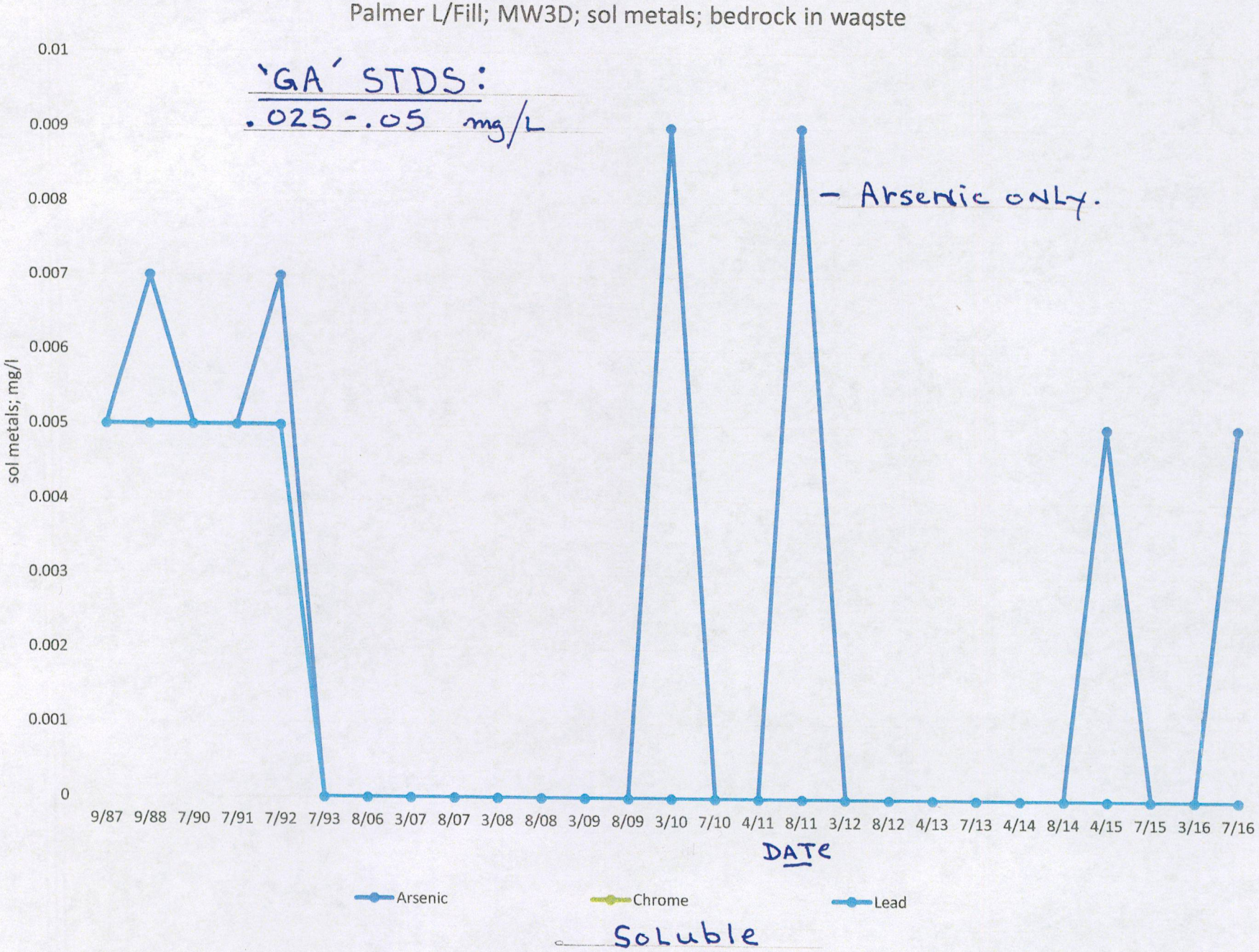
		PALMER ST. LANDFILL; MOENCH COMPANY												
		MW-3D, SOLUBLE METALS;(BEDROCK, IN WASTE)					ATTACHMENT-C1			Dec. 2016				
	9/87	9/88	7/90	7/91	7/92	7/93	8/06	3/07	8/07	3/08	8/08	3/09	8/09	3/10	7/10
Arsenic	0.005	0.007	0.005	0.005	0.007	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.009	<.005
(soluble)															
Chrome	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
(soluble)															
Lead	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
(soluble)															

ATTACH: C1

	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14	4/15	7/15	3/16	7/16
Arsenic	<.005	0.009	<.005	<.005	<.0005	<.005	<.005	<.005	0.005	<.005	<.005	0.005
(soluble)												
Chrome	<.005	<.005	<.005	<.005	<.0005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
(soluble)												
Lead	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
(soluble)												

MDL = .005 mg/L

Plmr.mTL.MW3D



Plmr.MTL.MW3D

		PALMER ST. LANDFILL; MOENCH COMPANY																
		MW-4SR SOLUBLE METALS; ***SCREENED IN WASTE***						Dec. '16			ATTACHMENT C1							
	12/84	4/85	5/86	9/87	10/88	9/89	10/90	7/91	11/93	9/94	8/98	9/98	5/03	8/06	3/07	8/07	3/08	8/08
Arsenic (soluble)	0.006	0.007	0.003	0.014	0.018	0.01	0.016	0.01	0.008	0.01	0.01	0.017	0.01	<.005	<.005	<.005	<.005	<.005
Chrome (soluble)	0.006	0.015	0.03	0.019	0.025	0.02	0.06	0.027	0.009	0.028	0.042	0.029	0.014	0.014	<.005	0.012	0.007	0.015
Lead (soluble)	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.01	<.005	<.005	<.005	<.005	<.005

Screened in Waste

ATTACH: C1

	3/09	8/09	3/10	7/10	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14	4-15	7/15	3/16	7/16
Arsenic (soluble)	0.009	<.005	<.005	<.005	<.005	0.013	<.005	0.008	<.005	<.005	<.005	<.005	<.005	<.005	0.007	0.009
Chrome (soluble)	0.012	<.005	0.017	<.005	<.005	0.017	0.012	<.005	0.015	0.019	0.021	0.019	0.01	0.011	0.01	0.02
Lead (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

Plmr. MTL - MW 4SR

Palmer l/fill; sol. Metals; MW-4sr

Screened in Waste

ATTACH: C1

'GA' STDS:

As = .025 mg/L

Cr = .05 "

Pb = .025 "

PlMr.MTL.MWSr

PALMER ST L/F, MOENCH COMPANY
MW-4D Soluble Metals; Bedrock.
Jan. '17

Attach; C1

	Mar. '94	Jun. '94	Oct. '94	Dec. '94	Mar. '95	Jun. '95	Sept. '95	Dec. '95	Apr. '96	Jun. '96	Nov. '96	Apr. '97	Aug. '97	Nov. '97	Apr. '98	Aug. '98	Nov. '98	Apr. '99	Aug. '99	Nov. '99	Apr. '00	Sept. '00	Mar. '01	Aug. '01	Apr. '02	Aug. '02	Apr. '03
Arsenic (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.006	<.005
Chrome (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Lead (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

**NO GRAPHES GENERATED D

MW-4D BEDROCK

plrmti1.xlxs.xls

ATTACH: c1

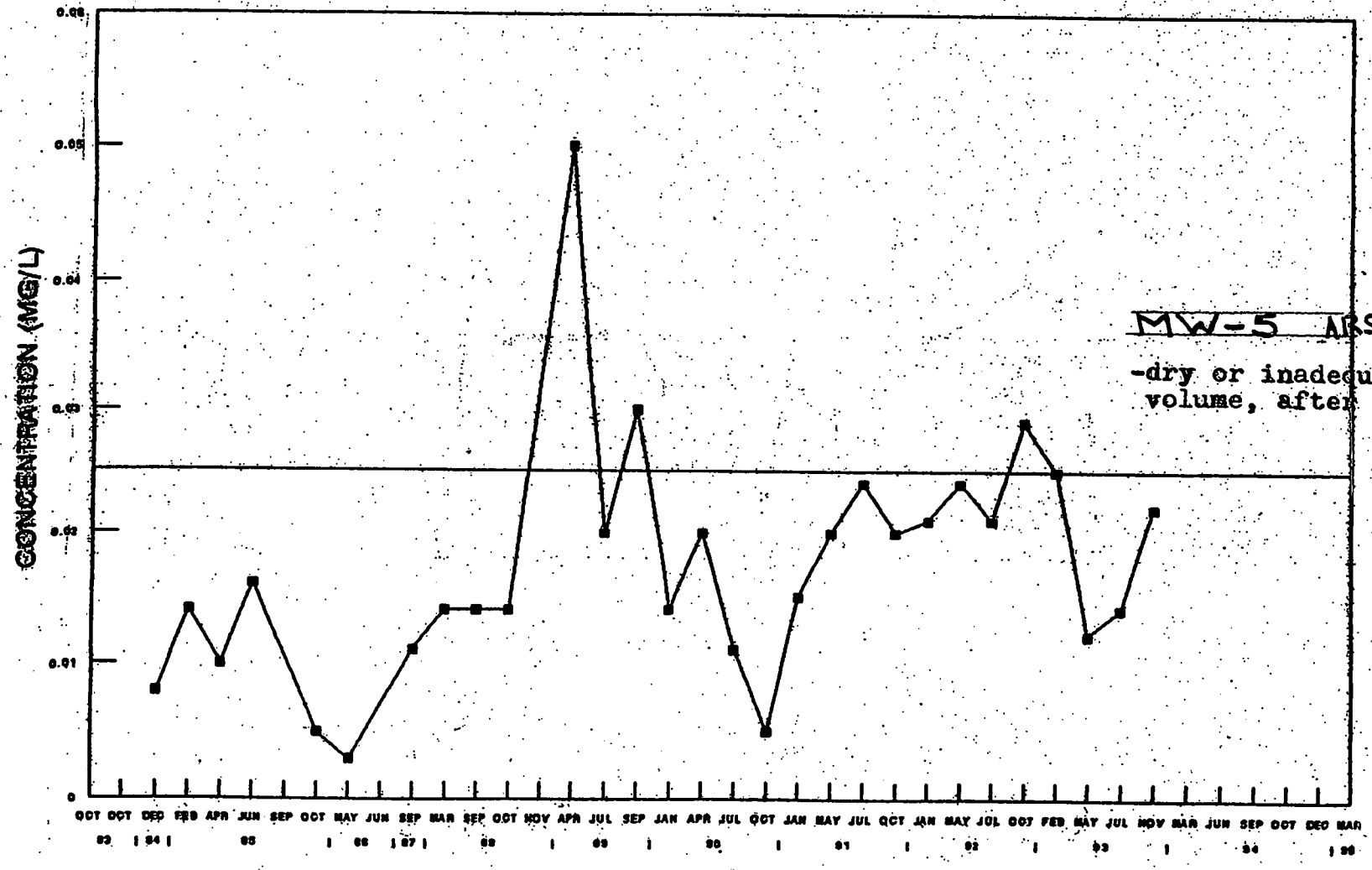
Attach: C1

	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July '15	Apr. '16	July '16
Arsenic (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.007	<.005	<.005	<.005	<.005	<.005	<.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Chrome (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.017	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Lead (soluble)	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
	UE TO LIMITED		DETECTION***																								

No graph due to minimal detection; thru 2016.

PALMER STREET LANDFILL
MW-5 SOLUBLE ARSENIC (screened in the waste)

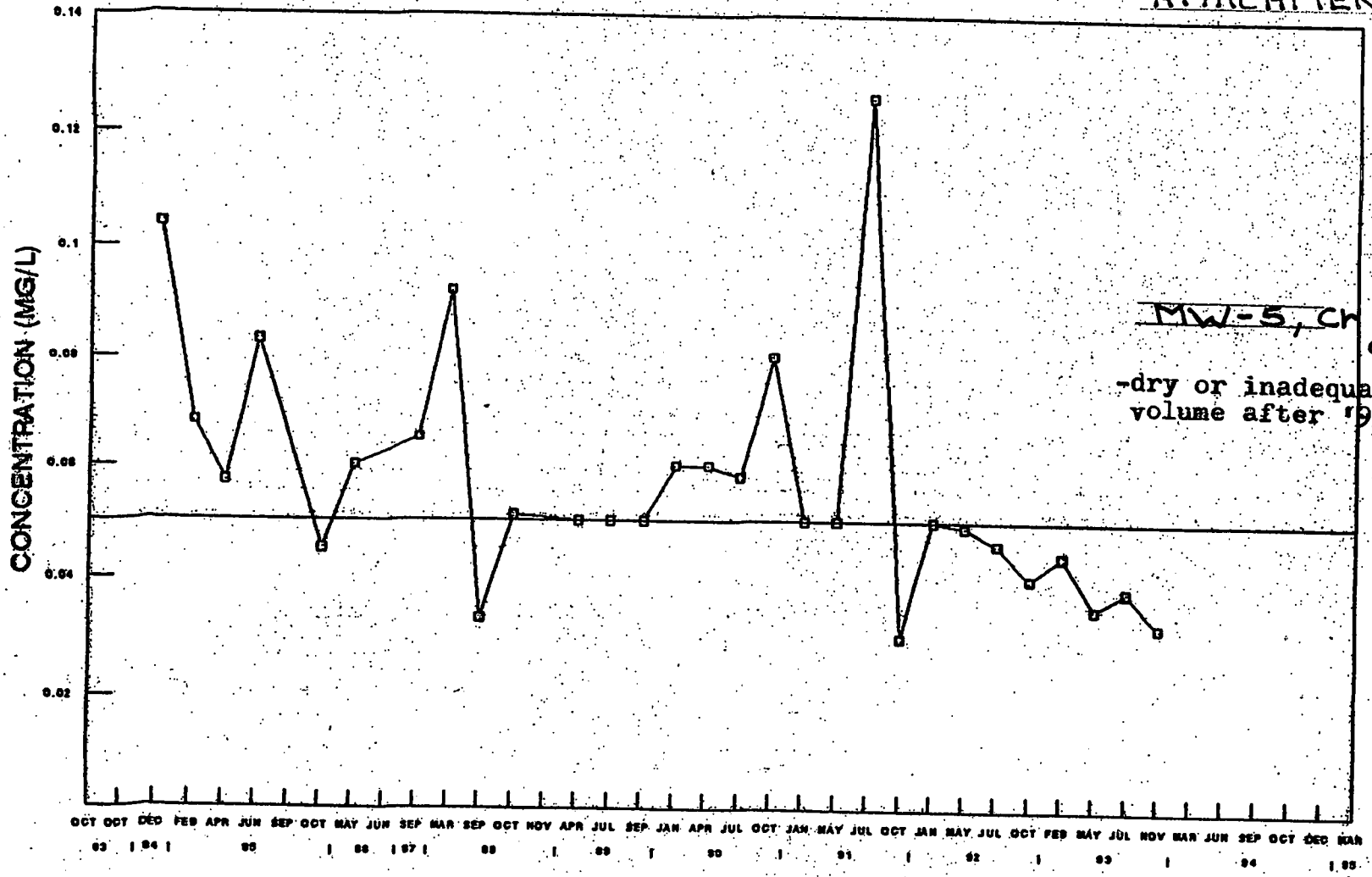
ATTACHMENT # C1



NOT ON COMPUTER

PALMER STREET LANDFILL
MW-5 SOLUBLE CHROMIUM (screened in the waste)

ATTACHMENT 'C1'



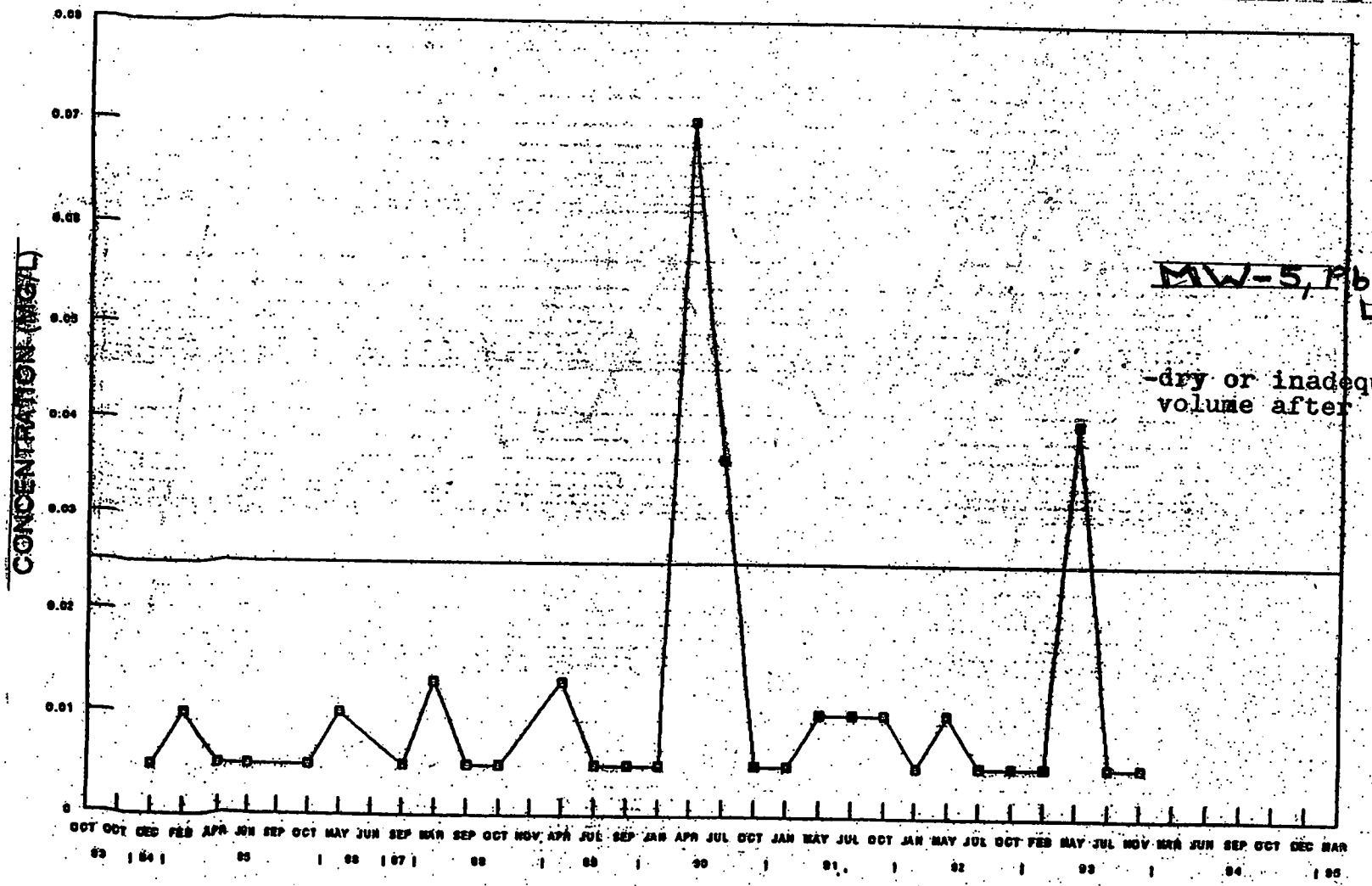
MW-5, Ch CHROME

-dry or inadequate volume after '93.

NOT ON COMPUTER

PALMER STREET LANDFILL
MW-5 SOLUBLE LEAD (screened in the waste)

ATTACHMENT C1



MW-5, Pb
LEAD

-dry or inadequate volume after '93.

NOT ON COMPUT'

		PALMER ST. LANDFILL; MOENCH COMPANY													
		MW-6 SOLUBLE METTAL(SCREENED IN WASTE)						Jan. '17							
	2/85	5/86	9/87	9/88	9/89	10/90	10/91	10/92	7/93	10/94	8/98	8/03	8/06	3/07	8/07
Arsenic	0.01	0.005	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.04	0.03	0.005	0.026	0.044	
(soluble)												l.t.			dry
Chrome	0.02	0.01	0.01	0.02	0.01	0.05	0.01	0.01	0.01	0.01	0.03	0.007	0.005	0.005	
(soluble)													l.t.	l.t.	dry
Lead	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.005	0.005	

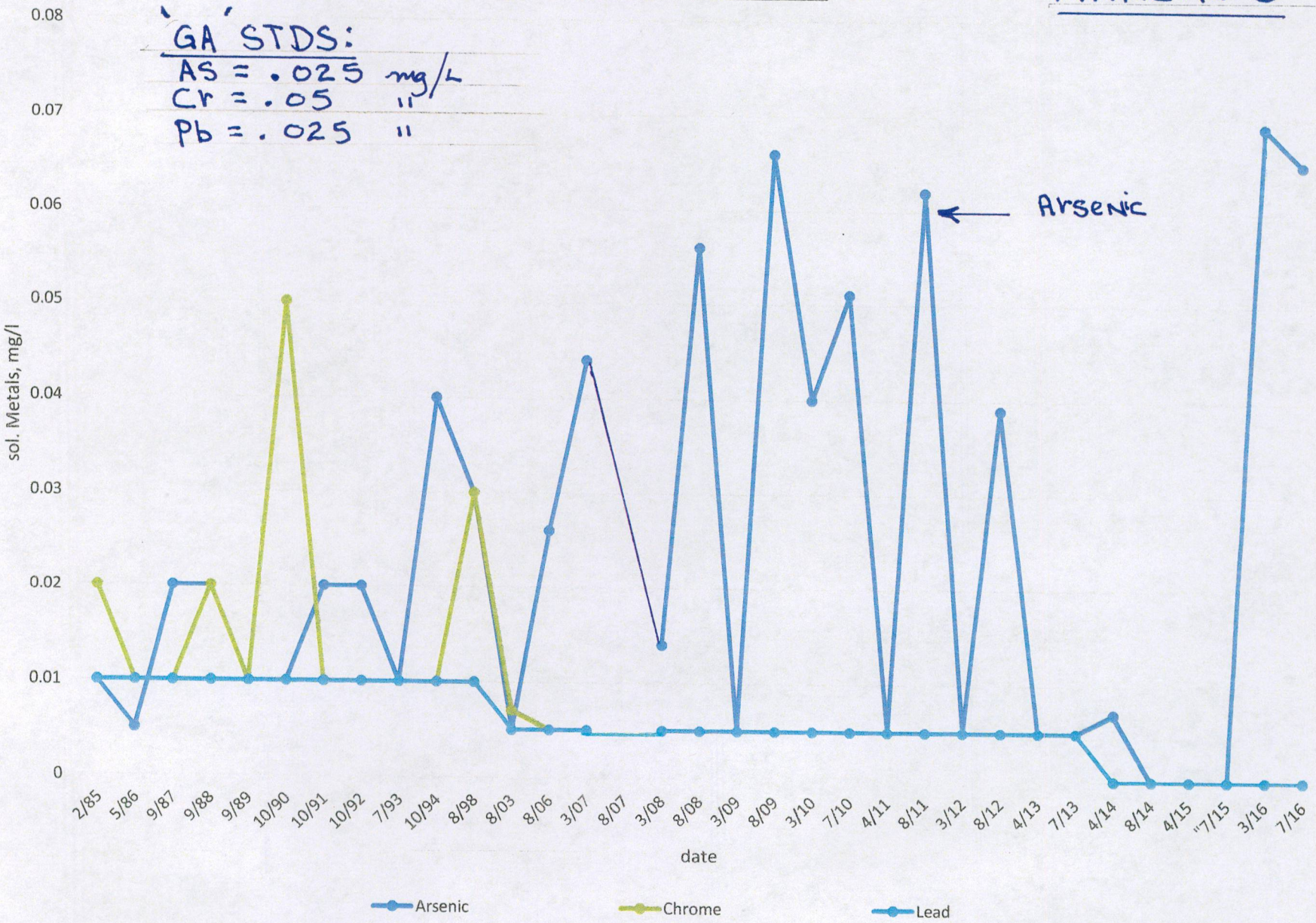
	3/08	8/08	3/09	8/09	3/10	7/10	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14	4/15
Arsenic	0.014	0.056	0.005	0.066	0.04	0.051	0.005	0.062	0.005	0.039	0.005	0.005	0.007	<.005	<.005
(soluble)							l.t.		l.t.		l.t.	l.t.			
Chrome	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005
(soluble)	l.t.	l.t.	lt	lt	l.t.	l.t.	l.t.	l.t.	l.t.	l.t.	l.t.	l.t.			
Lead	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005

Screened in WASTE.
ATTACH: C

	"7/15	3/16	7/16
Arsenic	<.005	0.069	0.065
(soluble)			
Chrome	<.005	<.005	<.005
(soluble)			
Lead	<.005	<.005	<.005

PlmrMTLMW 6

ATTACH: C



PlmrMTL MW6

PALMER ST L/F, MOENCH COMPANY
ARSENIC (SOLUBLE) vs TIME (MG/L)
Jan. '17
MONITOR WELLS & BANK SEEPS
Attachment 'C'

Soluble Arsenic: 6D, 7D, 8D.

	Sep-87	Mar-88	Sep-88	Oct-88	Nov-88	Apr-89	Jul-89	Sep-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92
MW-6D	START94																		
MW-7D	0.005	0.005	0.005	0.005	0.005	0.03	0.01	0.01	0.005	0.005	0.005	0.005	0.005	0.01	0.01	0.01	0.005	0.01	0.005
MW-8D	0.01	0.005	0.005	0.005	0.007	0.05	0.01	0.01	0.005	0.005	0.005	0.005	0.005	0.01	0.01	0.01	0.005	0.01	0.005

Attachment 'C'

	Oct-92	Feb-93	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Oct-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97
MW-6D						<.005	0.007	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.01	<.01	<.01	<.01	<.01
MW-7D	0.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.01	<.01	<.01	<.01	<.01
MW-8D	0.005	0.005	<.005	<.005				<.005	<.005			<.005		<.005	<.01	<.01		<.01	

Attachment 'C'

	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06
MW-6D	<.01	<.01	<.01	<.01	<.01	<.01	<.005	<.005	<.002	<.002	<.002	<.002	<.002	<.02	<.002	<.002	0.001	0.003	<.005
MW-7D	<.01	<.01	<.01	<.01	<.01	<.01	<.005	<.005	<.002	<.002	<.002	<.002	<.002	<.02	<.002	<.002	<.001	<.001	<.005
MW-8D	<.01	<.01				<.01	<.005			<.002	<.002	<.002		<.02		<.002		<.001	

Attachment "C"
Soluble Arsenic

	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July '15
MW-6D	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-7D	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-8D	<.005	<.005	<.005	<.005	<.005	0.011	<.005	<.005	0.008	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

	Mar. '16	July '16
MW-6D	<.005	0.005
MW-7D	<.005	<.005
MW-8D	<.005	0.006

- No graph due to minimal DETECTION PAST 27 YEARS.
"GA" STD = .025 mg/L

PALMER ST L/F, MOENCH COMPANY
CHROME(SOLUBLE), mg/l vs. time
Jan. '17 MONITOR WELLS & Attachment "C"

	Sep-87	Mar-88	Sep-88	Oct-88	Nov-88	Apr-89	Jul-89	Sep-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93
MW-6D	START94																				
MW-7D	<.005	0.006	<.005	<.005	<.005	<.01	<.01	<.01	<.05	<.05	<.05	<.05	<.05	<.05	<.01	<.005	<.005	<.005	<.005	<.005	<.005
MW-8D	<.005	0.008	<.005	<.005	<.005	0.02	<.01	<.01	<.05	<.05	<.05	<.05	<.05	<.05	<.01	<.005	<.005	<.005	<.005	<.005	<.005

Soluble chrome: 6D, 7D, 8D

Attachment "C"

	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Oct-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99
MW-6D				<.005	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.01	<.005	<.01	<.01	<.01	<.01	<.01	<.01	<.01
MW-7D	<.005	<.005	<.005	<.005	<.005	0.025	<.005	<.005	<.005	<.005	<.005	<.005	<.01	<.005	<.01	<.01	<.01	<.01	<.01	<.01	<.01
MW-8D	<.005	<.005				<.005				<.005				<.005		<.01		<.01	<.01		

Attavhmer

"C"

Attachment "C" Sol. Chrome

	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09
MW-6D	<.01	<.01	<.005	<.005	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004
MW-7D	<.01	<.01	<.005	<.005	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004
MW-8D		<.01	<.005			0.005	<.004			<.004		<.004		<.004		<.004	<.004	<.004	<.004	<.004	<.004

"GA" STD = .05 mg/L

	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. "12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July"15	Mar. '16	July '16
MW-6D	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004
MW-7D	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004
MW-8D	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004	<.004

No graphs; Minimal DETECTION past 28 YEARS.

PLT MTL 6

PALMER ST. L/F, MOENCH COMPANY
LEAD(SOLUBLE) vs TIME (MG/L)
MONITOR WELLS & P

Attachment 'C'

	Jan. 17																		
	Sep-87	Mar-88	Sep-88	Oct-88	Nov-88	Apr-89	Jul-89	Sep-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92
MW-6D	START94																		
MW-7D	0.005	0.043	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.05	0.026	0.005	0.005	0.01	0.01	0.01	0.01	0.01	<.005
MW-8D	0.005	0.01	0.005	0.005	0.005	0.025	0.005	0.006	0.005	0.1	0.006	0.005	0.005	0.01	0.01	0.01	0.01	0.01	0.01

Soluble Lead: MW-6D, 7D, 8D

Attachment 'C'

	Oct-92	Feb-93	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Oct-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97
MW-6D						<.005	0.013	<.005	<.005	<.005	<.005	<.005	<.005	0.006	<.005	<.005	<.005	<.005	<.005
MW-7D	0.007	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.015	<.005	<.005	0.214	<.005
MW-8D	<.005	<.005	<.005	<.005				<.005				<.005				<.005		<.005	

Attachment "C"

	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06
MW-6D	<.005	<.005	<.005	0.008	<.005	<.005	<.02	<.02	0.027	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.005	<.005	<.005
MW-7D	<.005	<.005	<.005	<.005	<.005	<.005	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.005	<.005	<.005
MW-8D	<.005	<.005				<.005	<.02			<.02	<.02			<.02		<.02		<.005	

Attachment "C"

Lead

	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July '15
MW-6D	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-7D	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-8D		<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

	Mar. '16	July '16	
MW-6D	<.005	<.005	
MW-7D	<.005	<.005	
MW-8D	<.005	<.005	

- No graphs: Due To Minimal DETECTION PAST 27 yrs.

- GA STD = .025 mg/L

PlrMTL 7

										Arsenic										Arsenic							
ARSENIC	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug.'11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July '15	Mar. '16	July '16
BS-1	0.005	0.002	0.002	0.001	0.005	0.005	0.005	0.005	0.005	0.005	0.0005	0.005	<.005	<.005	<.005	ns	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
BS-2						0.005	0.005	0.005	0.005	0.007	0.007	0.005	<.005	<.005	<.005	ns	ND	ND	ND	ND	ND	NA	NA	NA	ns	NA
BS-3	0.002	0.002	0.003	0.008	0.005	0.006	0.005	0.005	0.005	0.005	0.008	0.005	<.005	0.007	<.005	<.005	ND	0.007	ND	ND	ND	ND	ND	0.005	0.006	0.012
	lt.	lt.		lt.	lt.	lt.	lt.	lt.	lt.																	
										Chrome									Chrome							
CHROME		Chrome																								
BS-1	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	ns	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
BS-2						0.005	0.005	0.005	0.005	0.006	0.005	0.005	<.005	<.005	<.005	ns	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
BS-3	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	<.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.																
										Lead									Lead							
LEAD	less				Lead																					
BS-1	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	ns	ND	ND	A- .023	ND	ND	NA	NA	NA	NA	NA
BS-2						0.005	0.005	0.005	0.005	0.005	0.005	0.005	<.005	<.005	<.005	ns	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA
BS-3	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	<.005	<.005	<.005	<.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.	lt.																
	when no Bank seep.																									

Fig. 'C'

			PALMER ST L/F, MOENCH COMPANY																								
	Jan. '17		ARSENIC(SOL), CHROME(SOL), LEAD(SOL) vs TIME (MG/L)									Attachment 'C'														Attachment 'C'	
			BANK SEEPS		BS1, BS2, BS3																						
ARSENIC	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03
BS-1	0.005	0.005		0.005	0.005	0.005	0.005		0.005	LT .01	LT.01	0.01	0.01	0.01	0.01	0.011	0.01	0.01	0.01	0.01	0.005	0.005	0.004	0.002	0.002	0.002	0.003	0.02
BS-2																											
BS-3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	LT.025	LT.01	0.01	0.012	0.01	0.012	0.01	0.027	0.01	0.01	0.01	0.005	0.005	0.002	0.002	0.002	0.002	0.002	0.02
																									lt.	lt.	lt.	lt.
CHROME												Chrome																
BS-1	0.005	0.005		0.005	0.005	0.006	0.005		0.005	LT.025	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.008	0.005	0.01	0.004	0.005	0.004	0.008	0.004
BS-2																												
BS-3	0.005	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	LT.025	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.004	0.009	0.005	0.012	0.006	0.005	0.006	0.004
																												lt.
LEAD																												
BS-1	0.005	0.005		0.005	0.005	0.005	0.005		0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.008	0.005	0.005	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BS-2																												
BS-3	0.005	0.005	0.007	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.2	0.005	0.005	0.005	0.005	0.008	0.005	0.005	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
		**No graphes due to minimal detection & creek samples taken.																							lt.	lt.	lt.	lt.
																												A -Often creek sample

- No graphs due to minimal detection past 27 years.
- No sample available @ BS1 + BS2, past 3 years.

ATTACHMENT "D"

TOTAL VOLATILES vs TIME
(grouped by monitoring point)

MONITORING EVENTS: MARCH '16
JULY '16

PALMER ST. LANDFILL; MOENCH CO.
TOTAL VOLATILE ORGANICS OF RELEVANT; ACETONE, TOLUENE, XYLENE
MW3, MW4, MW5, MW6; ALL SCREENED U IN WASTE

Jan. '17

(ATTACHMENT "D")

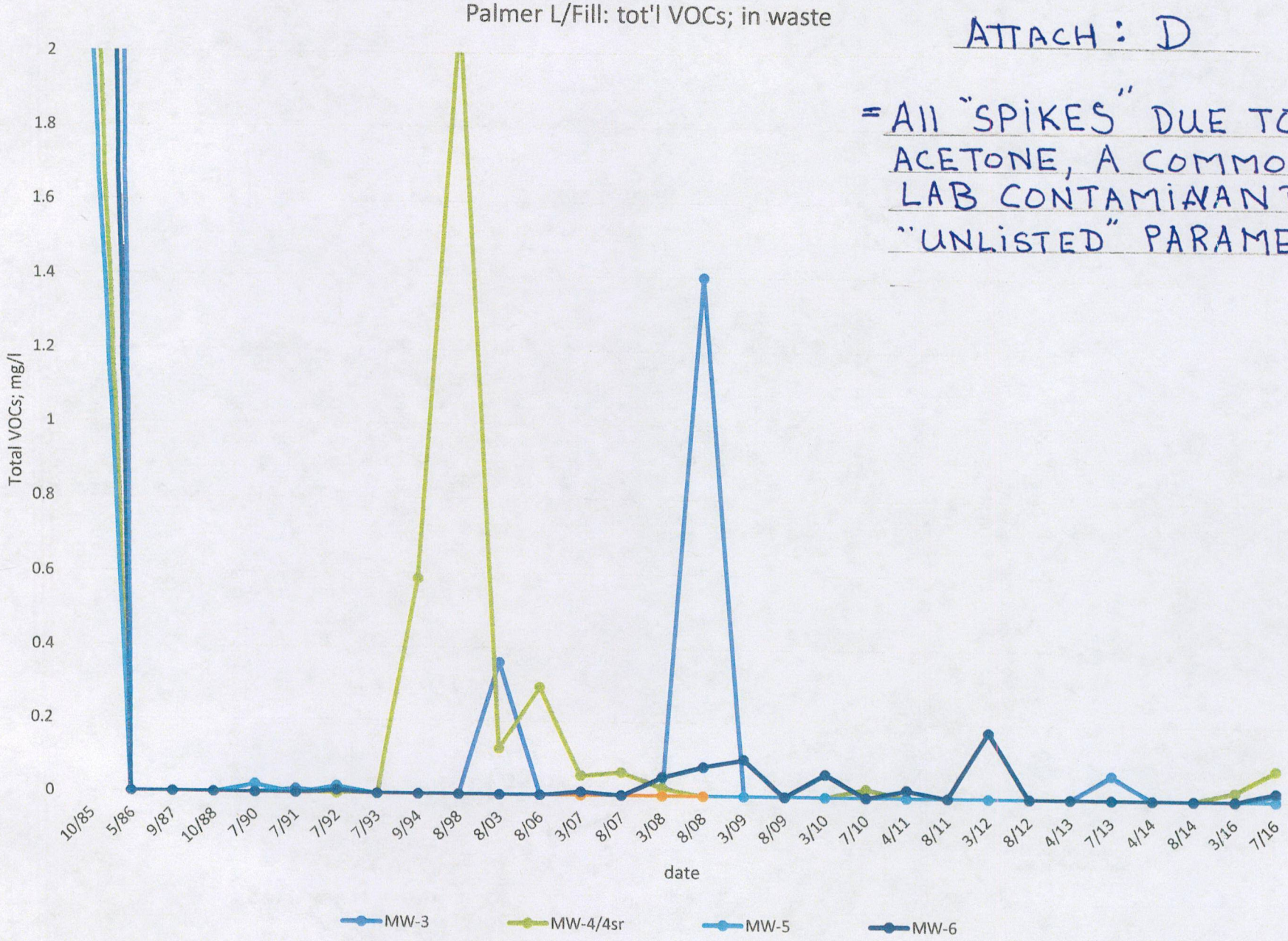
	10/85	5/86	9/87	10/88	7/90	7/91	7/92	7/93	9/94	8/98	8/03	8/06	3/07	8/07	3/08	8/08	3/09	8/09
MW-3	8.97	<.005	<.005	<.005	<.005	0.011	<.005	<.005	<.005	<.005	0.38	dry	dry	dry	dry	1.4	dry	dry
MW-4/4sr	2.46	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.586	2.1	0.125	0.293	0.052	0.062	0.021	<.005	<.005	<.005
MW-5	2.02	<.005	<.005	<.005	0.022	<.005	0.019	<.005	<.005	<.005	dry	dry	dry	dry	acetone dry	dry	dry	dry
MW-6	4.82	<.005	<.005	<.005	<.005	<.005	0.009	<.005	<.005	<.005	<.005	<.005	0.01	dry	0.05 acetone	0.078 acetone	0.099 acetone	<.005

- ALL WELLS SCREENED IN WASTE.

	3/10	7/10	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14	3/16	7/16
MW-3	dry	dry	dry	dry	dry	dry	dry	0.065 acetone	<.005	dry	dry	0.018
MW-4/4sr	<.005	0.024 acetone	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.025	0.083
MW-5	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
MW-6	0.062 acetone	<.005	0.022 acetone	<.005	0.18 acetone	<.005	<.005	<.005	<.005	<.005	<.005 acetone	0.024 acetone

} ALL ACETONE

WELLS IN WASTE. TOTAL VOC



ATTACH: D

= ALL "SPIKES" DUE TO ACETONE, A COMMON LAB CONTAMINANT + "UNLISTED" PARAMETER.

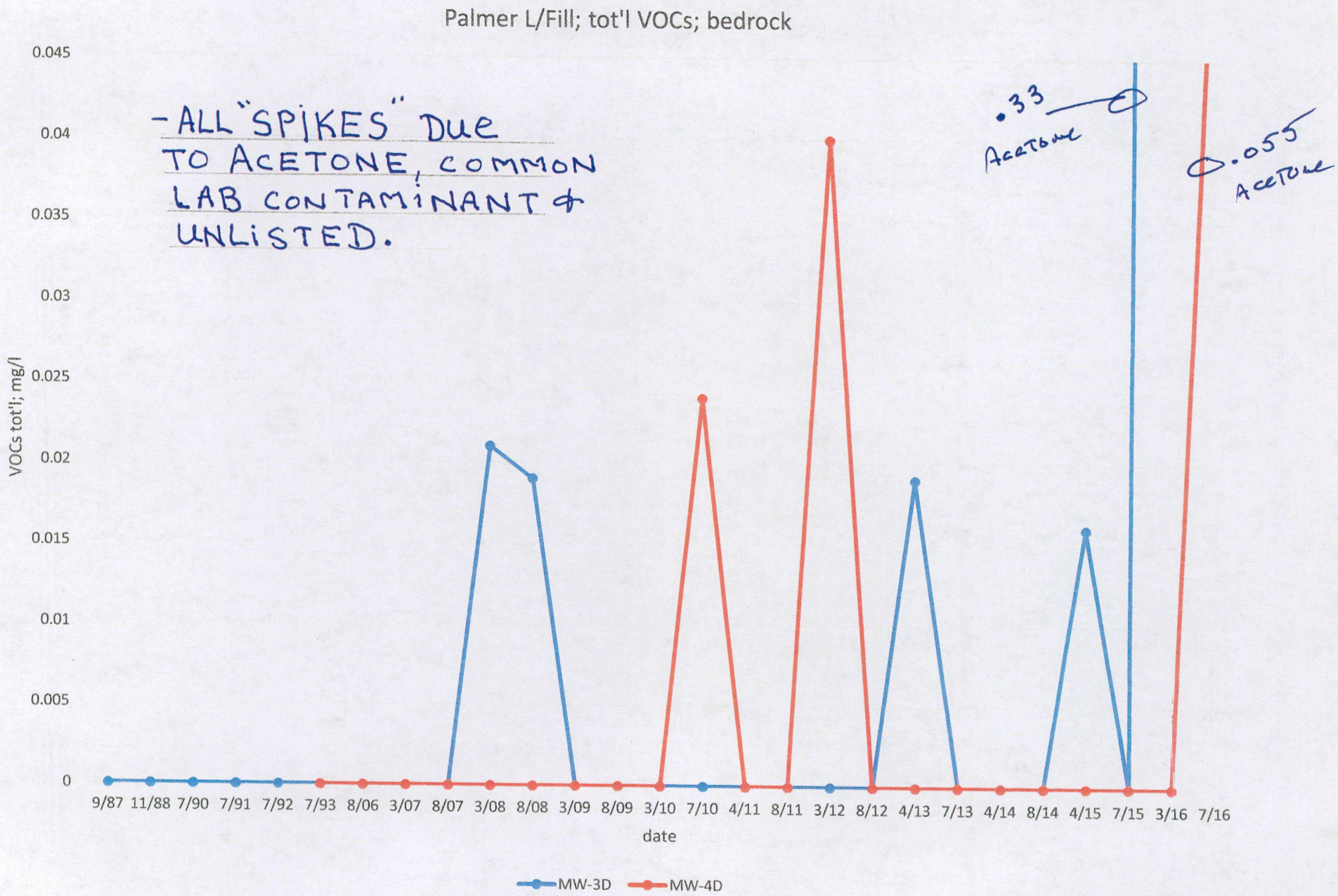
WELLSINWASTE.TOTALVOC

				PALMER ST. LANDFILL; MOENCH COMPANY									
	Jan. '17			TOTAL RELEVANT VOCs; BEDROCK WELLS(acetone, toluene,xylene)								ATTACHMENT "D"	
	9/87	11/88	7/90	7/91	7/92	7/93	8/06	3/07	8/07	3/08	8/08	3/09	8/09
MW-3D	<.005	<.005	<.005	<.007	<.005	<.005	<.005	<.005	<.005	0.021	0.019	<.005	<.005
MW-4D						<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
										acetone	acetone		

	3/10	7/10	4/11	8/11	3/12	8/12	4/13	7/13	4/14	8/14	4/15	7/15	3/16
MW-3D	<.005	<.005	<.005	<.005	<.005	<.005	0.019	<.005	<.005	<.005	0.016	<.005	0.33
MW-4D	<.005	0.024	<.005	<.005	0.04	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
					acetone		acetone						acetone

	7/16
MW-3D	0.098
MW-4D	0.055
	acetone

Plmr. Voc. Bedrock



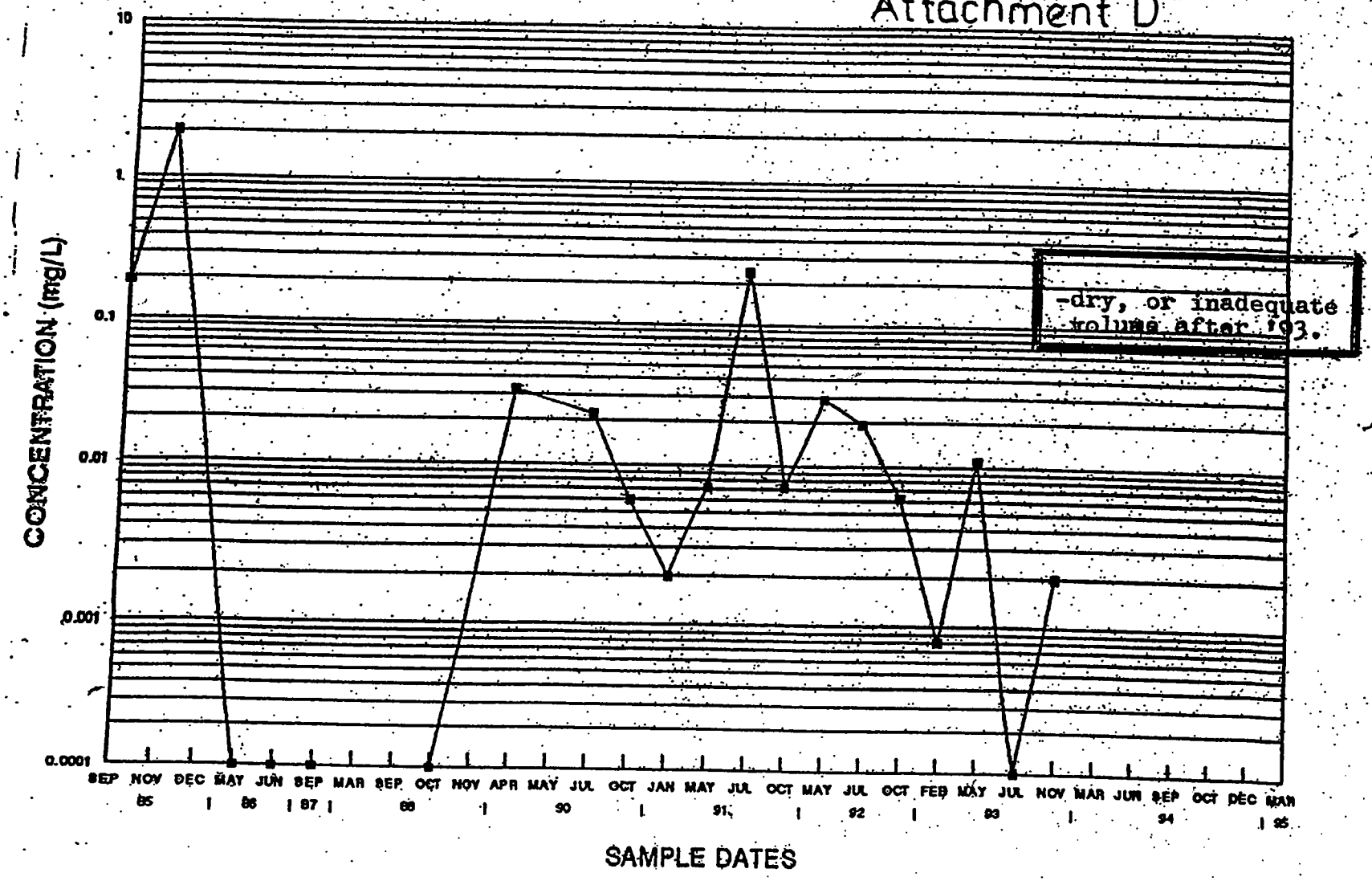
Plmr. Voc. BEDROCK

PALMER STREET LANDFILL

TOTAL VOLATILE ORGANICS (sereened in the waste)

MW-5

Attachment D



-dry, or inadequate volume after '93.

			PALMER ST. L/F, MOENCH COMPANY																		
			TOTAL VOLATILE ORGANICS vs TIME (MG/L)					**relevant VOCs; acetone, toluene, xylene					Attachment 'D'								
	Jan. '17		MONITOR WELLS &																		
	Sep-87	Mar-88	Sep-88	Oct-88	Nov-88	Apr-89	Jul-89	Sep-89	Jan-90	Apr-90	Jul-90	Oct-90	Jan-91	May-91	Jul-91	Oct-91	Jan-92	May-92	Jul-92	Oct-92	Feb-93
MW-6D	START90									0.2	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-7D	<.005				<.005					<.005	<.005	<.005	<.005	<.005	<.005	0.011		<.005	<.005	<.005	<.005
MW-8D	<.005			0.012						<.005	0.07	<.005	<.005	0.011	<.005			<.005	<.005	<.005	<.005

	Attachment 'D'															Attachment 'D'					
						DEC. '15															
	May-93	Jul-93	Nov-93	Mar-94	Jun-94	Oct-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99
MW-6D	<.005	<.005	<.005	0.02	0.03	0.03	0.02	0.03	0.008	<.005	<.005	<.005	0.012	<.005	0.007	<.005	<.005	<.005	<.005	<.005	<.005
MW-7D	<.005	<.005	<.005	<.005	0.008	0.012	<.005	<.005	<.005	<.005				<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-8D	<.005	<.005				<.005								<.005		<.005		<.005	<.005		

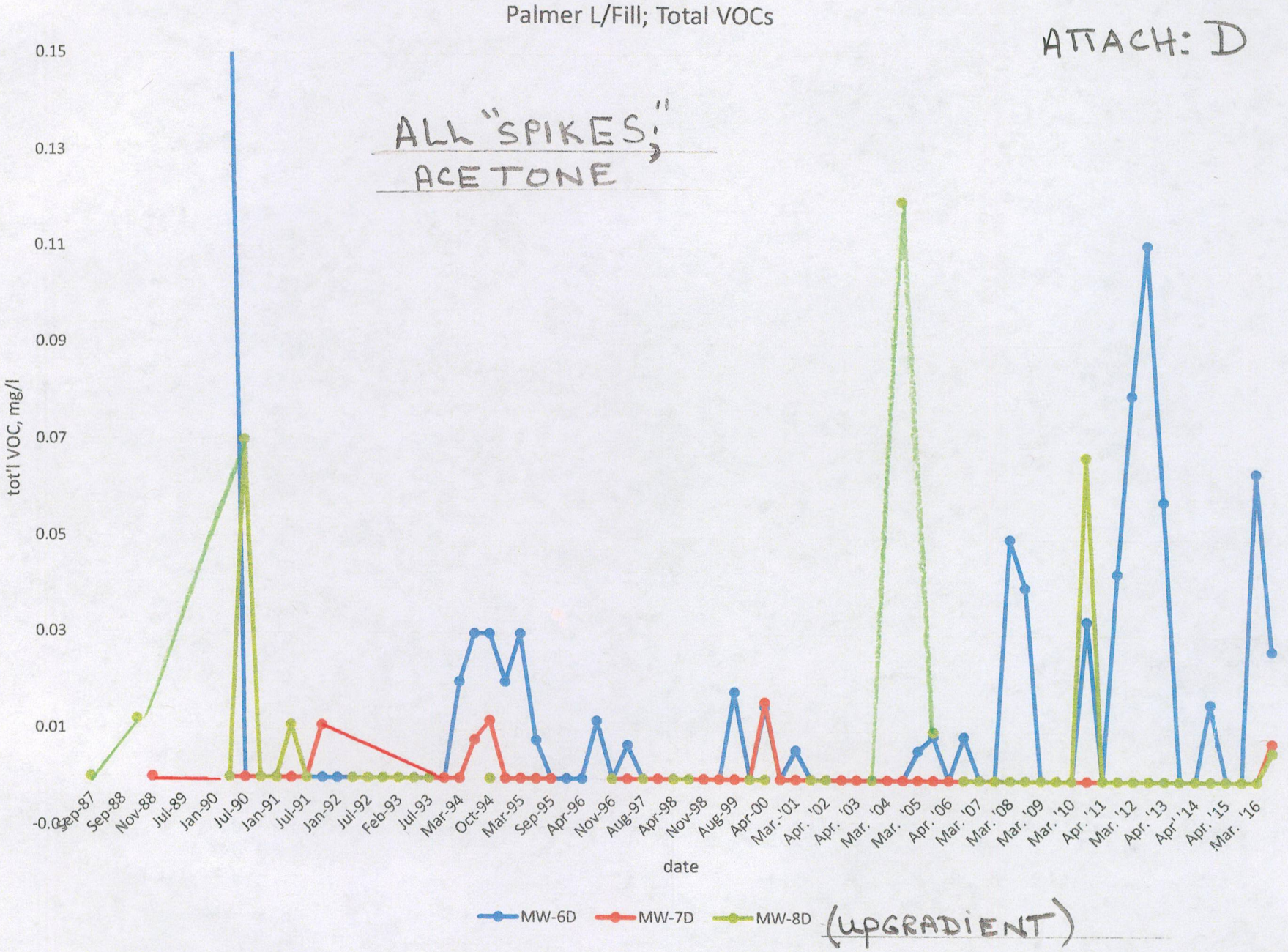
											Attachment 'D'										
	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. '03	Aug. '03	Mar. '04	Aug. '04	Mar. '05	Aug. '05	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09
MW-6D	0.018	<.005	0.015	<.005	0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.006	0.009	<.005	0.009	<.005	<.005	0.05	0.04	<.005
MW-7D	<.005	<.005	0.016	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
MW-8D		<.005	<.005			<.005	<.005			<.005		0.12		0.01		<.005	<.005	<.005	<.005	<.005	<.005
												(j) est							acetone	acetone	

	attachment D														
	Aug.'09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12	Aug. '12	Apr. '13	July '13	Apr' '14	Aug. '14	Apr. '15	July '15	Mar. '16	July '16
MW-6D	<.005	<.005	0.033	<.005	0.043	0.08	0.111	0.058	<.005	<.005	0.016	<.005	<.005	0.064	0.027
MW-7D	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.008
MW-8D	<.005	<.005	0.067	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.006
			ace/CS2		acetone	acetone	acetone	acetone			acetone			acetone	acetone

- ONLY DETECTIONS ARE ACETONE.

Plrvoc8

ATTACH: D


Palmer L/Fill; Total VOCs
ALL "SPIKES;"
ACETONE
tot'l VOC, mg/l
0.15
0.13
0.11
0.09
0.07
0.05
0.03
0.01
-0.01
Sep-87
Sep-88
Nov-88
Jul-89
Jan-90
Jul-90
Jan-91
Jul-91
Jan-92
Jul-92
Feb-93
Jul-93
Mar-94
Oct-94
Mar-95
Sep-95
Apr-96
Nov-96
Aug-97
Apr-98
Nov-98
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Mar. '07
Mar. '08
Mar. '09
Mar. '10
Apr. '11
Mar. '12
Apr. '13
Apr '14
Apr. '15
Mar. '16
date
MW-6D
MW-7D
MW-8D
(UPGRADIENT)

PALMER ST. L/F, MOENCH COMPANY
TOTAL VOLATILE ORGANICS vs TIME (MG/L)
Jan. '17 — BANK SEEPS — BS-1,2,3

	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98
BS-1	0.13			0.009	<.005	<.005			<.005	<.005	<.005	<.005	<.005	<.005	<.005
BS-2	(started in 2006)														
BS-3					<.005	<.005			<.005	<.005	<.005	<.005	<.005	<.005	<.005

(Attachment 'D')

	Aug-98	Nov-98	Apr-99	Aug-99	Nov-99	Apr-00	Sep-00	Mar.-'01	Aug.-'01	Apr. '02	Aug. '02	Apr. "03	Aug. '03	Mar. '04	Aug. '04
BS-1	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
BS-2															
BS-3	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005

acetone

Attachment 'D'

	Mar. '05	Aug. '05	Apr. '06	Aug. '06	Mar. '07	Aug. '07	Mar. '08	Aug. '08	Mar. '09	Aug. '09	Mar. '10	July '10	Apr. '11	Aug. '11	Mar. '12
BS-1	0.006	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005	na	ND
BS-2				<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005-b	<.005	na	ND
BS-3	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	<.005 b	0.011	<.005 b	<.005	<.005	<.005	<.005	<.005	<.005	ND
		Often no B	ank seep	; took creel	sample										

	Mar. '12	Aug. '12	Apr. '13	July '13	Apr. '14	Aug. '14	Apr. '15	July '15	Apr. '16	Apr. '16
BS-1	ND	ND	<.005	<.005	na	na	NA	NA	NA	NA
BS-2	ND	ND	<.005	<.005	na	na	NA	NA	NA	NA
BS-3	ND	ND	<.005	<.005	ND	ND	ND	ND	ND	0.008
										acetone
			NA= no bank seep available.							

- No graphs Due to Minimal Detection past 20+ years.
No BANK SEEP @ BS 1 or BS 2, PAST 4 YEARS (NA).
ND = Non Detect.

ATTACHMENT "E"

* FIELD MEASUREMENT DATA SHEETS;

SAMPLE EVENTS: Apr. + July 2016

*Individual "field data sheets" were submitted with prior actual sample event reports. Contact Moench if you require them.

ATTACHMENT "F"

ANALYTICAL DATA EVENTS: April + July 2016

*Analytical data from: ALpHA LAB
was submitted in the prior individual semi-annual reports.
Please contact Moench Co. if you require them.

6.0 REFERENCES

1. PALMER STREET LANDFILL CLOSURE/POST CLOSURE PLAN (EPA ID. NYDOO2126910), PREPARED BY MALCOLM PIRNIE, INC. REVISED FEBRUARY 1989 July 1993, DEC. 2006.
2. PALMER STREET LANDFILL, SUPPLEMENTAL HYDROGEOLOGIC INVESTIGATION, PREPARED BY MALCOLM PIRNIE, INC. JANUARY 1989.
3. SAMPLING PLAN/QUALITY ASSURANCE PLAN FOR GROUNDWATER MONITORING - PALMER STREET LANDFILL. PREPARED BY MALCOLM PIRNIE, INC., AUGUST 1989. REVISED-7/93, 8/94, 12/06.
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. COVER SYSTEM PERFORMANCE EVALUATION, PALMER STREET LANDFILL; PREPARED BY MALCOLM PIRNIE, INC. OCTOBER 1995 & FEBRUARY 1999.
7. FORMER TANNERY PLANT SITE, WELL INSTALLATION REPORT; PREPARED BY BENCHMARK ENVIRONMENTAL ENGINEERING SCIENCE CO., AUGUST 2000.
8. (previously #3) Letter to Mr. Jeffrey Smith, Moench Tanning Co., from New York State Dept. of Environmental Conservation, dated August 31, 1993.
9. PALMER ST. LANDFILL; COVER SYSTEM PERORMANCE SYSTEM EVALUATION, PREPARED BY GEOMATRIX CONSTULTANTS, WILLIAMSVILLE, NY. FEBRUARY 2004.
10. JULY 27,2006 LETTER FROM RICHARD FRAPPA, GEOMATRIX CONSULTANT, WILLIAMSVILLE, NY; DOCUMENTING THE AGREEMENT WITH N.Y. STATE DEPT. OF ENVIRONMENTAL CONSERVATION, REGION 9; REVISED MONITORING(DETECTION) PROGRAM. LETTER TO STAN RADON.
11. SEPTEMBER 7, 2006 LETTER FROM STAN RADON (NYSDEC9) TO JEFFREY SMITH(MOENCH), CONFIRMING THE ACCEPTANCE OF THE REVISED DETECTION MONITORING SYSTEM, AND THE ELIMINATON OF THE PERFORMANCE MONITORING PLAN-COVER SYSTEM EVALUATION.