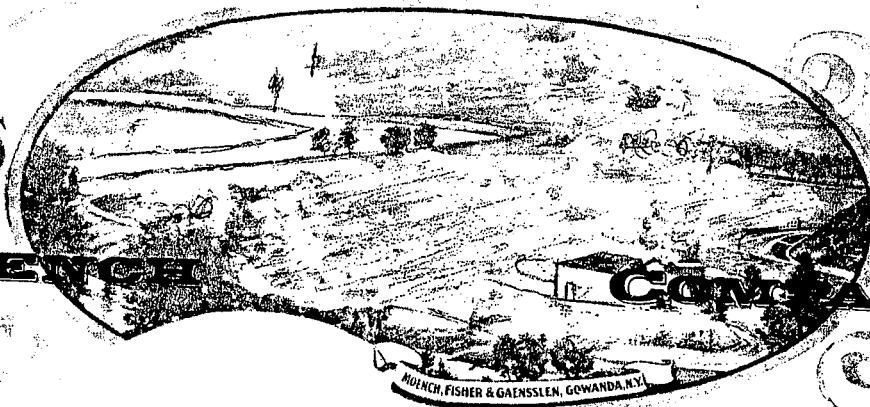


C. Moench and Sons
Co.

MOENCH



Established
1865

COMPANY

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ANNUAL GROUNDWATER QUALITY MONITORING
REPORT.
FOR CALENDAR YEAR - 2006
AT PALMER STREET LANDFILL.

MOENCH COMPANY
GOWANDA, NEW YORK 14070

January 2007
Jeffrey Smith
Site Manager

MOENCH COMPANY
PALMER STREET LANDFILL
 2006 ANNUAL GROUNDWATER MONITORING REPORT.....

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1.0 INTRODUCTION

1.1 BACKGROUND

THE MOENCH COMPANY, A DIVISION OF BROWN SHOE COMPANY, INC. IS 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. 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.

1.2 PUPOSE AND SCOPE

SAMPLES ASSOCIATED WITH TWO ROUNDS OF WATER QUALITY MONITORING, FOR THE 2006 CALENDAR YEAR, WERE COLLECTED IN APRIL & AUGUST OF 2006, FOR THE LANDFILL. THE PURPOSE OF THIS REPORT IS TO PROVIDE A SUMMARY OF THE DATA GENERATED FOR THE PALMER STREET LANDFILL DURING 2006. IT SHOULD BE NOTED SAMPLING LOCATIONS WERE MODIFIED BETWEEN THE APRIL AND AUGUST SAMPLING, THE RESULTS OF A MEETING WITH NYSDEC9 AND OUR ENVIRONMENTAL CONSULTANTS. THE NEW DETECTION MONITORING SYSTEM BETTER REPRESENTS POTENTIAL PARAMETER MIGRATION. (REF# 10 & 11)

2.0 MONITORING SYSTEM

SEVEN (7) GROUNDWATER MONITORING WELLS AT THE PALMER STREET LANDFILL WERE MONITORED IN APRIL SAMPLE, INACCORDANCE WITH THE LONG TERM POST CLOSURE MONITORING PLAN APPROVED FOR THE SITE.

THESE WELLS ARE DESIGNATED AS FOLLOWS:

UPGRADIANT UPPER BEDROCK	DOWN GRADIANT UPPER BEDROCK	UPPER BEDROCK PIEZOMETER P-6D
MW-1D	MW-3DR	LOWER OVERBURDEN
MW-7D	MW-4D	PIEZOMETER P-6B
MW-8D (ANNUAL)	MW-6D	

IN ADDITION TO THE WELLS, NYSDEC ALSO REQUIRES THE MONITORING OF TWO (2) BANK SEEPS DESIGNATED AS BS-1 AND BS-3, RESPECTIVELY. THE ABILITY TO OBTAIN SAMPLES FROM THESE BANKSEEPS VARIES DUE WET/DRY WEATHER CONDITIONS. CREEK SAMPLES ARE USUALLY OBTAINED IN THEIR PLACE.

A BANK SEEP SAMPLE WAS AVAILABLE FOR THE APRIL SAMPLE, BUT NOT FOR THE AUGUST SAMPLE.

TO AID IN THE EVALUATION OF COVER PERFORMANCE, LEVELS FROM FIVE (5) INFILTROMETERS, ARE ALSO MEASURED. LOCATIONS OF MONITORING POINTS ARE SHOWN ON FIGURE 2.

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:

DOWNGRADIANT WELLS		UPGRADIANT WELLS	BANK SEEPS
OVERBURDEN/ <u>WASTE</u>	<u>BEDROCK</u>		
MW-3	MW-3D	MW-7D	BS-1
MW-4SR	MW-4D	MW-8D	BS-2
MW-5	MW-6D		BS-3
MW-6			

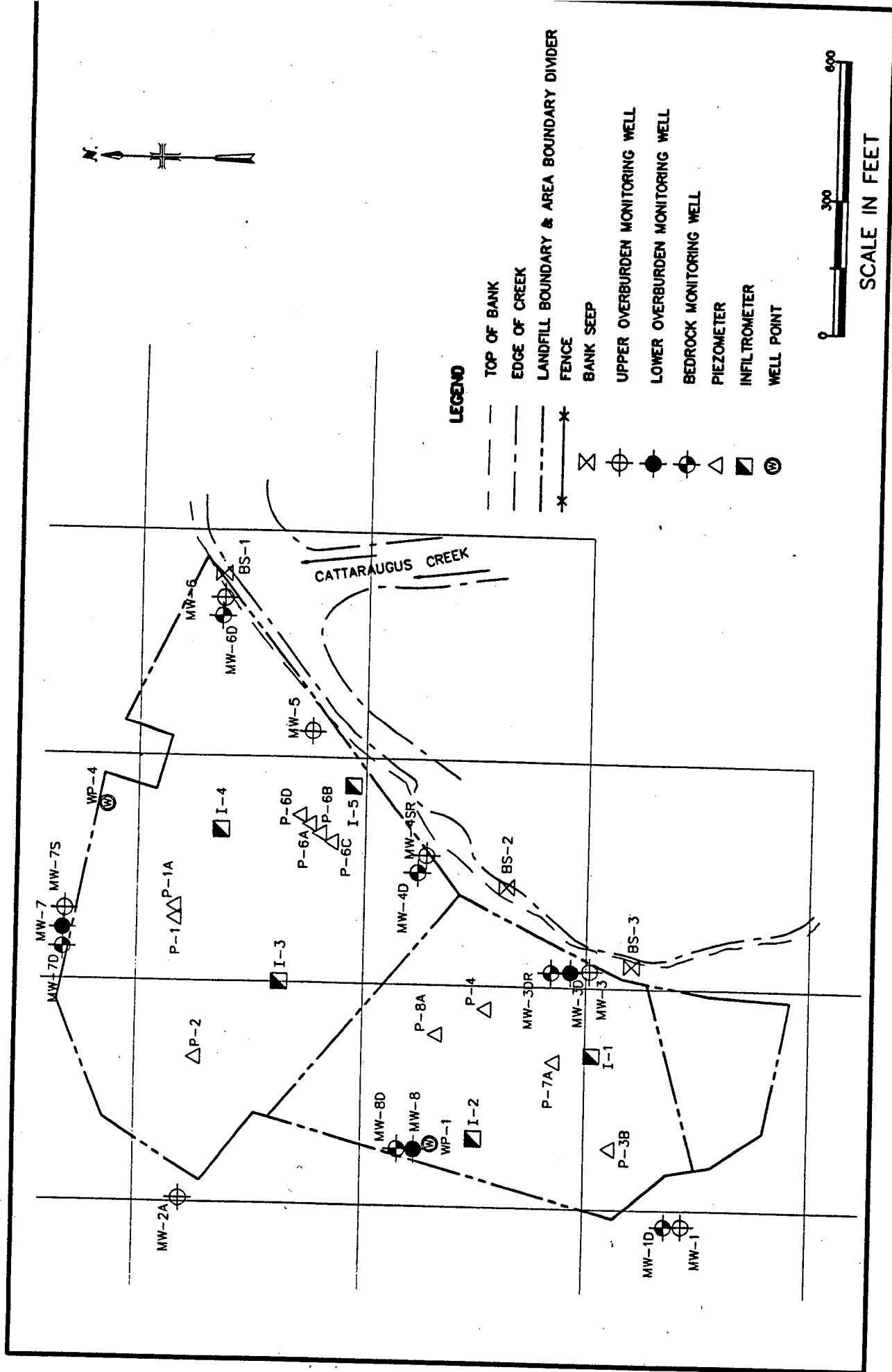


FIGURE #2

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 2006. THE ANALYTICAL WORK WAS PERFORMED BY SEVERN TRENT LABORATORY, BUFFALO, 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 SW-846, 3RD EDITION (REFERENCE 4). THE MONITORING PARAMETERS ARE LISTED IN TABLE 1. SAMPLES WERE COLLECTED FROM EACH OF THE TEN (10-APRIL), AND 12-AUGUST, 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, INFILTRMETERS, 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 7.

3.2 INFILTRMETER MONITORING

FIVE INFILTRMETERS HAVE BEEN INSTALLED BENEATH THE LANDFILL CAP TO AID IN THE ASSESSMENT OF PERFORMANCE OF THE CAP. DURING EACH SEMIANNUAL EVENT, WATER LEVELS IN THE INFILTRMETER 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 1×10^{-7} CM/SEC, EXCEPT ARE NOTED ON THE TABLE. A SCHEMATIC SHOWING THE DESIGN AND DIMENSIONS OF THE INFILTRMETERS 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.

2006 Annual

TABLE 4

PALMER STREET LANDFILL
SUMMARY OF GROUNDWATER ELEVATIONS⁽¹⁾

Location	Dates of Measurement	
	3-28-06	8-4-06
MW-1	821.60	821.15
MW-1D	818.82	818.42
MW-2A	806.92	805.67
MW-3	794.47	DRY
MW-3D	800.88	801.25
MW-3DR	803.89	803.10
MW-4SR	794.19	792.93
MW-4D	795.87	796.17
MW-5	DRY	DRY
MW-6	785.46	784.45
MW-6D	782.45	782.21
MW-7S	794.48	793.72
MW-7	794.99	793.72
MW-7D	796.29	795.00
MW-8D	809.94	809.75
P-1	795.45	794.68
P-1A	796.46	795.30
P-2	801.39	800.24
P-3B	818.90	818.16
P-4	798.09	791.43
P-6A	792.10	790.97
P-6B	791.58	791.24
P-6C	792.63	791.93
P-6D	792.32	791.39
P-7A	796.82	795.16
P-8A	DRY	DRY
WP-1	813.51	812.46
WP-4	793.34	792.41

Notes:

- (1) Measured in feet; distance above sea level.
 • Well locked; unable to open.
 ** Wells added to program prior to November 1993 event.

MW = Monitoring Well P = Piezometer WP = Well Point

TABLE X 2

MOENCH COMPANY
PALMER STREET LANDFILL
3/28/06 MONITORING EVENT

INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft)	Static Water Level (ft)	Δ Depth (ft)	# Days Between Readings (#)	Infiltration Rate		Approx. Total Rainfall This Period (ft)	Infiltration (%)
					gal/day.ft ²	(cm/sec)		
I-1	3/28/06 4.38	3/28/06 6.38	2.00	232	.0041	1.9×10^{-7}	2.87	④ 10.870
I-2	7.54	7.57	.03	"	.0001	5.0×10^{-9}	"	.17
I-3	6.92	7.32	.40	"	.0009	4.2×10^{-8}	"	2.4
I-4	7.25	7.35	.10	"	.0002	9.4×10^{-9}	"	.57
I-5	6.87	7.20	.33	"	.0007	4.0×10^{-8}	"	2.0

Note:

** Negative ΔD precludes calculation of meaningful data.

④ FREQUENTLY FLOODED; UPGRADIENT SPRINGS + GRAVEL WASH POUNDS.

TABLE X 3

MOENCH COMPANY
PALMER STREET LANDFILL
8/4/06 MONITORING EVENT

INFILTROMETER MEASUREMENTS

Infiltrometer	Static Water Level (ft)	Static Water Level (ft)	Δ Depth (ft)	# Days Between Readings (#)	Infiltration Rate		Approx. Total Rainfall This Period (ft)	Infiltration (%)
					gal/day.ft ²	(cm/sec)		
I-1	4.40	4.38	No chg.	129	—	—	1.22	—
I-2	7.55	7.54	No chg.	"	—	—	"	—
I-3	6.98	6.92	-.06	"	—	—	"	—
I-4	7.15	7.25	.10	"	.00039	1.8×10^{-8}	"	—
I-5	6.85	6.87	No chg.	"	—	—	"	.57

Note:

** Negative ΔD precludes calculation of meaningful data.

Ⓐ FREQUENTLY FLOODED DUE TO UPGRADIENT SPRINGS + GERNAT PONDS.

4.0 GROUNDWATER QUALITY MONITORING RESULTS

4.1 EVALUATION OF GROUNDWATER ELEVATION DATA:

GROUNDWATER ELEVATION MEASUREMENTS WERE TAKEN AT EACH OF THE ACCESSIBLE ONSITE MONITORING WELLS, PIEZOMETERS AND WELL POINTS DURING THE ANNUAL 2006, 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, & ~~X~~, 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. WATER LEVELS HAVE STABILIZED, AFTER THREE YEARS OF INCREASE('92-'94). THIS OCCURRED DUE TO CESSATION OF VILLAGE AND TANNERY PUMPING OF THE DEEP AQUIFERS. SOME SLIGHT SEASONAL FLUCTUATION STILL OCCURS.

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.

IT SHOULD BE NOTED THAT THESE TABLES INCLUDES ONLY THOSE PARAMETERS WHICH WERE DETECTED ABOVE ANALYTICAL DETECTION LIMITS AT A MINIMUM OF ONE LOCATION. COMPARISON OF THE MONITORING DATA TO THE NYSDEC CLASS "GA" GROUNDWATER QUALITY STANDARDS/GUIDANCE VALUES IS ALSO 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 MIS-INTERPRETATION 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.

ALSO TOTAL NOR SOLUABLE BARIUM WILL NO LONGER BE SAMPLED FOR IN THE AGREEMENT WITH NYSDEC, AS THE ELEMENT IS NATURALLY HIGH IN CONCENTRATION IN NATIVE SOIL. 2006 ANNUAL SUMMARIES AS FOLLOWS:

-THERE WAS NO DETECTIONS OF METALS(As, Cr, Pb), ABOVE THE CLASS "GA" STANDARD, IN THE APRIL SAMPLE, AND ONLY A SLIGHT DETECTION OF SOLUBLE ARSENIC, AT MW-6, ABOVE THE STANDARD, IN THE AUGUST EVENT. THIS WILL BE NOTED IN THE APRIL 2007 EVENT.

-THERE WAS NO DETECTION OF VOCs IN THE APRIL EVENT. ACETONE HAD BEEN A DETECTED REGULARLY PREVIOUSLY. IT WAS THOUGHT THAT THIS CONTAMINATION WAS DUE TO BENTONITE PELLET CONTAMINATION. AGGRESSIVE PURGING, BY MOENCH PERSONAL LIKELY RESULTED IN COMPLETE FRESH GROUNDWATER IN THE WELL, WITH NO ACETONE CONTAMINATION. THERE WAS SLIGHT DETECTION ABOVE STANDARD/GUIDANCE VALUE, OF ACETONE & XYLENE IN MW-4SR. THIS WELL IS SCREENED IN THE LANDFILL WASTE.

TABLE X 7

MOENCH COMPANY
PALMER STREET LANDFILL
4/10-4/12/06 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

INITIAL

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance ⁽¹⁾ (umhos/cm)	Turbidity (NTU)	Sample Appearance	Sample Odor
(2) MW-1D*	4/11/06	1050	13.7	7.47	790	NA	CLEAR	NO
MW-3DR***	4/11/06	1015	13.0	7.91	520	NA	CLEAR	NO
MW-4D	4/11/06	900	13.5	7.81	680	NA	SLIGHT TUR.	NO
(3) MW-6D	4/10/06	815	13.4	7.78	410	NA	CLEAR	NO
MW-7D***	4/11/06	1315	14.7	7.79	660	NA	CLEAR	
MW-8D***	ANNUAL	(NOT THIS EVENT)						
P-6B	4/10/06	1045	14.1	7.50	530	NA	CLEAR	NO
P-6D	4/10/06	950	13.8	7.63	650	NA	CLEAR	NO
BS-1	4/10/06	925	9.0	7.76	650	NA	SLIGHT TUR.	NO
BS-3	4/10/06	1320	11.5	6.76	620	NA	REDISH	NO

NOTES:

(1) Conductivity readings corrected to 25°C.

(2) MW-1 is hydraulically upgradient shallow overburden well.

(3) MW-7D is apparent hydraulically upgradient bedrock well.

* Shallow Overburden Well
** Deep Overburden Well
*** Bedrock Well

Ⓐ BS-1 - CREEK SAMPLE, NO BANK SEEP.

TEMPORARY SAMPLE: MW-3 - DRY, NO SAMPLE.
PI - DRY, NO SAMPLE.

W04
TEMPERARY
50% DILUTION

TEMPERATURE

SUMMARY OF ANALYTICAL RESULTS

[illegible]

NOTES:

- (1) Only those parameters found at a concentration above laboratory detection limits at a minimum of
- (2) NYSDC Class "G" Ground Water Quality Standards, 6NYCRR Part 703, Revised October 1993.
- (3) Trip blanks were analyzed for only volatile organic compounds.
- (4) MW-8D sampled only once annually (Reference 6).

Estimated value due to limitations identified in the quality control review.

(B) LIKELY LAB CONTAMINATION.

TABLE X 7

MOENCH COMPANY
PALMER STREET LANDFILL
8/7-8/9/06 MONITORING EVENT

SUMMARY OF FIELD MEASUREMENTS

Location	Sampling Date	Sampling Time	Temp. (°C)	pH (units)	Conductance ⁽¹⁾ (umhos/cm)	Turbidity	Sample Appearance	Sample Odor
MW-3	8/7/06	9115	DRY-	NO SAM	PLE -	NA	-	-
MW-3D	8/9/06	9300	16.0	8.01	400	"	CLEAR	NO
MW-4SR	8/7/06	1030	18.7	6.60	1400	"	SLGT TUR.	FIN. OIL
MW-4D	8/8/06	1100	17.4	7.67	620	"	SLGT. TUR.	NO
MW-5	8/7/06	DRY -	NO SAMPL.			"	-	-
MW-6	8/7/06	915	17.5	6.43	1600	"	BLACK	NO
MW-6D	8/7/06	830	16.1	7.73	1000	"	ALMOST CLEAR	NO
MW-7D	8/9/06	1045	21.3	7.72	750	"	CLEAR	NO
MW-8D	8/9/06	1015	15.4	7.73	410	"	CLEAR	NO
BS-1	8/7/06	1000	25.2	7.78	280	"	SLGT TUR.	NO
BS-2	8/8/06	830	25.1	7.32	460	"	SLGT. TUR.	NO
BS-3	8/8/06	900	19.9	7.10	980	"	RED-IRON	NO

NOTES:

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

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

Ⓐ NO BANK SEEP; TOO DRY. CREEK SAMPLE.

MOENCH COMPANY
PALMER STREET LANDFILL
8/7 - 8/9/06 MONITORING EVENT⁽¹⁾

	Quantitation Limit	MW-3	MW-3 D	MW-4SR	MW4D	MW-5	MW-6	MW-6D	Class "GA" Std.
Metals (mg/l):									
Arsenic - Soluble	0.005	DRY	.004	N/D	N/D	DRY	.026	.002	.025mg/
Chromium - Soluble	0.005	-	N/D	.014	N/D	-	N/D	N/D	.05
Lead - Soluble	0.005	-	N/D	N/D	N/D	-	N/D	N/D	.025

[illegible]

8/7-8/9/06
MÖENCH COMPANY
PALMER STREET LANDFILL
MONITORING EVENT⁽¹⁾

8/7-8/9/06 PALM

SUMMARY OF ANALYTICAL RESULTS

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	Quantitation Limit	MW-7D (C)	MW-8D (C)	BS-1 (B)	BS-2 (B)	BS-3	Blind Duplicate	Class "GA" Std.
Metals (mg/l):								
Arsenic - Soluble	0.005	ND	ND	ND	.002	.001	ND	.025mg/l
Chromium - Soluble	0.005	ND	ND	ND	ND	ND	.013	.05
Lead - Soluble	0.005	ND	ND	ND	ND	ND	ND	.025

Volatiles mg/L	ND	ND	ND	ND	ND	ND	ND
ACETONE	-	-	-	-	-	-	ND
CHLORO BENZ	-	-	-	-	-	-	-
ETHYL BENZ	-	-	-	-	-	-	-
ISOPROP BENZ	-	-	-	-	-	-	-
XYLENE	-	-	-	-	-	-	-

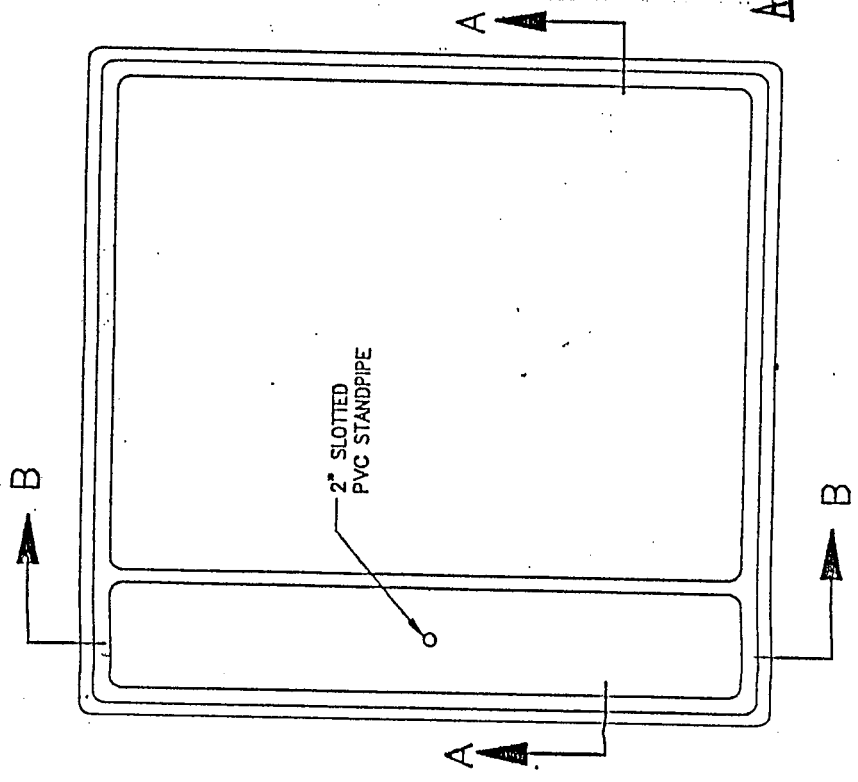
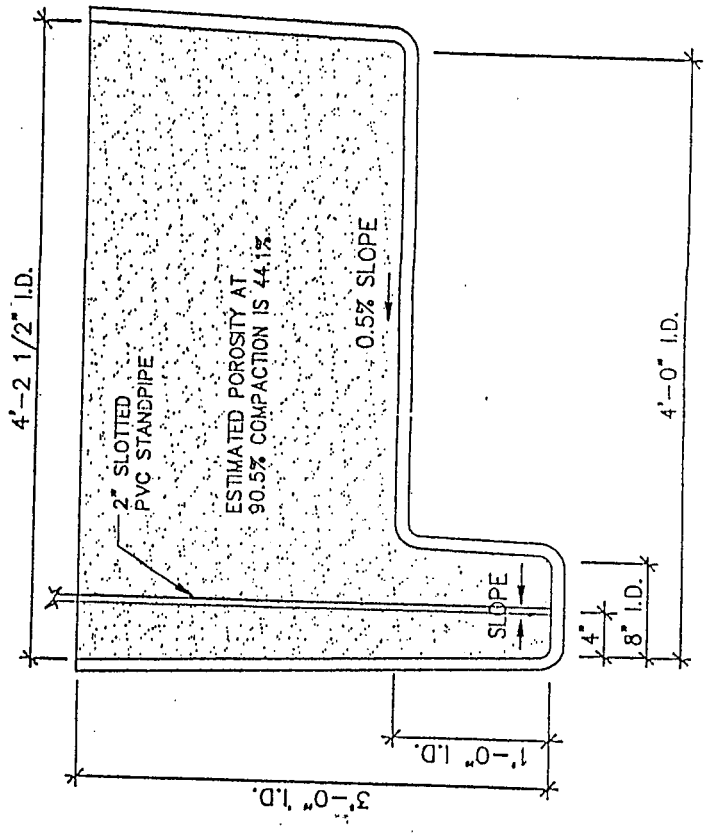
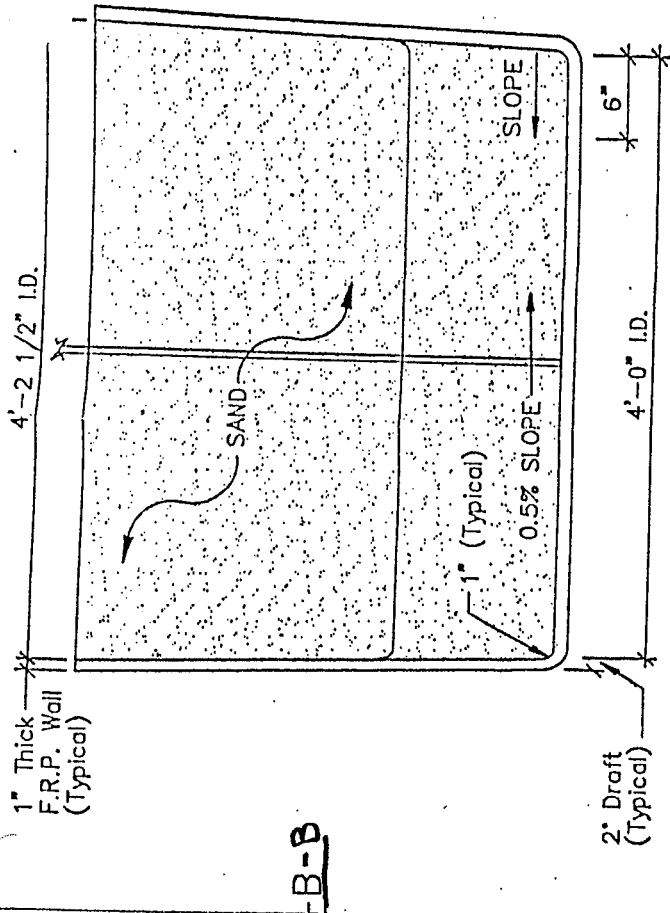
(B) TOO DRY FOR BANK SEED. - TOOK CREEK SAMPLE.
(C) UPGRADIENT. RED ROCK

ATTACHMENT A

INFILTROMETER DESIGN

PALMER STREET LANDFILL
GROUNDWATER MONITORING REPORT...

Apr. & Aug '06 SAMPLING EVENT..



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

INFILTRATER

ATTACHMENT B

GROUNDWATER ELEVATION
DATA & GRAPHS

MONITORING EVENTS 1/90 - 8/06

FIGURE #3	PALMER STREET LANDFILL																	
	MOENCH COMPANY																	
	GROUNDWATER ELEVATION vs TIME (FEET ABOVE SEA LEVEL)																	
	SHALLOW OVERBURDEN MONITOR WELLS																	

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Palmer St. I/fi//; Shallow GW Elev.

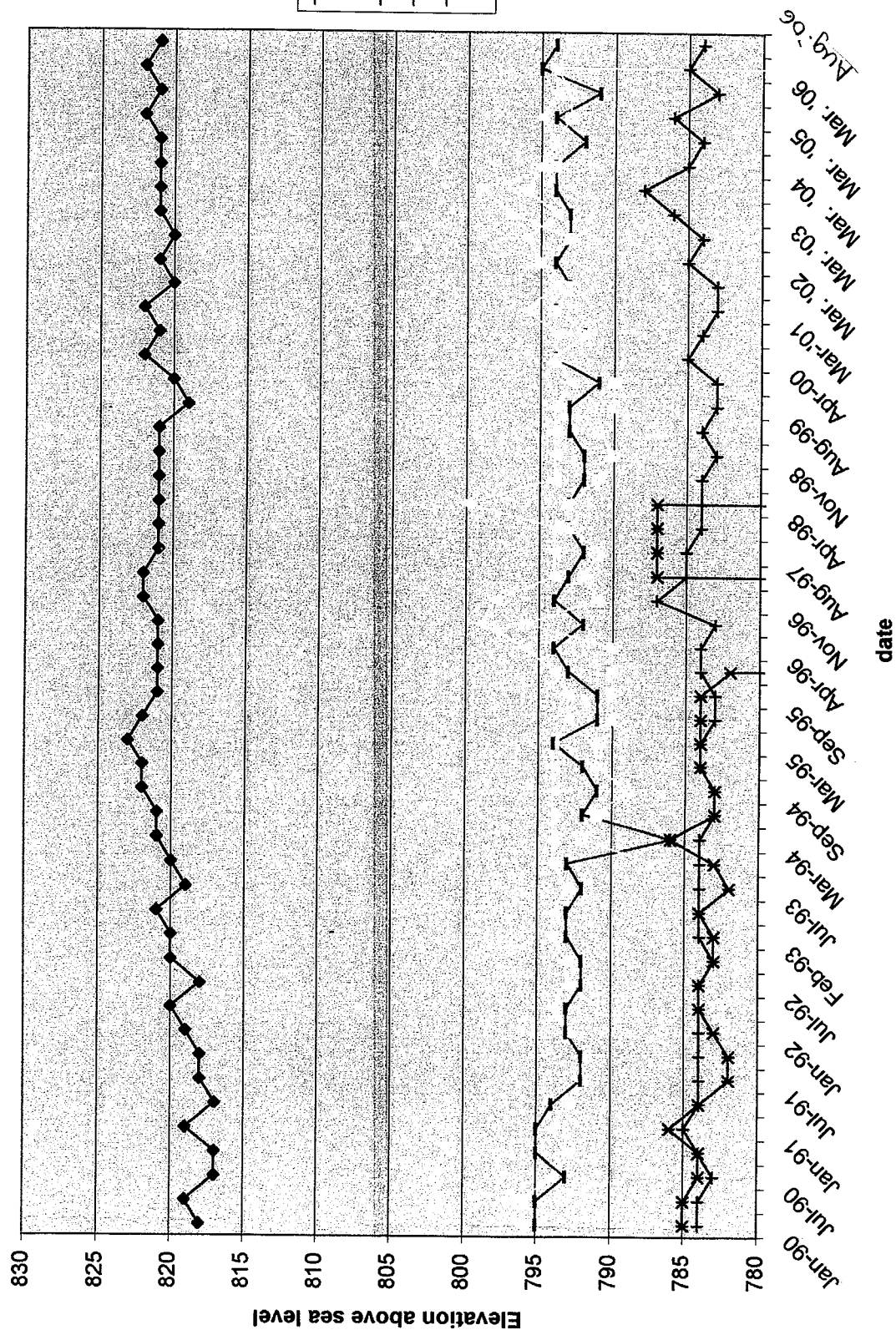
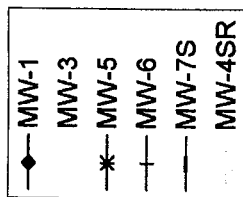


Figure #3



Palmer St. I/fill; GW deep overburden elev.

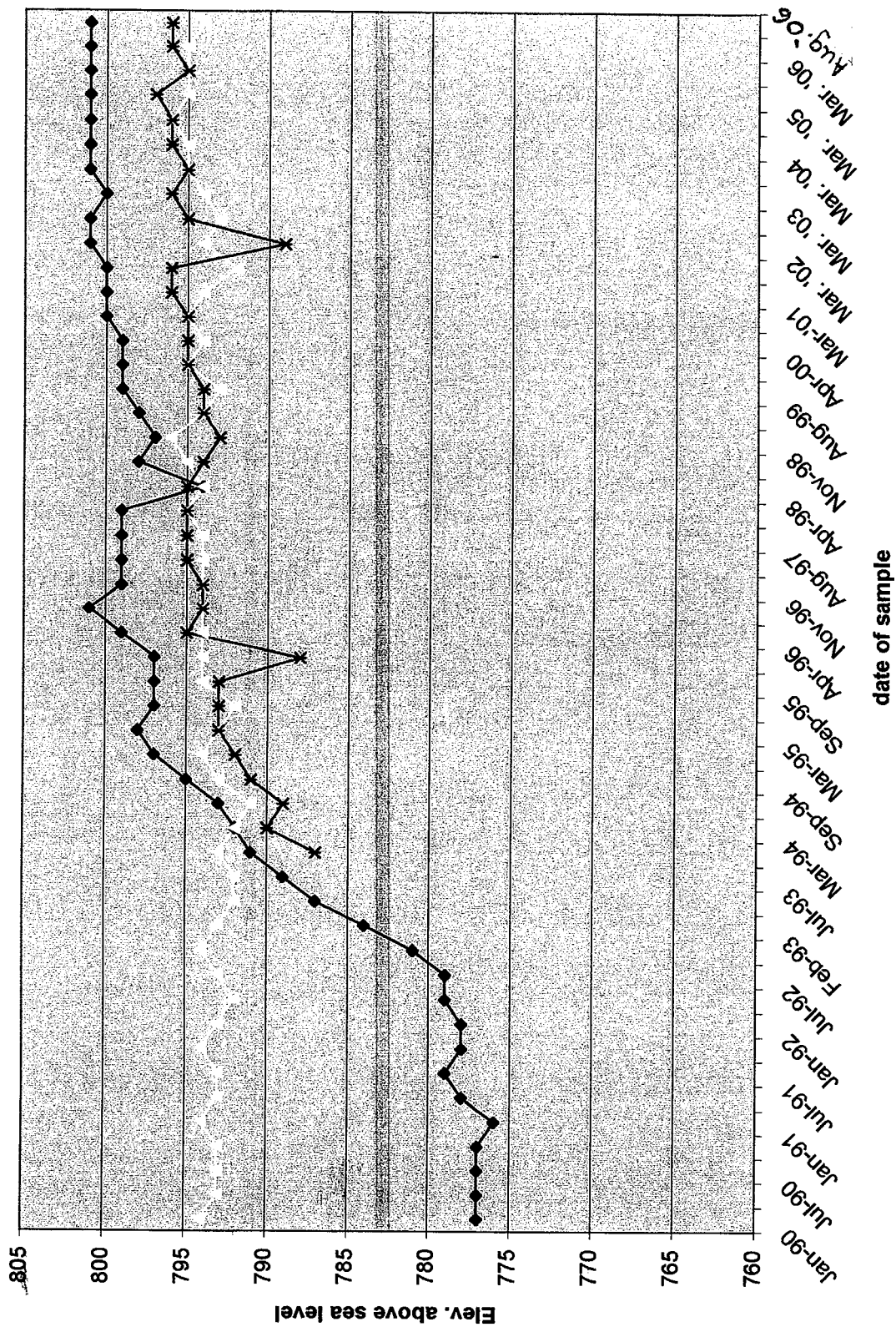
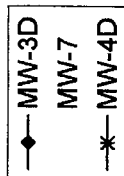


Fig. # 4



	PALMER STREET LANDFILL															
	MOENCH COMPANY															
	GROUNDWATER ELEVATION vs TIME															
	BEDROCK MONITOR WELLS & PIEZOMETERS															
	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
MW-3DR	773	773	773	773	772	775	787	775	777	777	778	783	786	789	792	794
MW-7D	795	794	794	795	795	794	794	795	793	792	792	793	793	792	790	793
MW-8D	768	766	767	767	763	770	773	771	773	772	776	786	790	794	796	798
MW-1D					743	762	765	752	756	758	776	795	798	801	802	807
MW-6D					783	781	787	781	781	781	782	782	781	781	781	782
P-6D					790	790	790	790	790	790	790	789	789	789	789	789

	PLMRGW3															
	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
MW-3DR	797	799	799	800	800	799	798	801	800	801	801	802	802	803	799	801
MW-7D	791	793	794	794	793	794	785	795	794	794	795	795	796	796	795	795
MW-8D	803	804	804	805	805	804	805	805	805	805	806	807	808	809	800	803
MW-1D	810	810	813	814	809	810	812	813	813	814	815	816	816	818	795	806
MW-6D	780	782	782	784	781	781	779	782	782	783	782	782	783	782	781	782
P-6D	785	789	789	789	790	790	788	790	790	791	791	791	791	792	792	791

Fig # 5

	Fig. #5															
	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	APR-06	Aug-06
MW-3DR	801	801	802	803	803	800	803	803	802	803	804	803	803	803	804	803
MW-7D	795	795	795	795	797	796	796	796	796	796	797	796	796	796	796	795
MW-8D	807	806	808	808	809	808	809	809	808	809	809	809	809	809	810	810
MW-1D	818	814	816	816	818	817	819	819	817	818	818	819	818	819	819	818
MW-6D	781	781	783	783	783	782	783	782	784	782	783	780	784	782	783	782
P-6D	791	791	792	792	792	792	793	793	793	792	793	792	792	792	792	791

Palmer I/fill; Bedrock GW Elev.

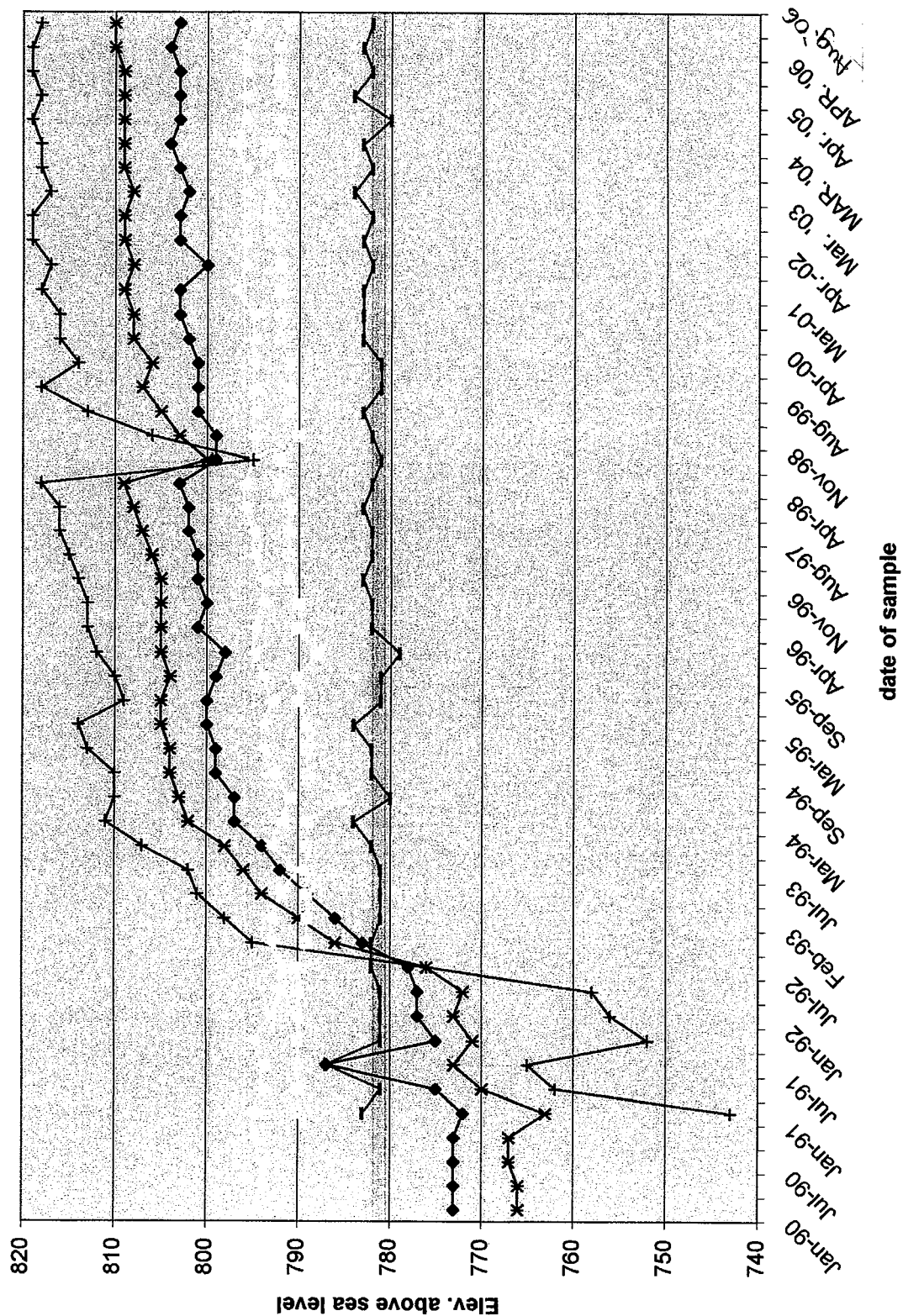
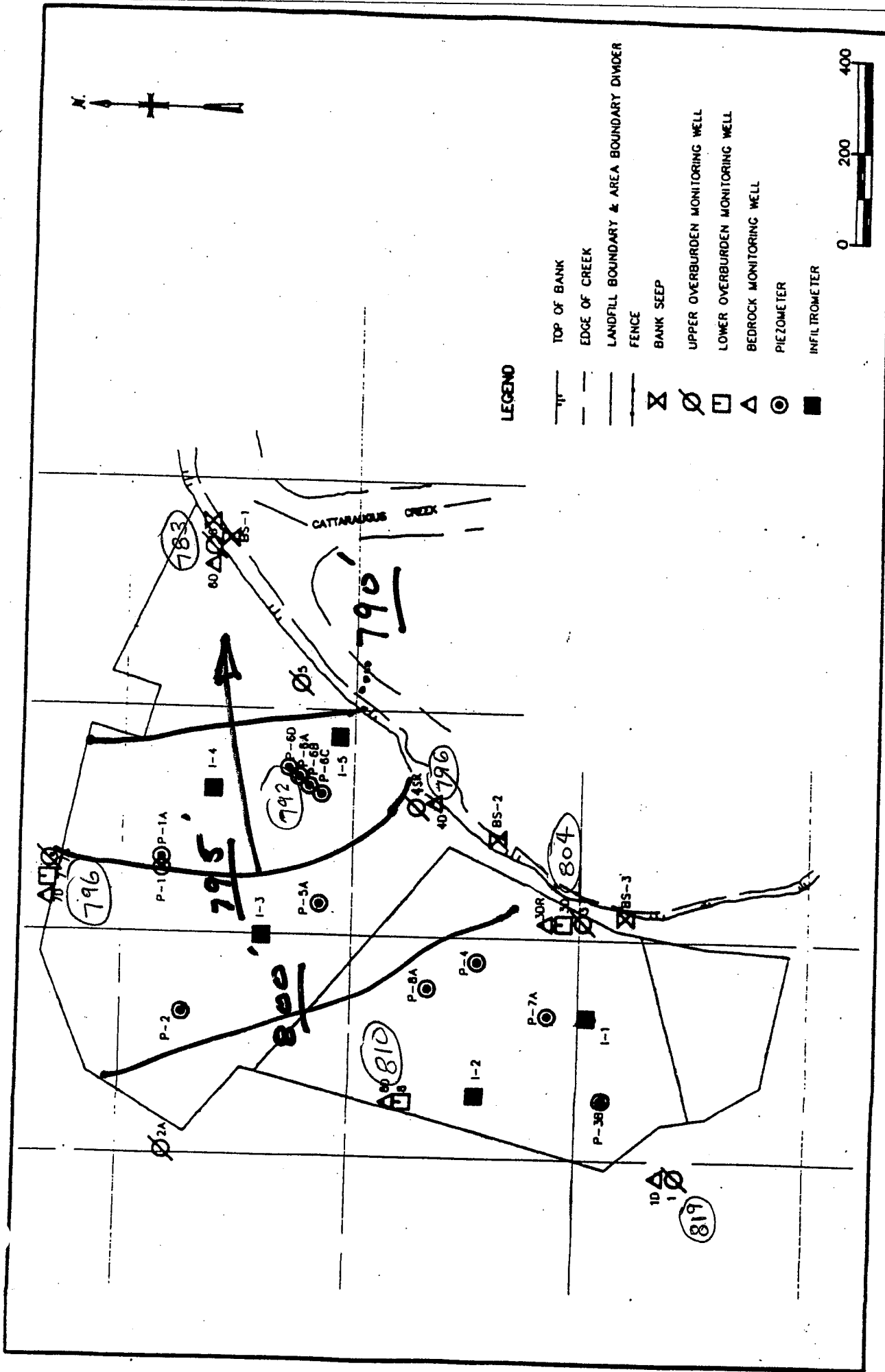


Fig # 5

- MW-3DR
- MW-7D
- MW-8D
- MW-1D
- MW-6D
- P-6D

5.0 GROUNDWATER FLOW

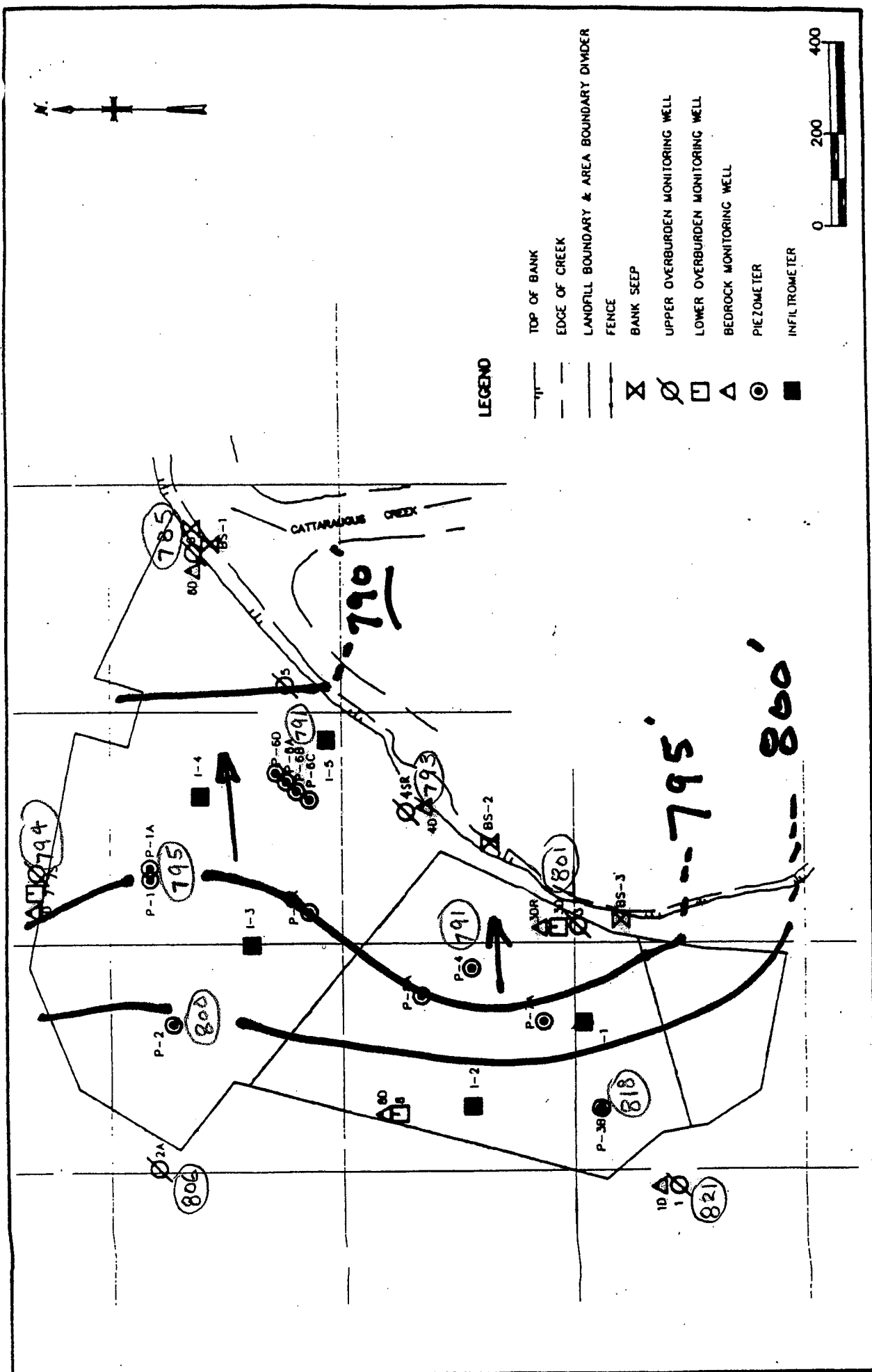
A WATER TABLE ISOPOTENTIAL MAP, BEDROCK ISOPOTENTIAL MAP AND A BEDROCK WATER LEVEL HYDROGRAPH HAVE BEEN PREPARED FOR THE PALMER STREET LANDFILL AND ARE PRESENTED IN FIGURES 3,4 AND 5, RESPECTIVELY. GROUNDWATER ELEVATIONS MEASURED THROUGH 2006 WERE USED IN PREPARING THE WATER TABLE AND BEDROCK ISO-POTENTIAL 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 LAND-FILL.



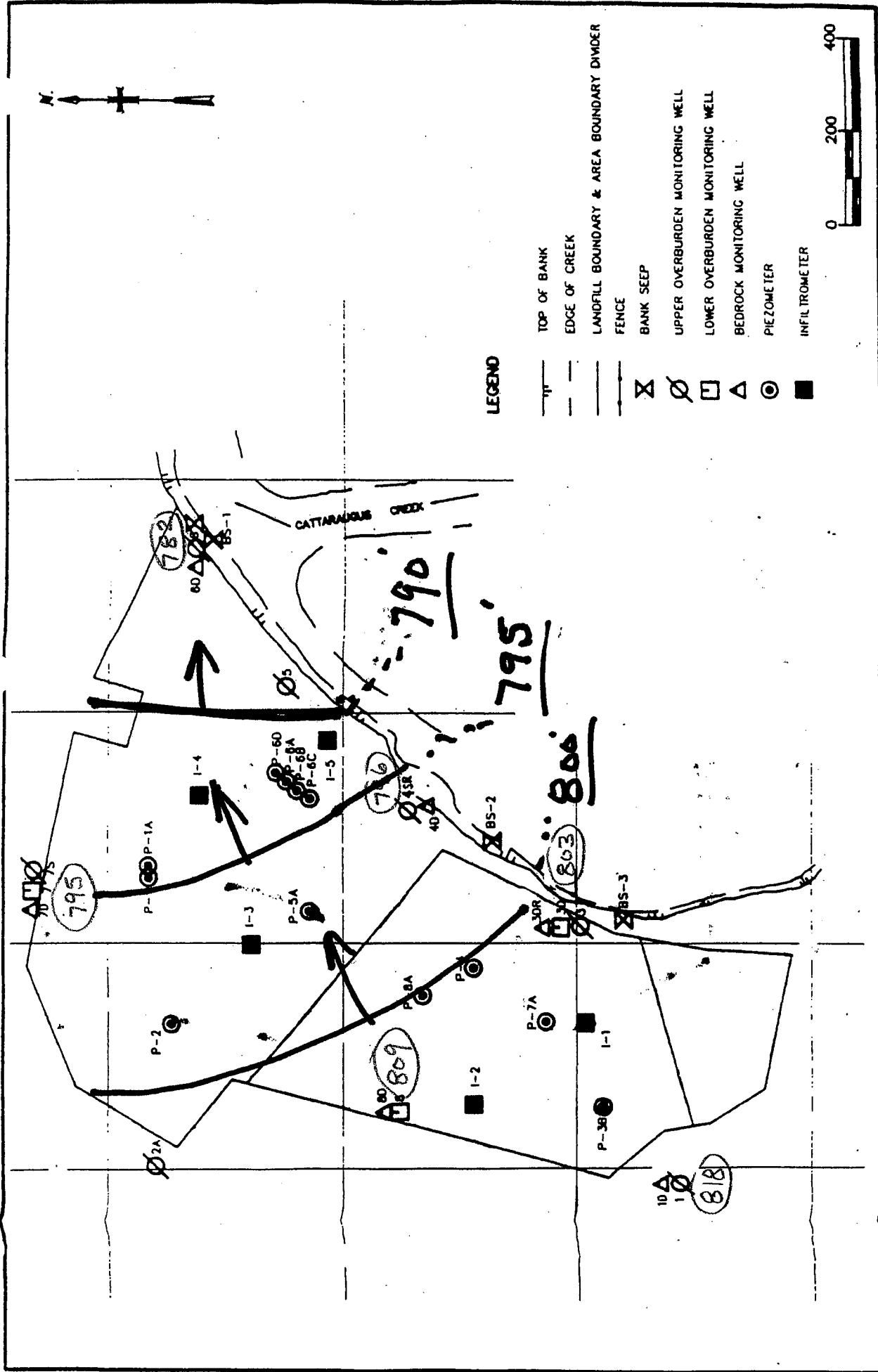
FIGURE

PALMER STREET LANDFILL
 WATERTABLE ISOPOTENTIAL MAP
 8-4-06 MONITORING EVENT

MOENCH T. COMPANY JULY 1992



9
 Fig. 3



PALMER STREET LANDFILL
 BEDROCK ISOPOTENTIAL MAP
 8-4-06 MONITORING EVENT
 MOENCH TANNING COMPANY JULY 1992

Fig. # 11

ATTACHMENT B1

PALMER ST. LANDFILL

FIELD MEASUREMENT TRENDS

MONITORING EVENTS April '06 + prior

August '06 + prior

[illegible][illegible]

Fig. 3

Palmer St. L/fill; pH vs. time

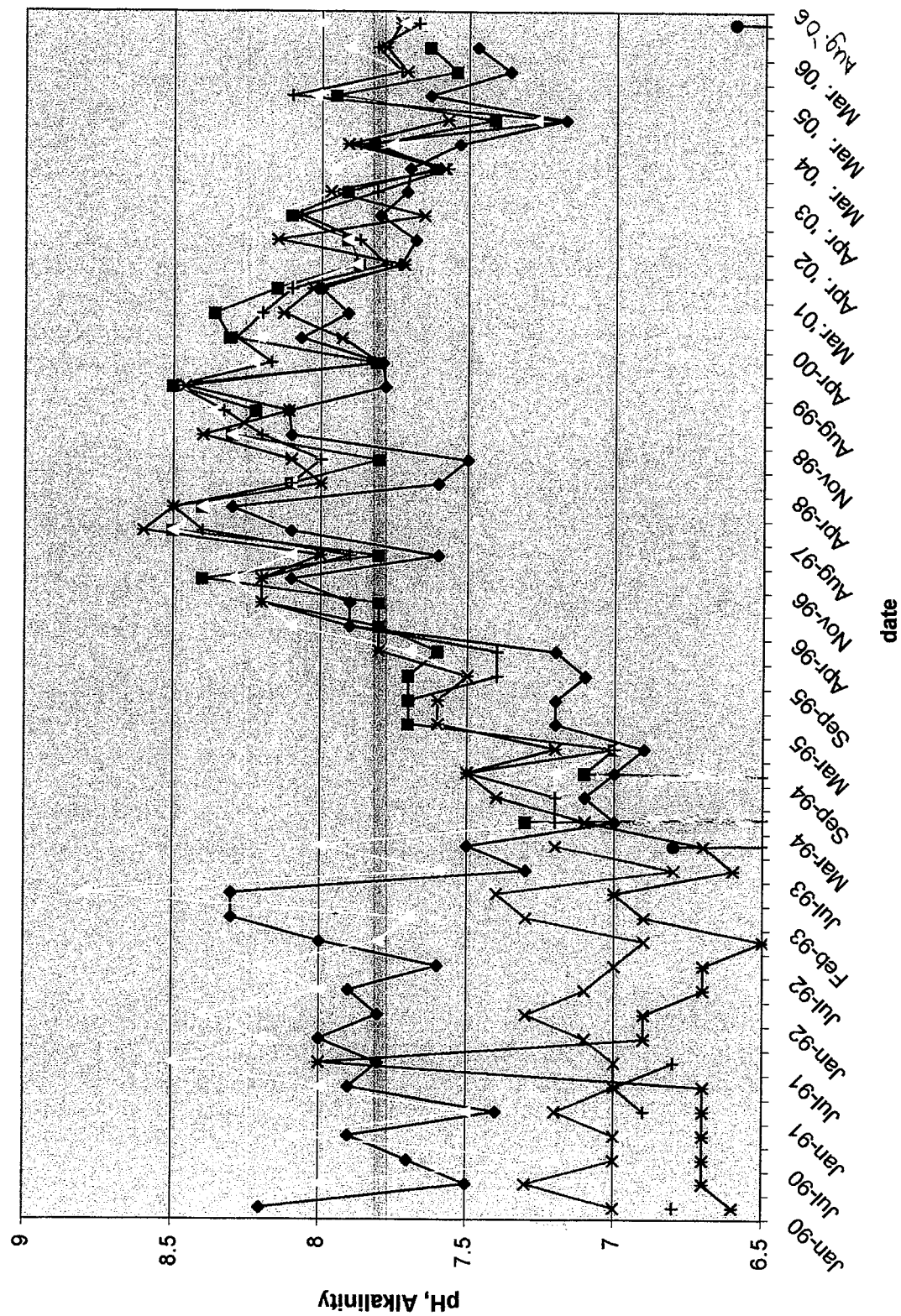


FIG. 6

PLMRSPH

		PALMER ST L.F. MOENCH COMPANY												FIG #6														Fig. #6	
		"PH" vs TIME																											
		MONITOR POINTS & BANK SEEPS																											
		Jan-80	Apr-80	Jul-80	Oct-80	Jan-81	May-81	Jul-81	Oct-81	Jan-82	May-82	Jul-82	Oct-82	Feb-83	May-83	Jul-83	Nov-83	Mar-84	Jun-84	Sep-84	Dec-84	Mar-85	Jun-85	Sep-85	Dec-85	Apr-86	Aug-86		
P-8B																													
MM-7D	7.7	7.8	7.8	7.8	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	7.2	7.1	7	7.6	7.6	7.4	7.6	7.9	7.9	8.2	
MM-8D	10	8.2	8	9	9.5	9	9.3	8.1	8.8	8.8	8.7	8.8	8.6	8.8	8.6	8.1				7.8				7.8					
BS-1	7.1	7.3	6.7	6.9	7.4	7			8.5	7.7	7.7	7.6	7.8	8.1	7.5		8.1	7.7	7.1	7.1	7.1	7.2	7.1	7.1	7.1	7			
BS-3	7	7.3	7.1	7.3	7.1	7.3			7.9	7.8	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	8.1			
BS-2																													

PLMRSPH

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FIG #6

plmr5pH

Palmer St. I/fill; pH vs. time

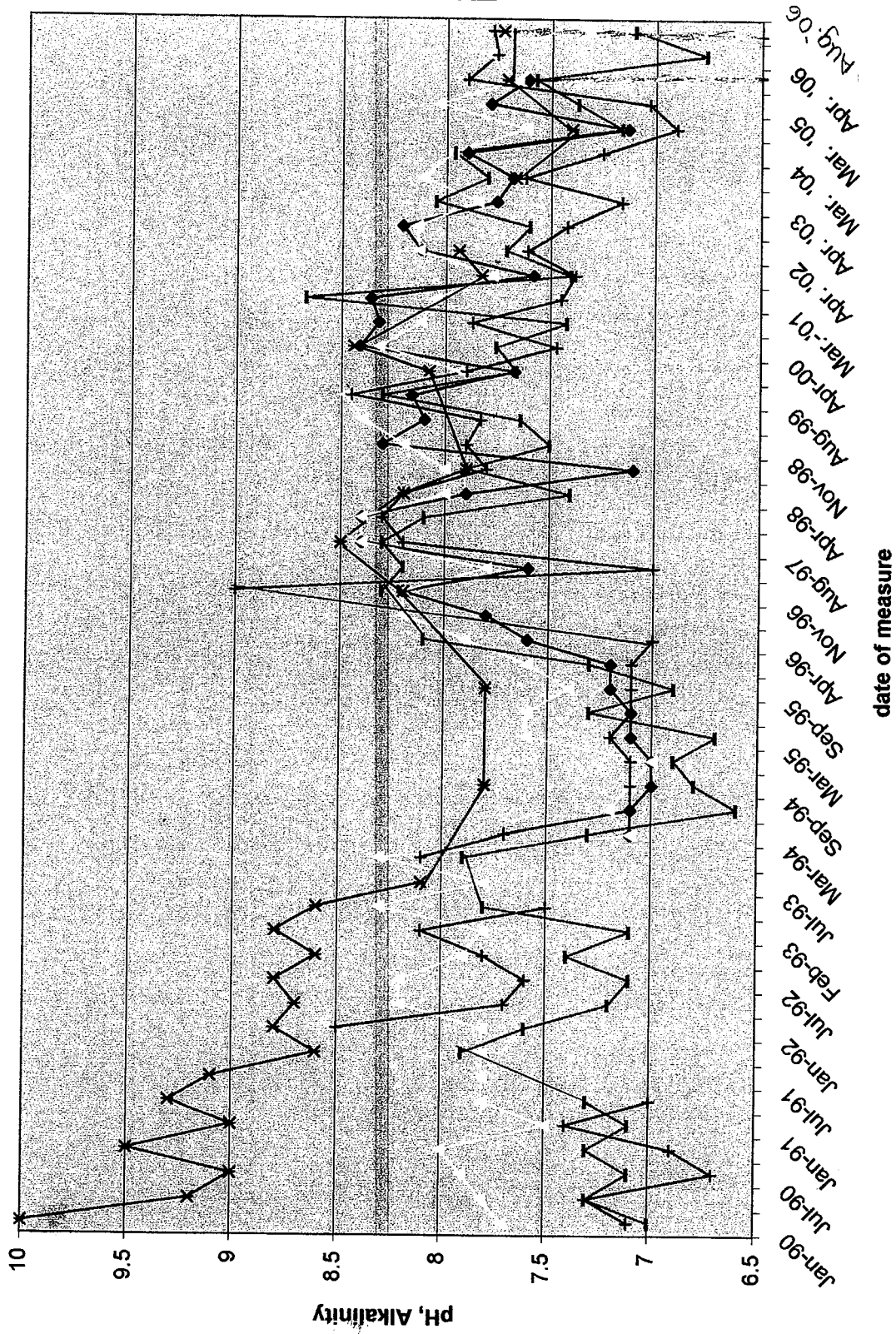


FIG 7

P-6B No Long El
MW-7D
MW-8D
BS-1
BS-3
BS-2 - New

		PALMER & ST. LUF. MOENCH CO. SPECIFIC CONDUCTIVITY vs TIME MONITOR WELLS & BANK SEEPS												FIGURE#7					
		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	
MW-1D	0.6	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	
P-6B	START94																		
MW-3DR	0.6	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	
MW-5	3.8	2.7	1.5	1.7	1.9	5	3.6	3.2	4.2	5.8	4.2	4.1	4.2	4	6.8	3.3	3.7	1	
MW-6D	5.3	5.4	4.9	3.1	3.5	3.6			4.9	4.1	3.3	2.8	2.8	2.7	4.3	3.8	3.3	1	
MW-4D																	2.6	0.6	
MW-3																			
MW-3D																			
MW-4SR																			

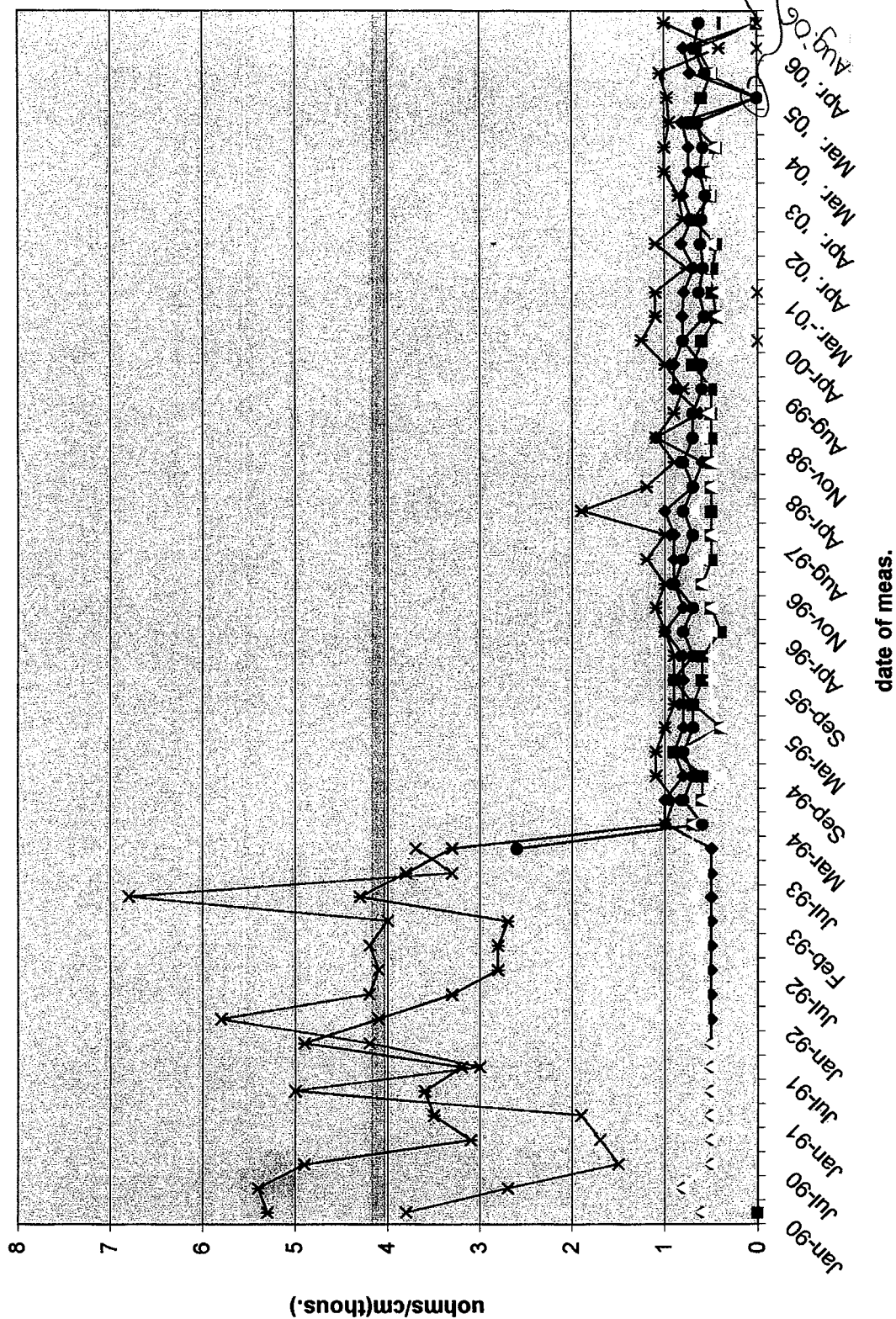
		Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Apr-96	Aug-96	Nov-96	Apr-97	Aug-97	Nov-97	Apr-98	Aug-98	Nov-98	Apr-99	
MW-1D	1	0.8	0.9	0.8	0.8	0.8	0.8	0.8	1	0.8	0.9	0.9	0.9	1	0.7	0.6	1.1	0.82	
P-6B	0.6	0.6	0.9	0.4	0.7	0.6	0.6	0.6	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
MW-3DR	0.6	0.4	0.8	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.7	0.5	0.5	0.6	0.53	
MW-5																			
MW-6D	0.9	1.1	1.1	1	0.9	0.9	0.9	0.9	1	1.1	1	1.2	1	1.9	1.2	0.9	1.1	0.9	
MW-4D	0.8	0.7	0.8	0.7	0.7	0.9	0.9	0.7	0.8	0.7	0.9	0.8	0.7	0.8	0.7	0.8	0.7	0.7	
MW-3																			
MW-3D																			
MW-4SR																			

		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		
MW-1D	0.9	0.9	0.8	0.81	0.79	0.68	0.82	0.71	0.8	0.74	0.81	0.74	0.81	meter brk	0.72	0.79	no more	1	
P-6B	0.5	0.7	0.6	0.44	0.48	0.48	0.44	0.69	0.5	0.56	0.56	0.44	0.71	0.6	0.49	0.65	no more	1	
MW-3DR	0.6	0.6	0.4	0.42	0.41	0.57	0.5	0.49	0.52	0.54	0.48	0.46	0.48	meter brk	0.5	0.52	no more	1	
MW-5																			
MW-6D	0.8	1	1.25	1.1	1.1	0.77	1.1	0.8	0.85	1	0.95	1	0.95	0.97	1.05	dry	dry	1	
MW-4D	0.6	0.6	0.8	0.57	0.63	0.58	0.61	0.6	0.56	0.62	0.64	0.58	0.64	meter brk	0.56	0.68	0.62	1	
MW-3																			
MW-3D																			
MW-4SR																			

FIG. 7

Palmer St. I/fill; Specific Conductivity

#7
FIG.



- MW-1D NO MORE ST
- P-6B NO MORE SM
- x— MW-3DR NO MORE ST
- *— MW-5 USUALLY 1
- MW-6D
- MW-4D
- MW-3 NEW srpl. Pt
- MW-3D NEW srpl. Pt
- MW-4SR NEW srpl. P

FIGURE # 7	PALMER ST. LANDFILL, MOENCH COMPANY																
	SPECIFIC CONDUCTIVITY vs TIME																
	(umhos/CM)(THOUSANDS)																
MONITOR WELLS & BANK SEEPS																	
	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
P-6D																	0.6
STRT-94	1	1	0.7	0.8	0.5	0.7	0.8	0.7	0.5	0.8	0.6	0.6	0.6	0.7	0.9	0.7	0.7
MW-7D	0.5	0.6	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4		
MW-8D	2.7	2.9	3	2.9	1	1.6		1.3	1.3	1.3	0.6	0.6	0.6	0.7		0.8	0.7
BS-1	2.8	2.9	1.8	1.8	1	1.8		1.1	0.9	0.9	1.1	0.5	0.5	0.7		0.7	0.6
BS-3																	
BS-2																	

FIGURE # 7																	

Figure #7																
</																

Palmer St. I/fill; Conductivity

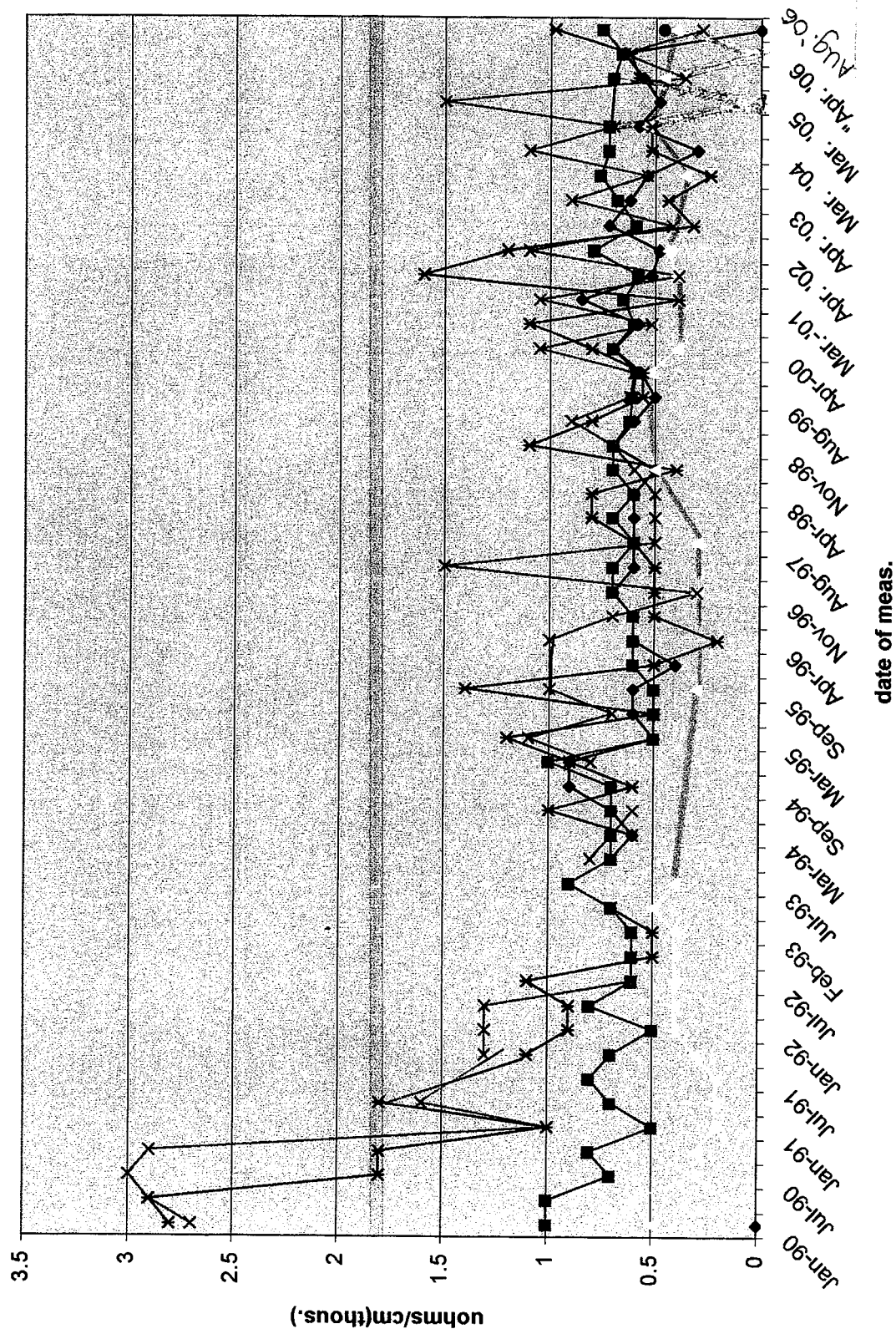


FIG. 7

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

ΔH = difference in average groundwater elevations between MW-1 and MW-3 (feet)
 ΔX = 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:

Pg. 6

$$V = \frac{K_i}{\theta} \frac{(4.1)(0.044)}{0.35} = 0.52 \text{ ft/day}$$

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:

$$\frac{\Delta H}{\Delta X} = \frac{24.5}{1085} = 0.022$$

ΔH = difference in average groundwater elevations between MW-2A and MW-5 (feet)

ΔX = distance between MW-2A and MW-5 (feet)

$$V = \frac{K_i}{\theta} \frac{(4.1)(0.022)}{0.35} = 0.26 \text{ ft/day}$$

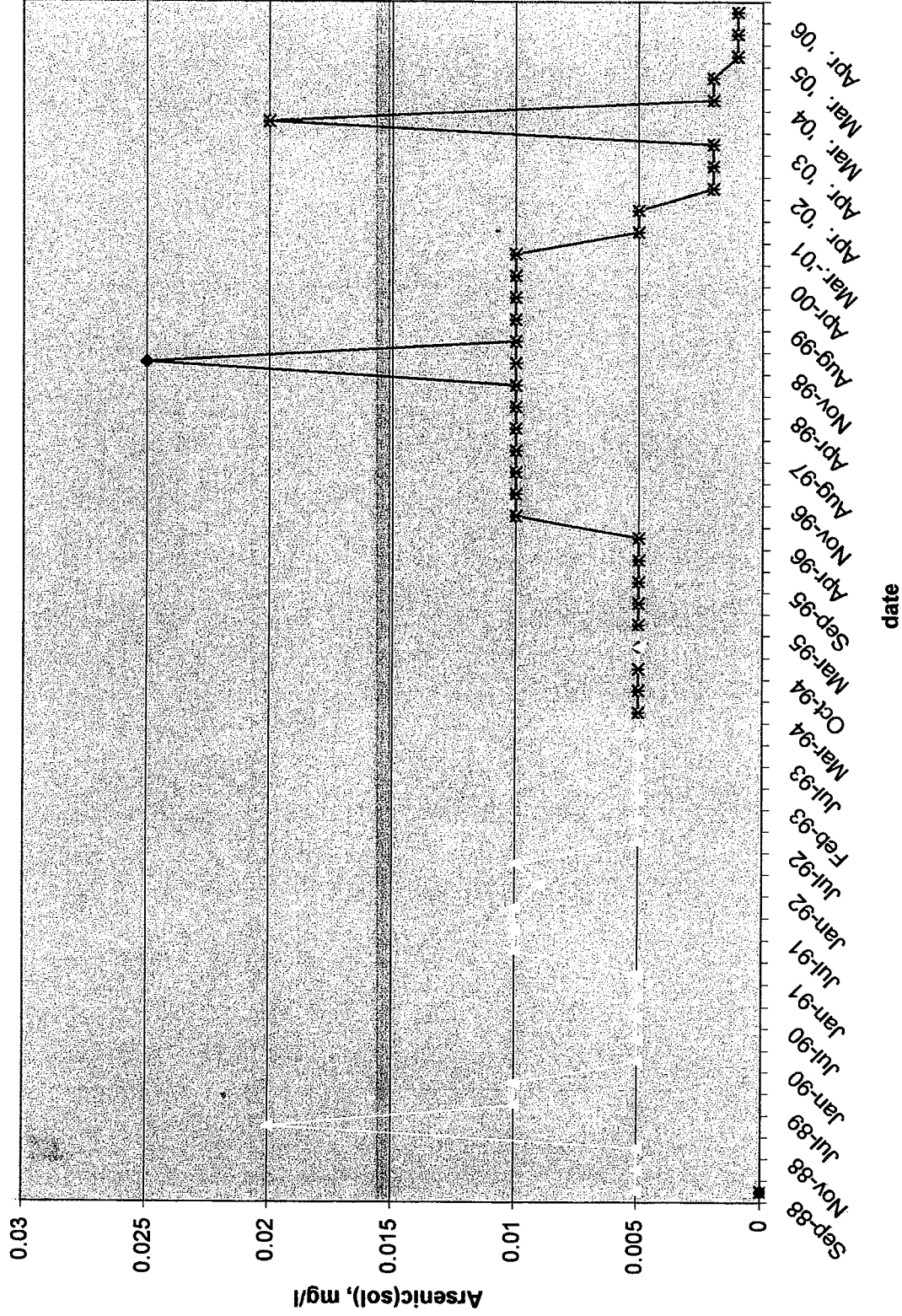
The rate of contaminant migration across the site is approximately 0.26 ft/day between monitoring wells MW-2A and MW-5.

ATTACHMENT C

SOLUBLE METALS CONCENTRATION VS. TIME

MONITORING EVENTS: April 2006 + prior
August 2006 + prior

Palmer St. I/fill; Arsenic(soluble)



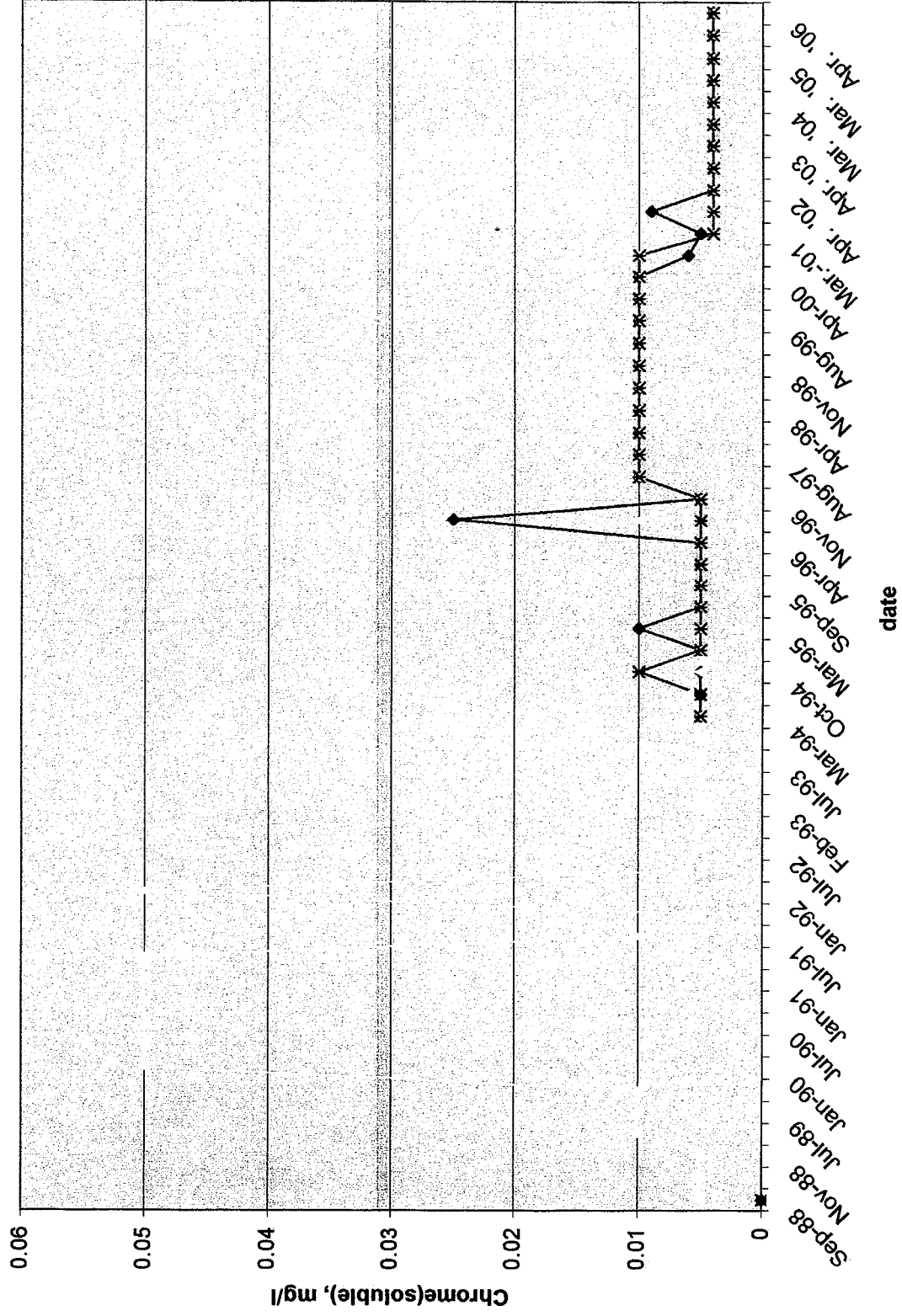
Attachment "C"

—◆— MW-1D
 — MW-3DR
 —*— MW-4D

-Quantitation limit
 .001, .002, .01
 & .005 mg/l.
 (various)

-.025 mg/l NYSDEC
 class 'GA' std.

Palmer St. I/fill; Chrome(sol)



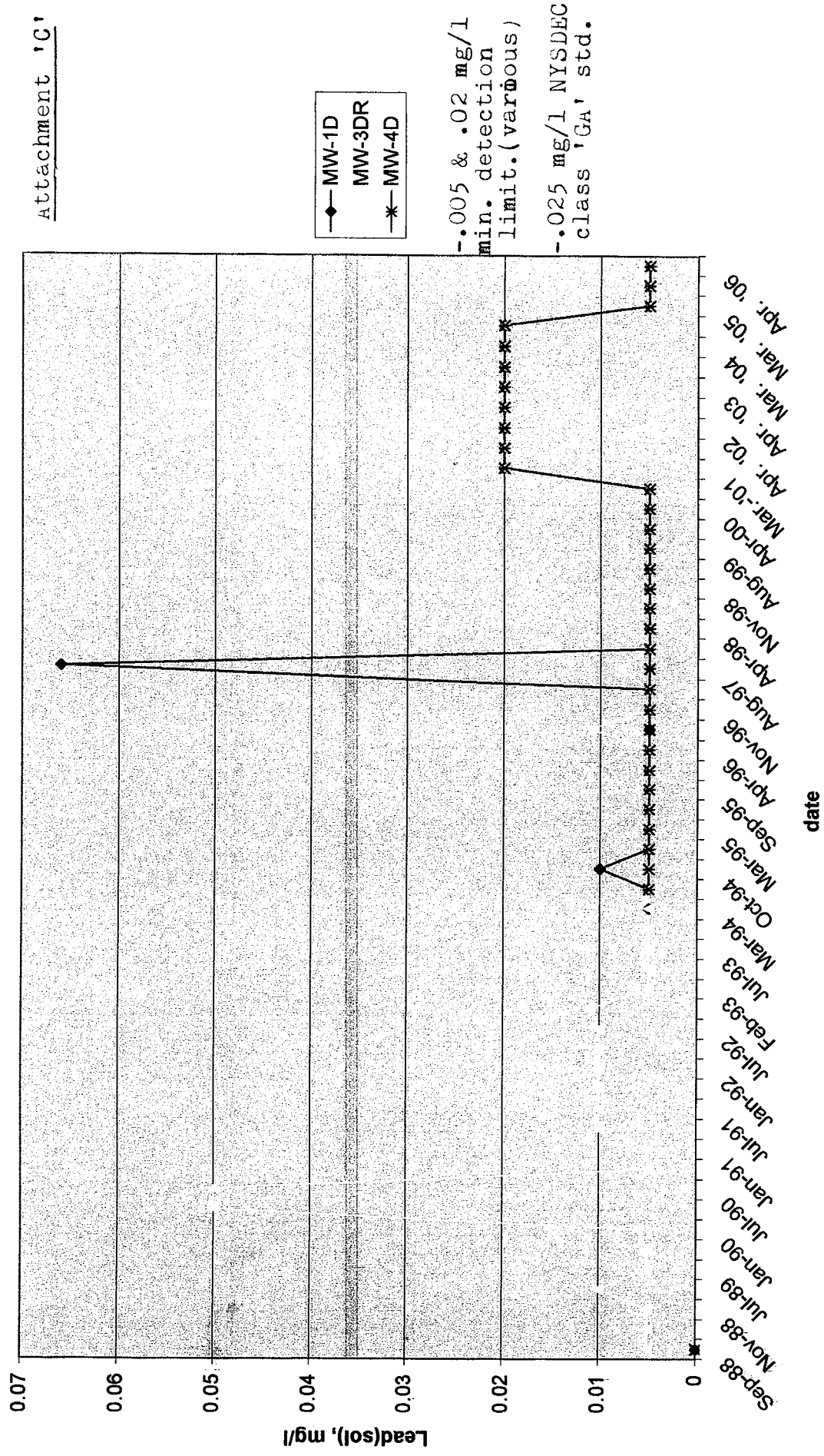
Attachment 'C'

◆ MW-1D
 ○ MW-3DR
 * MW-4D

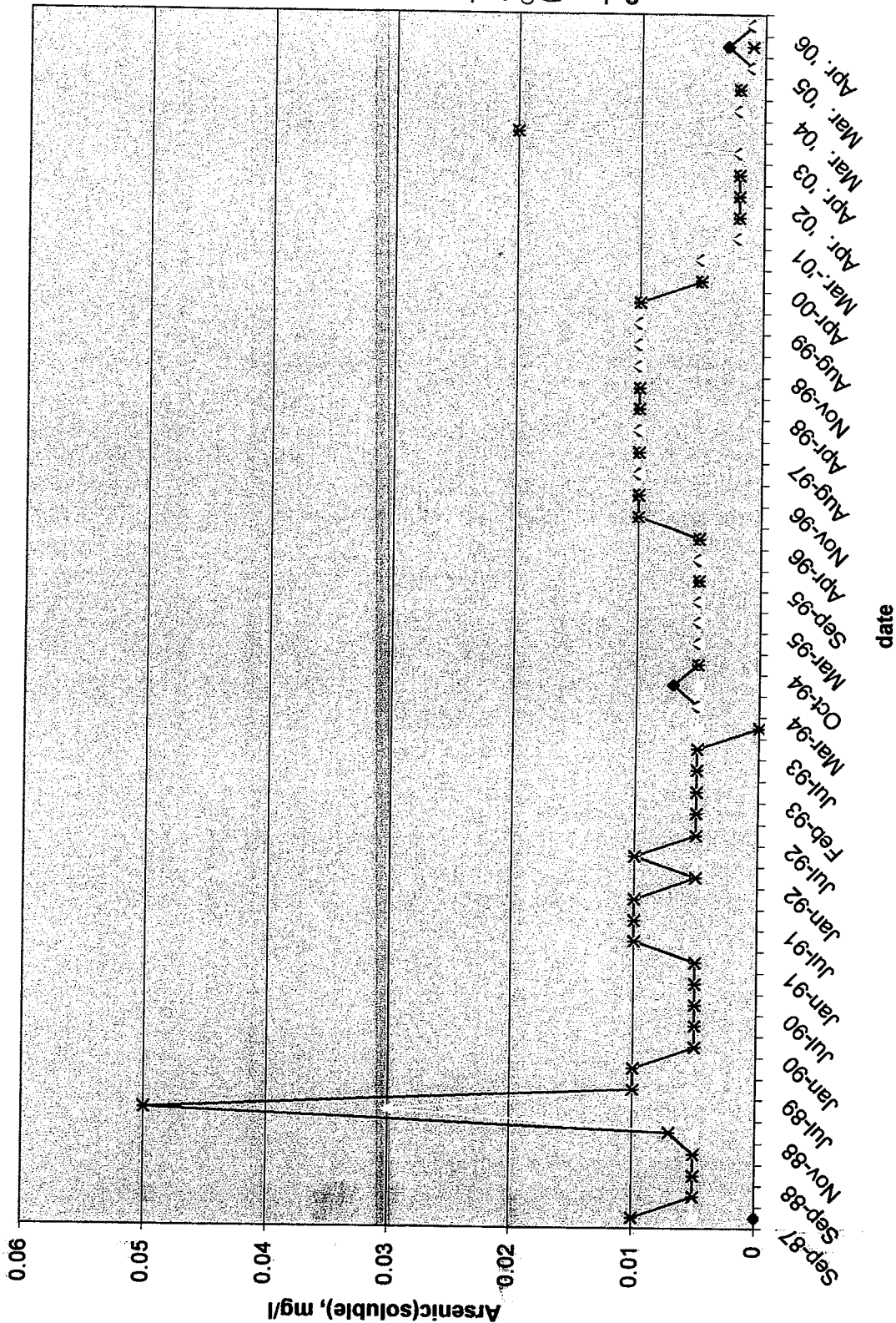
-.0004, .0005mg/l
 min. detection
 limit. Also .01,
 (various)

-.05mg/l NYSDEC
 class GA std.

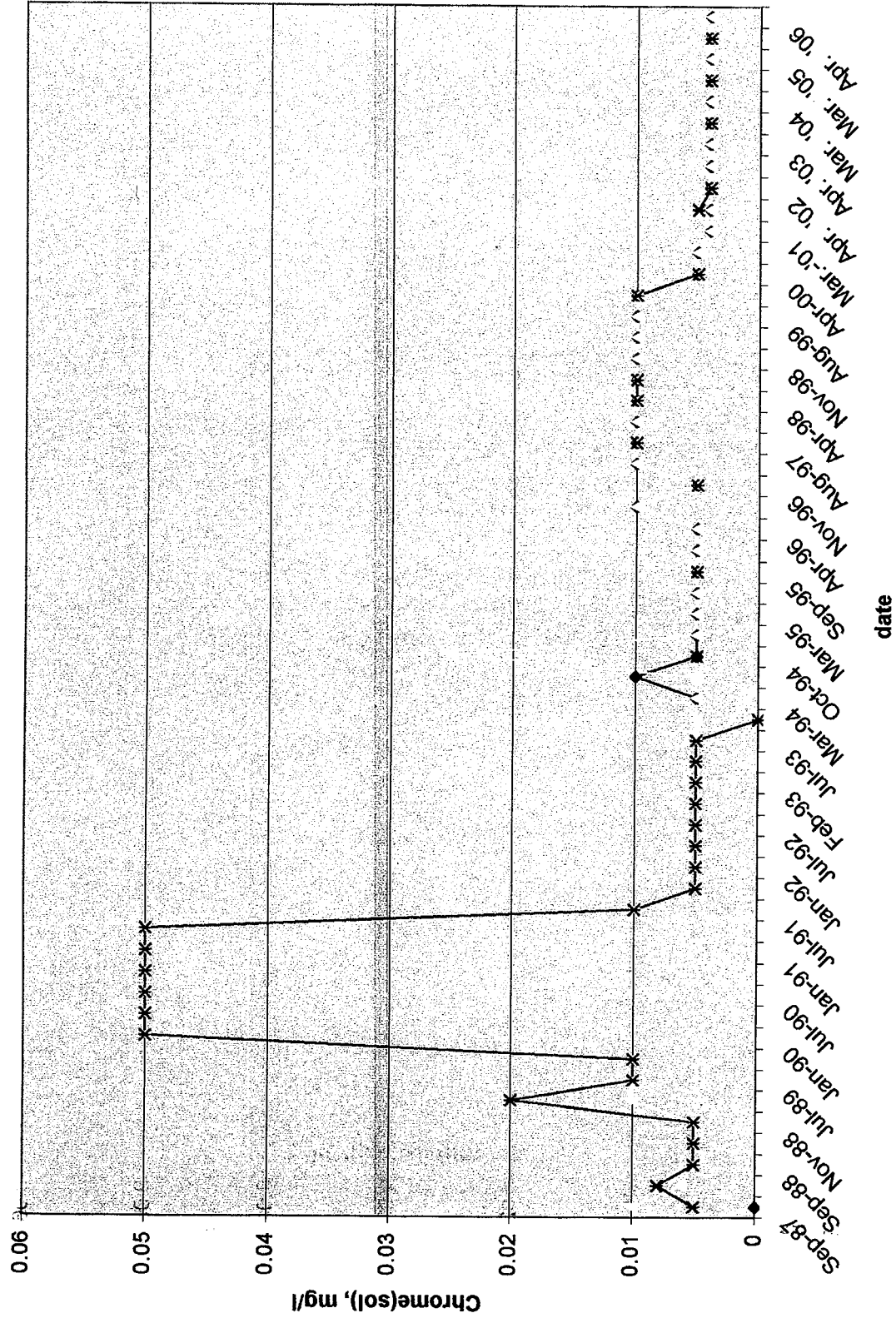
Palmer St. I/fill; Lead(soluble)



Palmer St. I/fill; Arsenic(sol)



Palmer St. I/fill; Chrome(sol)

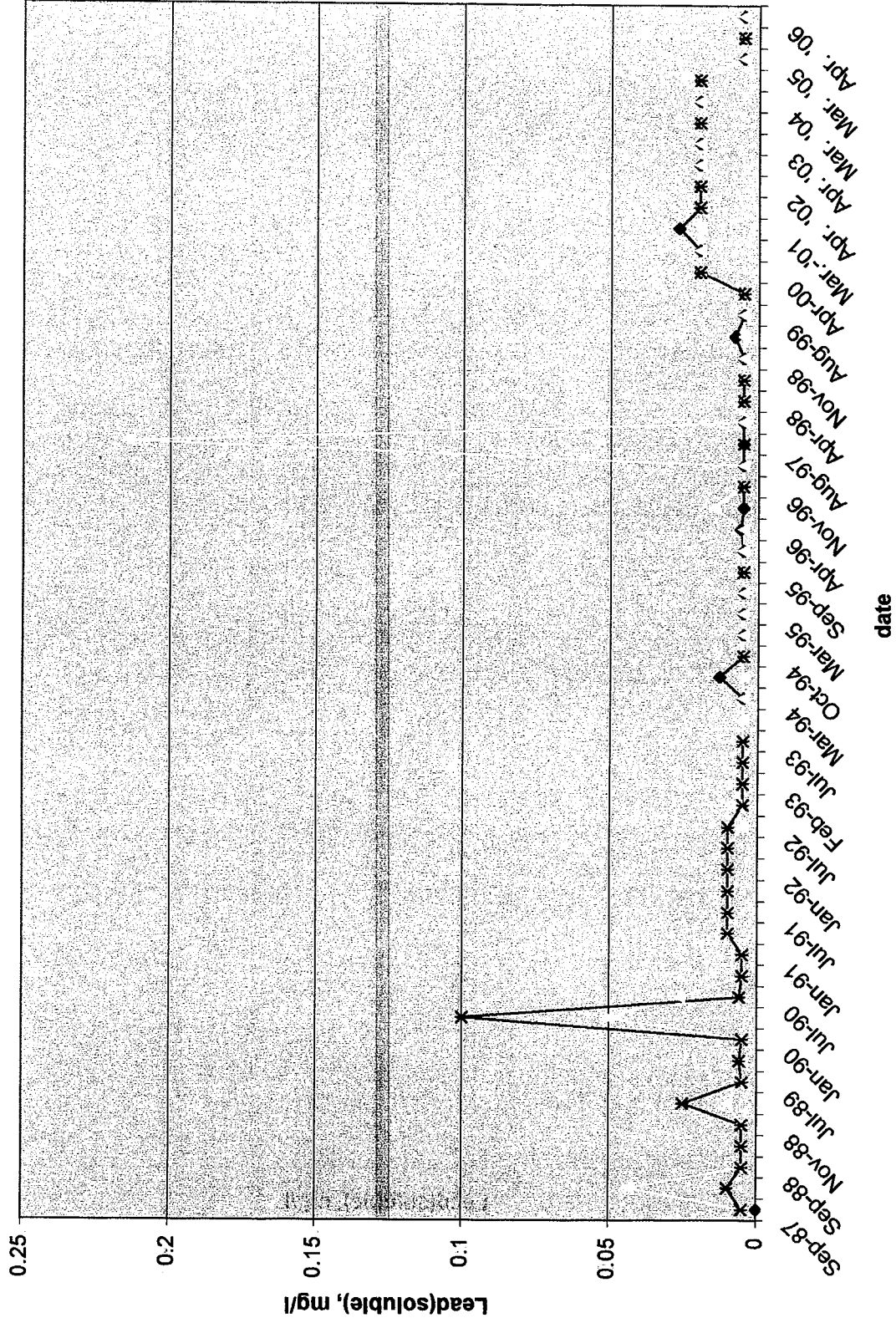


◆ MW-6D
 ▲ MW-7D
 * MW-8D

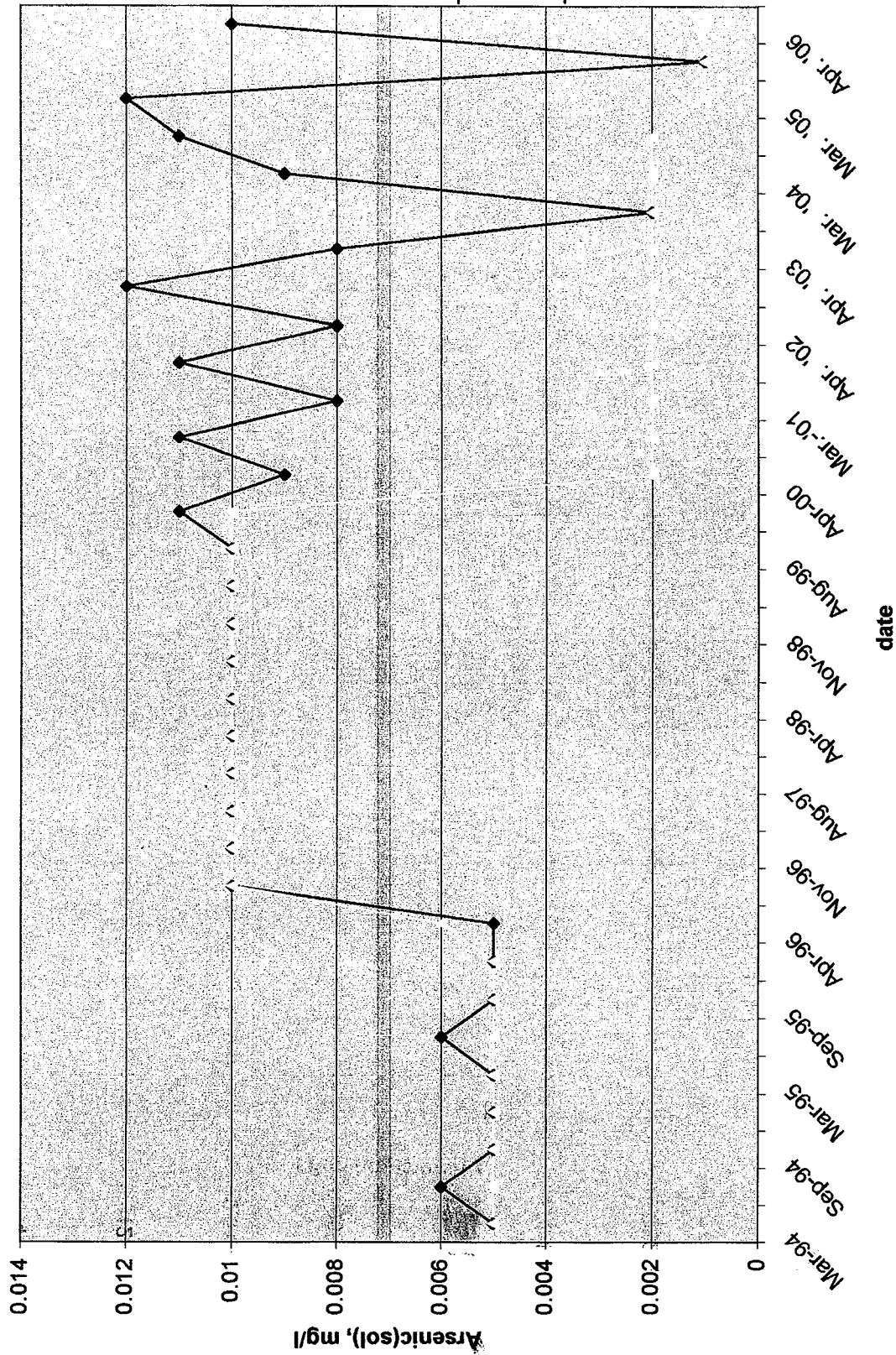
-.004, .005 & .01
 mg/l detection
 min. limits.
 (various)
 -.05 mg/l NYSDEC
 class 'Ga' std.

Attachment 'C'

Palmer St. I/fill; Lead(sol)



Palmer St. I/fill; Arsenic(sol)



Attachment 'C'

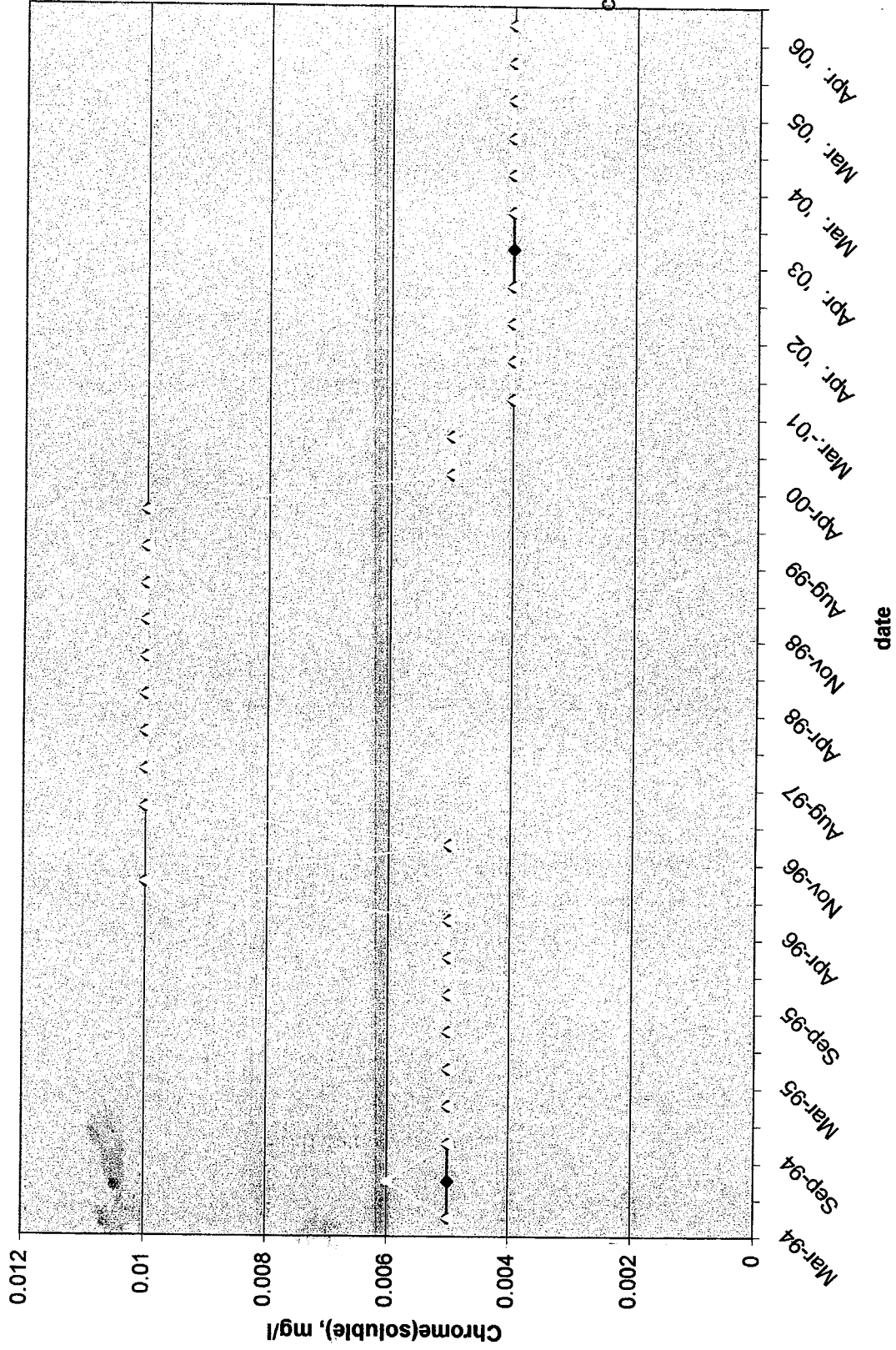
P6-B
P6-D

-.002, .005 &
.01 mg/l detec
(min.) limit.

-.025 mg/l NYSD
class 'Ga' std

plmrmtL9

Palmer St. I/fill; Chrome(sol)



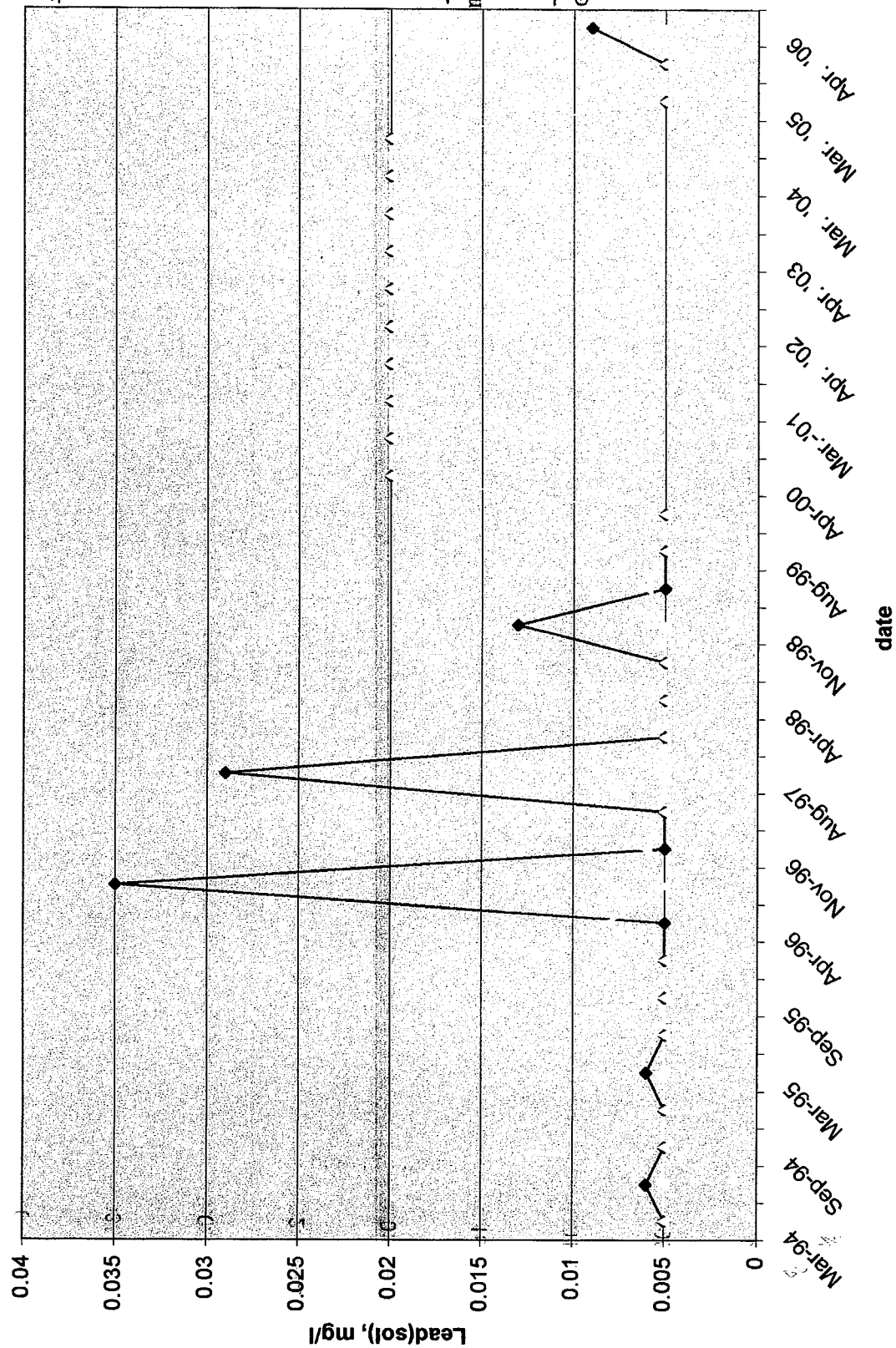
Attachment 'C'

— P6-B
P6-D

-.004, .005, .006
min. detection
limit. (mg/l)
(various)

-.05 mg/l NYSDH
class 'GA' std.

Palmer St. I/fill; Lead, soluble



[illegible][illegible]

NEW METALS SAMPLE POINTS AS OF AUGUST 2006.

ATTACHMENT C1

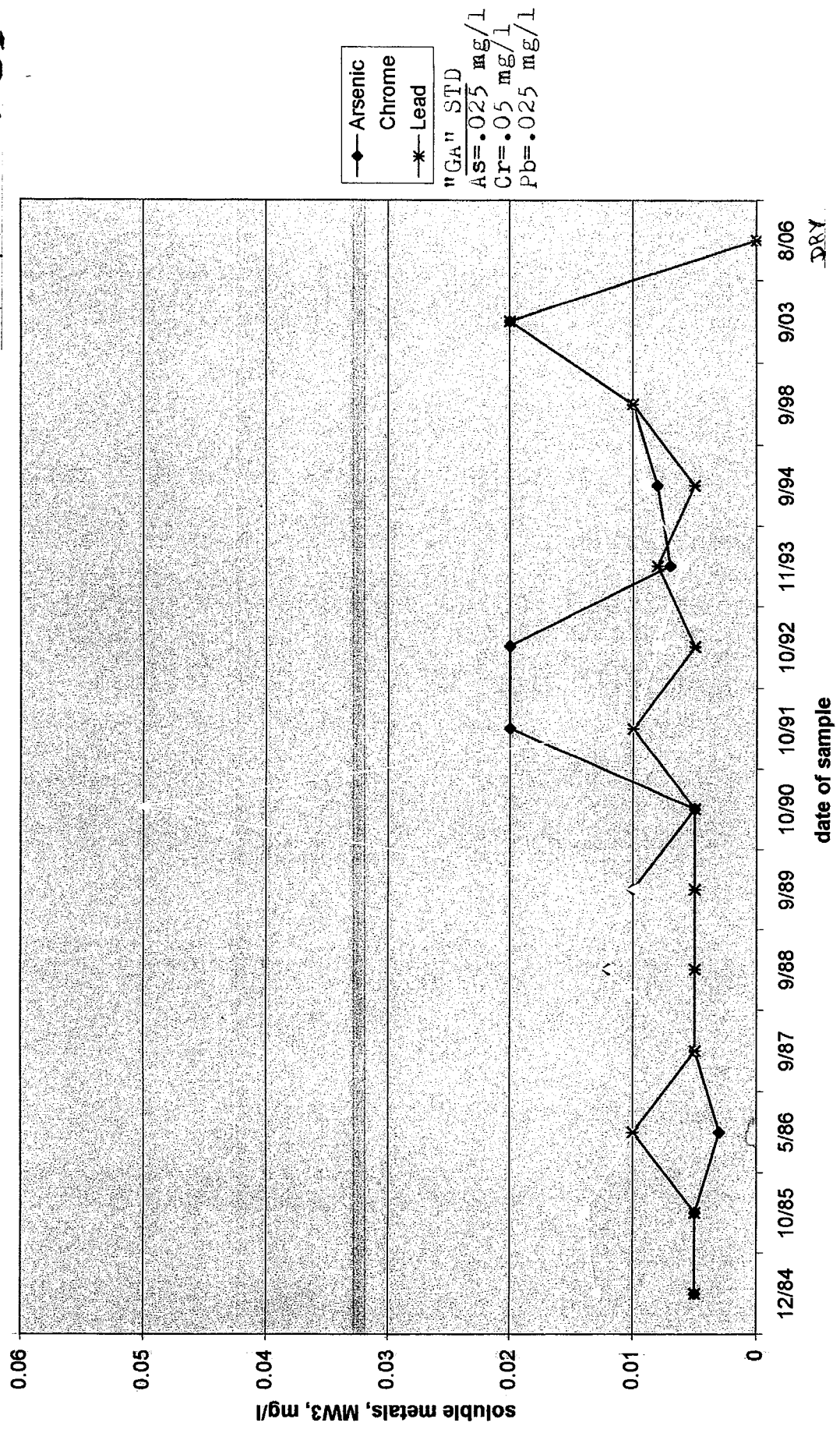
		PALMER ST. LANDFILL; MOENCH COMPANY															
		MW-3 SOLUBLE METALS vs. TIME*** SCREENED IN WASTE***															
		10/84	10/85	5/86	9/87	9/88	9/89	10/90	10/91	10/92	11/93	9/94	9/98	9/03	8/06		
Arsenic (soluble)	0.005		0.005	0.003	0.005	0.012	0.01	0.005	0.02	0.02	0.007	0.008	l.t.	0.01	0.02 dry		
Chrome (soluble)	0.013		0.014	0.01	0.005	0.012	0.01	0.05	0.01	0.008	0.006	0.009	l.t.	0.01	0.008 dry		
Lead (soluble)	0.005		0.005	0.01	0.005	0.005	0.005	0.005	0.01	0.005	0.008	0.005	l.t.	0.01	0.02 dry		
													l.t.	l.t.			

ATTACHMENT CI

plmr.mtl.MW3

Palmer St. I/fill; sol metals; MW3
(in waste)

ATTACH. C1

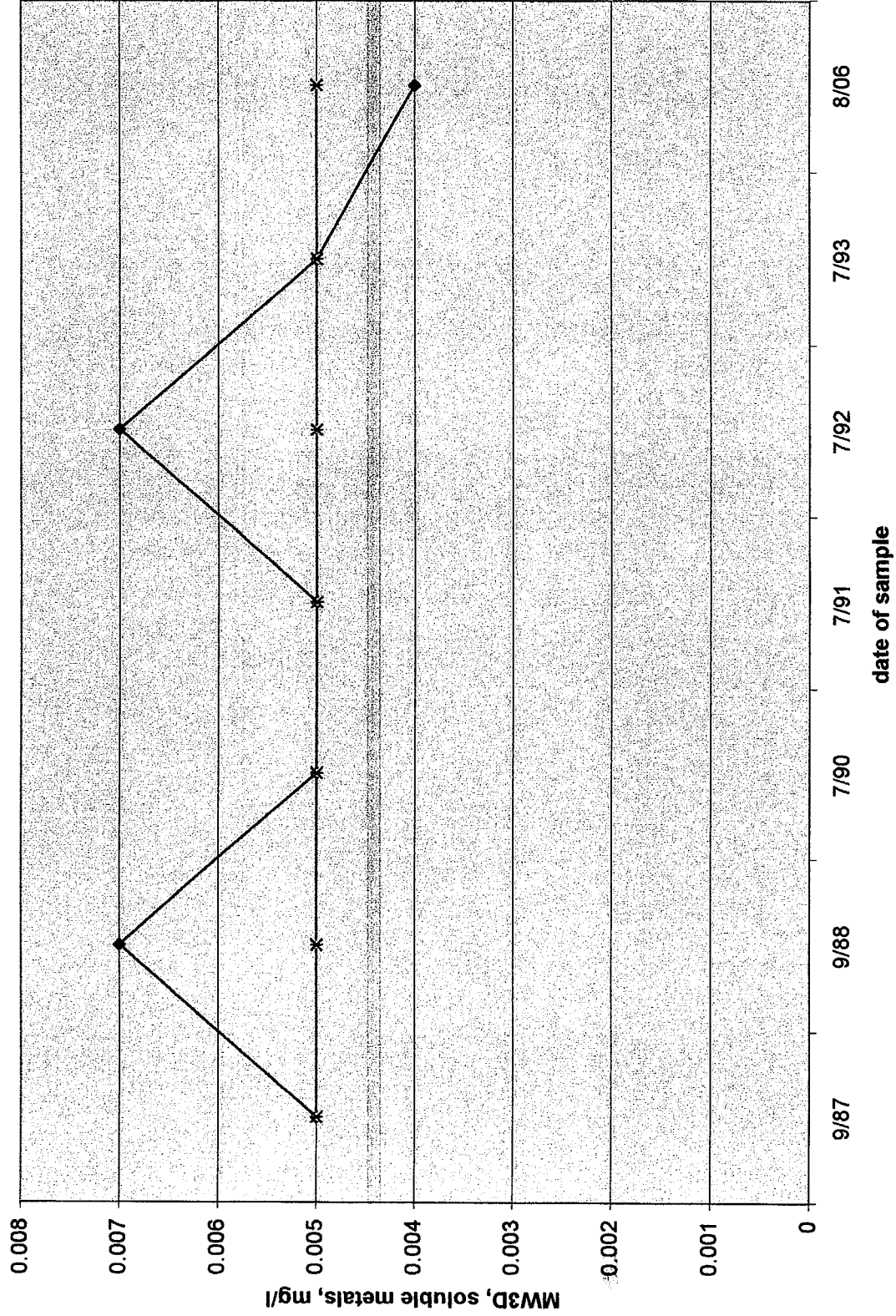


		PALMER ST. LANDFILL; MOENCH COMPANY						
		MW-3D, SOLUBLE METALS;(BEDROCK, IN WASTE)						
	9/87	9/88	7/90	7/91	7/92	7/93	8/06	
Arsenic	0.005	0.007	0.005	0.005	0.007	0.005	0.004	
(soluble)						l.t.		
Chromium	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
(soluble)						l.t.	l.t.	
Lead	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
(soluble)						l.t.	l.t.	

✖
ATTACH. C1

Palmer St. I/fill; sol. metals; MW3D

CL
Attachment 'X'



◆ Arsenic
* Chrome
* Lead

MDL - .005 mg/l
"GA" STD.

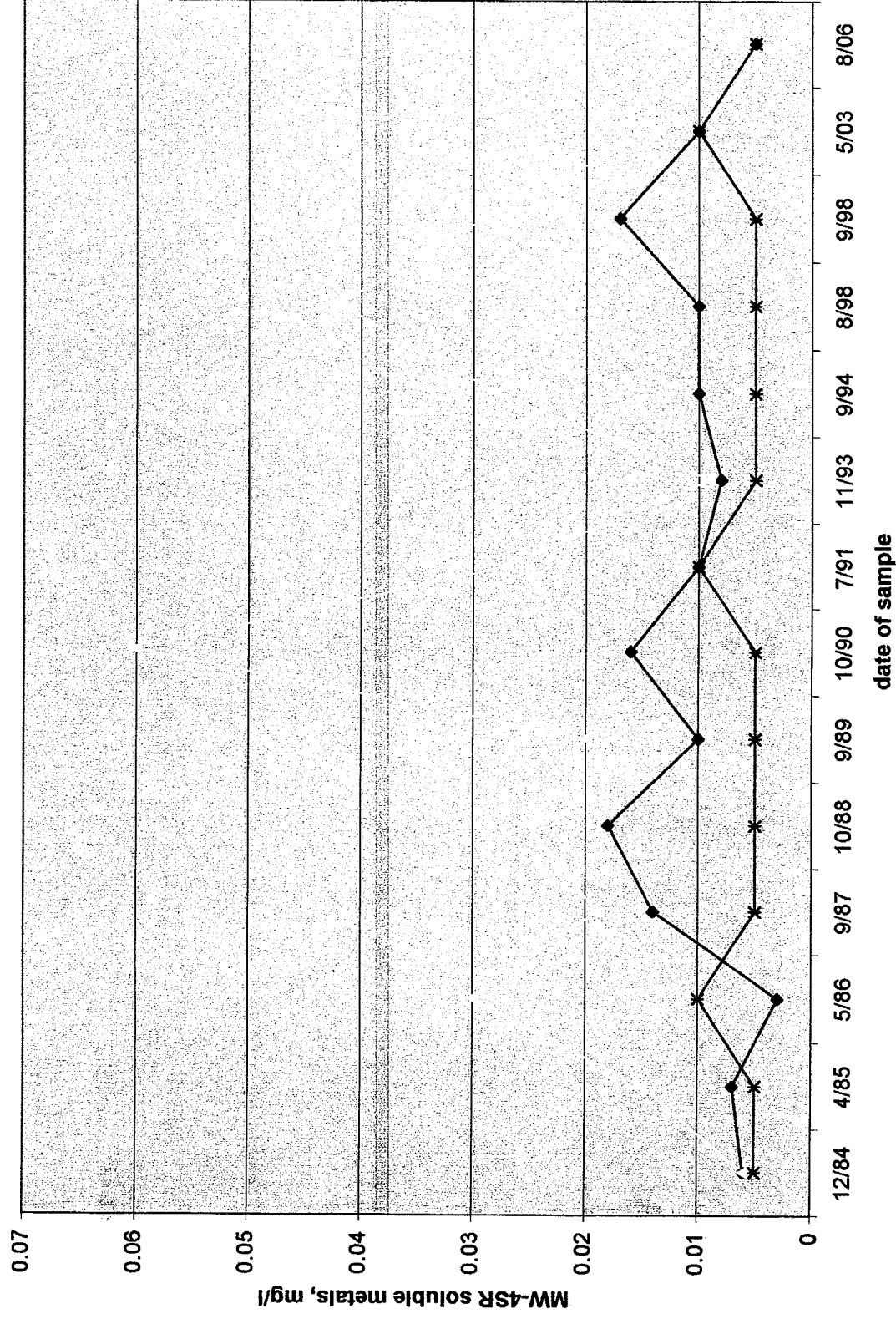
As = .025 mg/l
Cr = .05 mg/l
Pb = .025 mg/l

		PALMER ST. LANDFILL, MOENCH COMPANY													
		MW-4SR SOLUBLE METALS; ***SCREENED IN WASTE***													
		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
Arsenic	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	0.005
(soluble)															l.t.
Chrome	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
(soluble)															
Lead	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	0.005
(soluble)															l.t.

ATTACH. C1

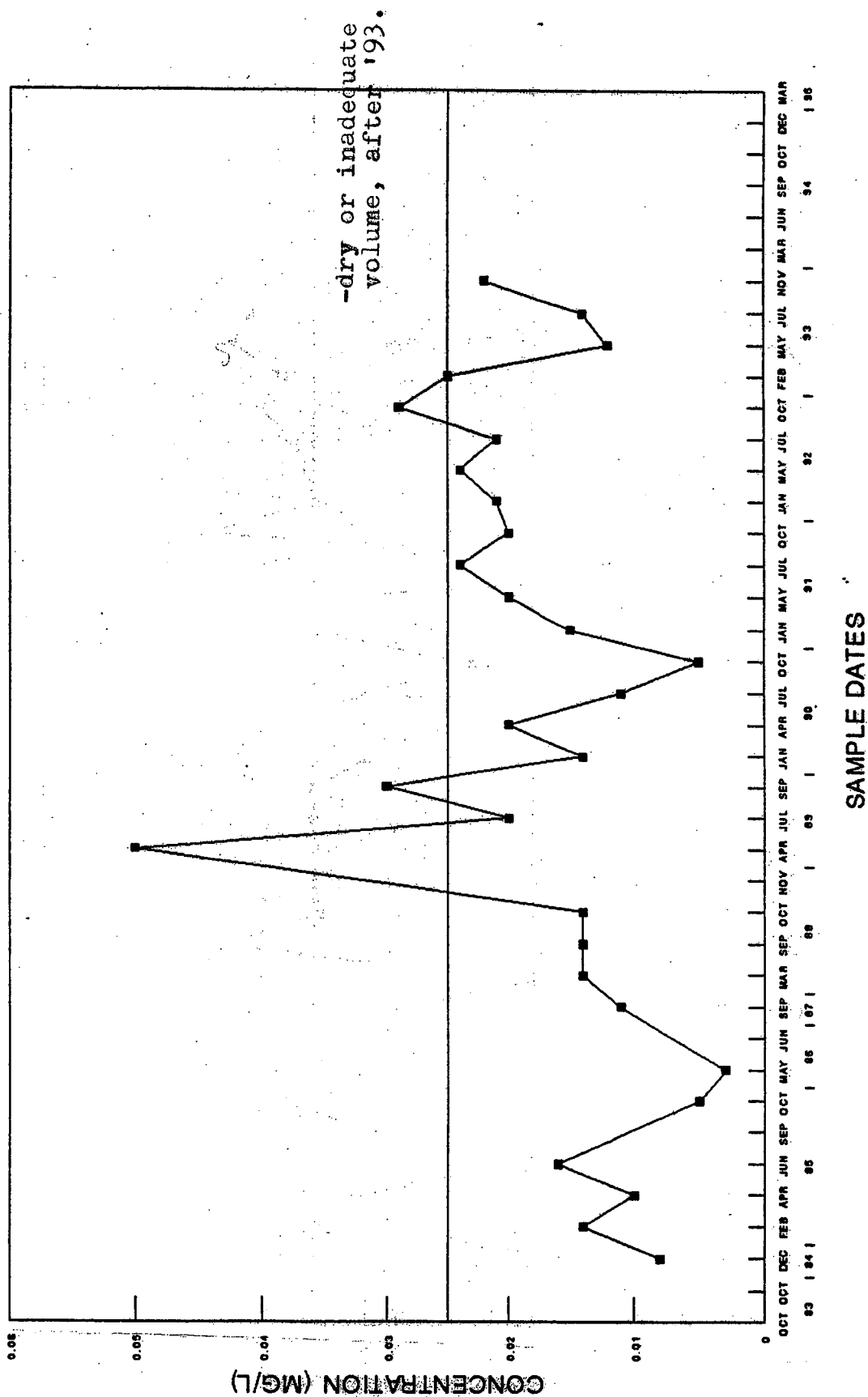
Palmer St. L/fill; soluble metals; MW4SR(screened in waste)

Attachment 10



MW-5 SOLUBLE ARSENIC (screened in the waste)

ATTACHMENT C1

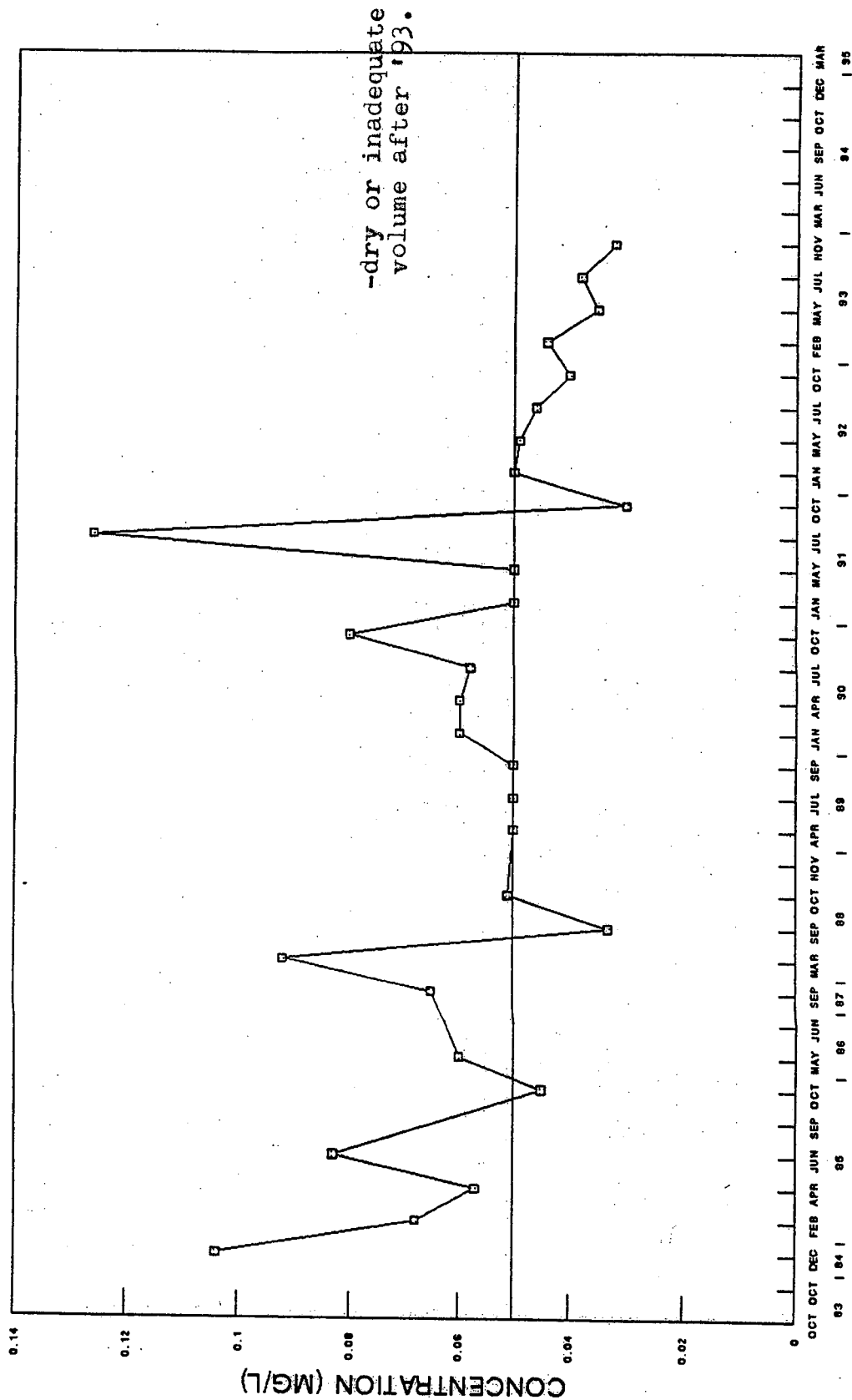


■ ARSENIC (SOLUBLE) — NYSDEC STANDARD

PALMER STREET LANDFILL
MW-5 SOLUBLE CHROMIUM

(screened in the waste)

ATTACH #CL

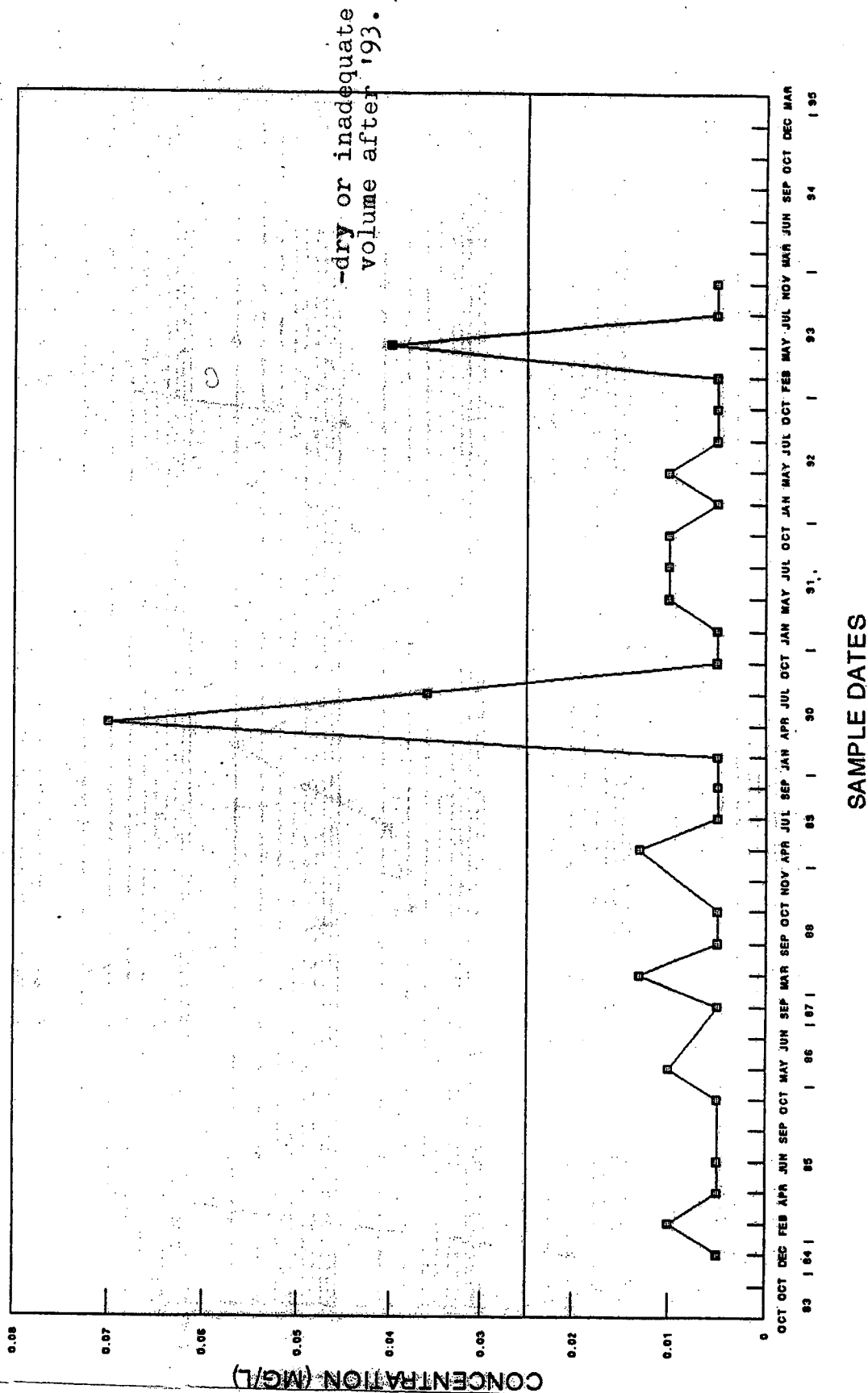


SAMPLE DATES

— NYSDEC STANDARD □ CHROMIUM (SOLUBLE)

PALMER STREET LANDFILL
MW-5 SOLUBLE LEAD (screened in the waste)

ATTACHMENT C1



LEAD (SOLUBLE) — NYSDEC STANDARD

ATTACHMENT C.1

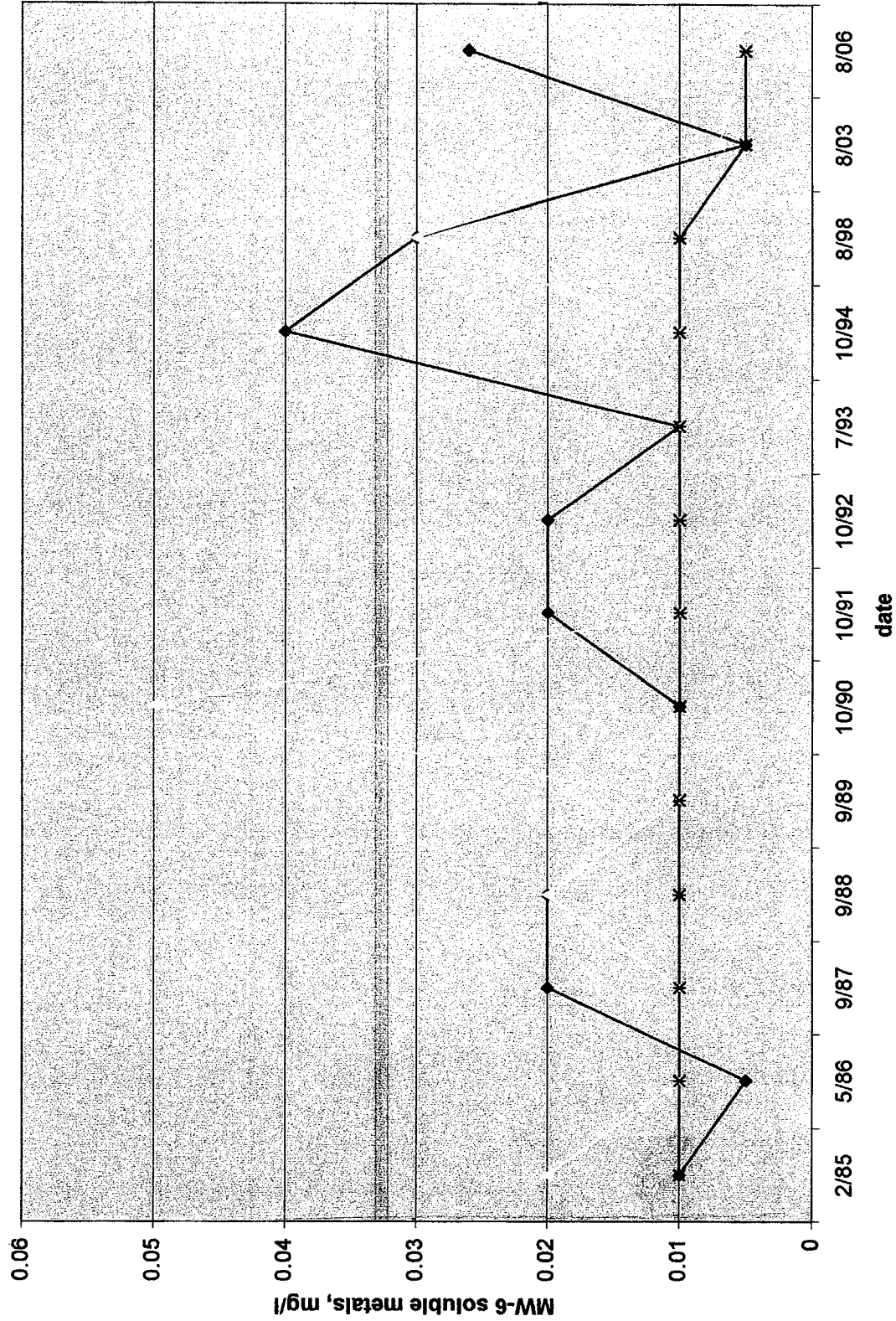
		PALMER ST. LANDFILL; MOENCH COMPANY MW-6 SOLUBLE METALS (SCREENED IN WASTE)																
		5/86	9/87	9/88	0.02	9/89	10/90	10/91	10/92	7/93	10/94	8/98	8/03	8/06				
2/85	0.01	0.005		0.02		0.01	0.01	0.02	0.02	0.01	0.04		0.03	0.005				
Arsenic (soluble)													l.t.					
Chromium (soluble)	0.02	0.01	0.01	0.02	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.03	0.007	0.005			
Lead (soluble)	0.01	0.01	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			
													l.t.					

PLMR.MTL.MWG

Palmer St. landfill; MW6, soluble metals

C-1

Attachment 'X'



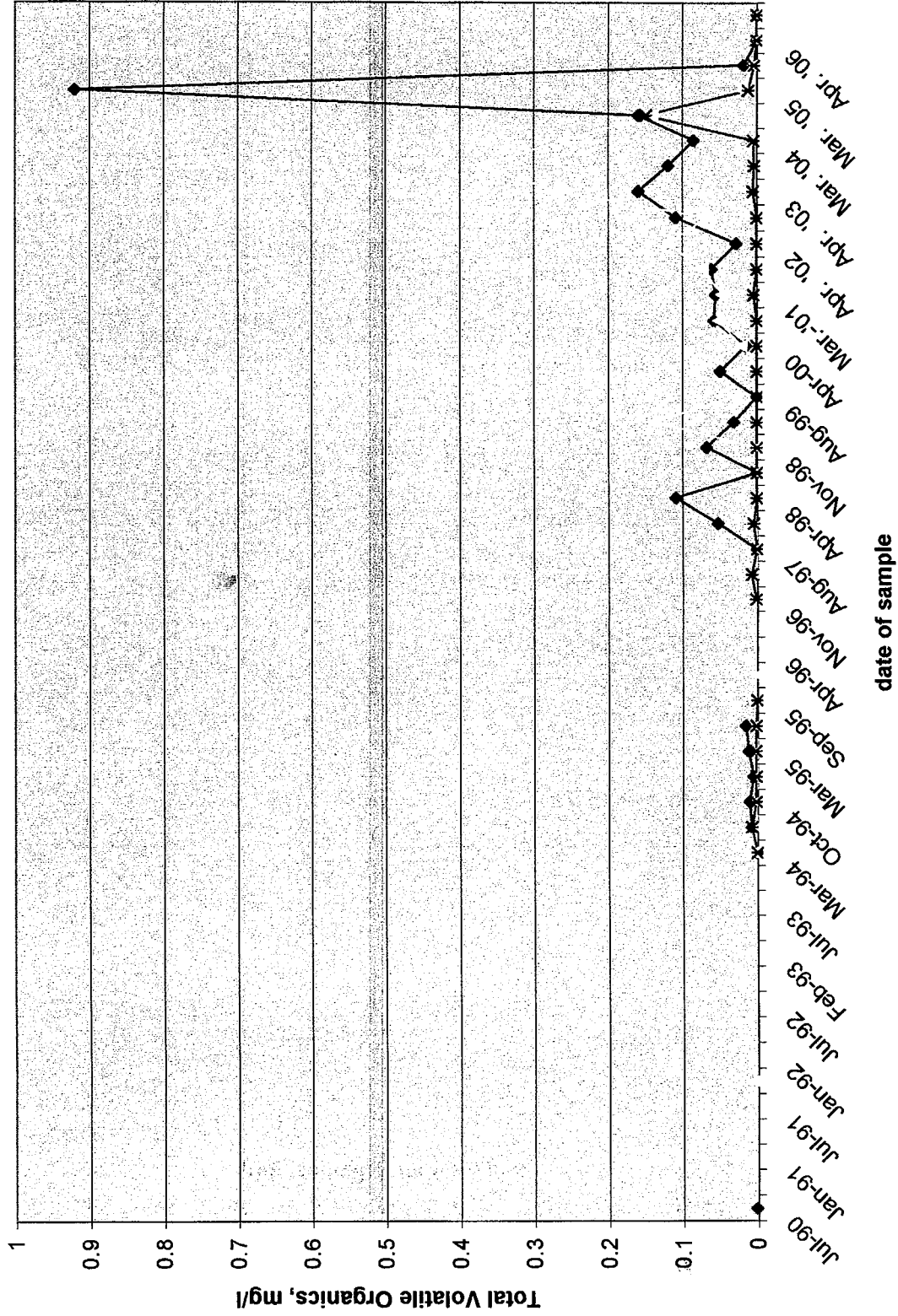
PLMR.MTL.MW6

ATTACHMENT "D"

TOTAL VOLATILES vs TIME
(grouped by monitoring point)

MONITORING EVENTS: April 2006 + prior
August 2006 + prior

Palmer St. I/fill; Total Volatile Organics(mostly Acetone)



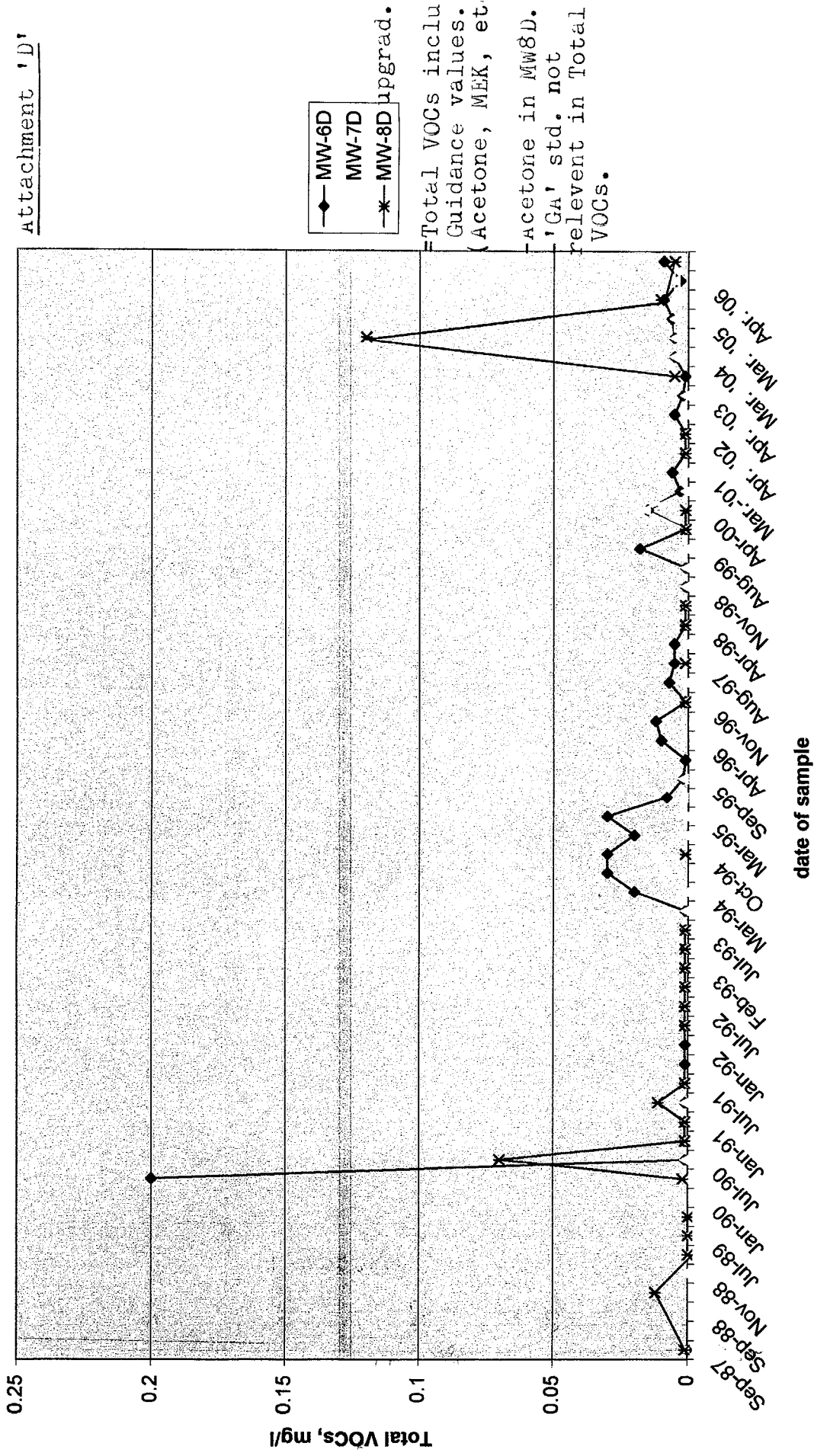
upg RAD161

Guidance values included.

-GA std not refer to total VOC.

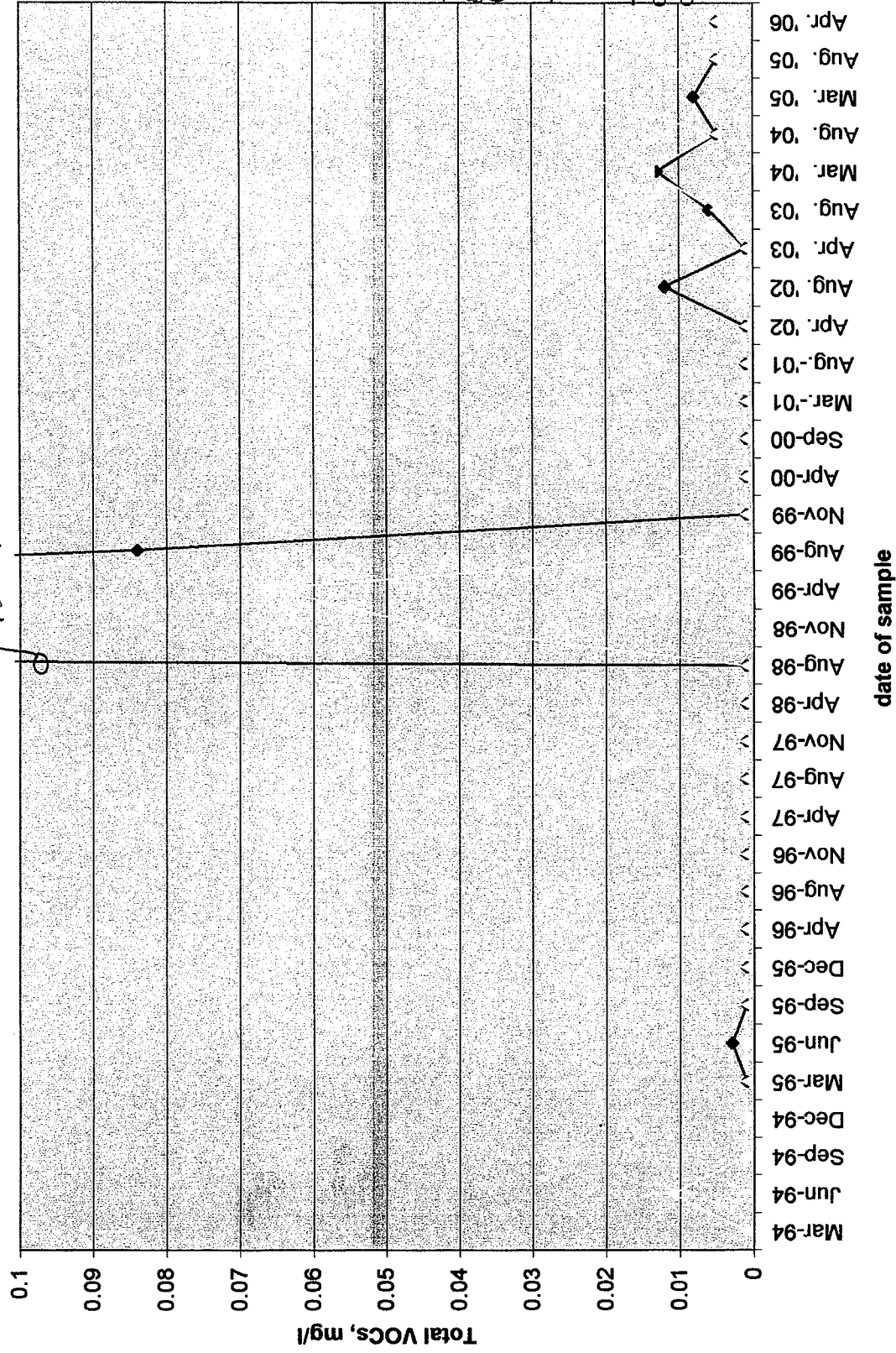
-Likely Bentonite Acetone contam. greatly reduced by aggressive purging of deep wells.

Palmer St. I/fill; Total VOCs(mostly Acetone)



Palmer St. I/fi//; Total VOCs

34 ppm MEK



[illegible][illegible][illegible]

Page 1

~~-No graphs generated due to no/minimal detection in past 10 years.~~
~~-Bank seeps often dry, due to weather.~~
~~Creek sample taken adjacent to bank seep, in its' place.~~

TOTAL VOLATILE ORGANICS FOR NEW MONITORING POINTS, AS OF AUGUST 2006.

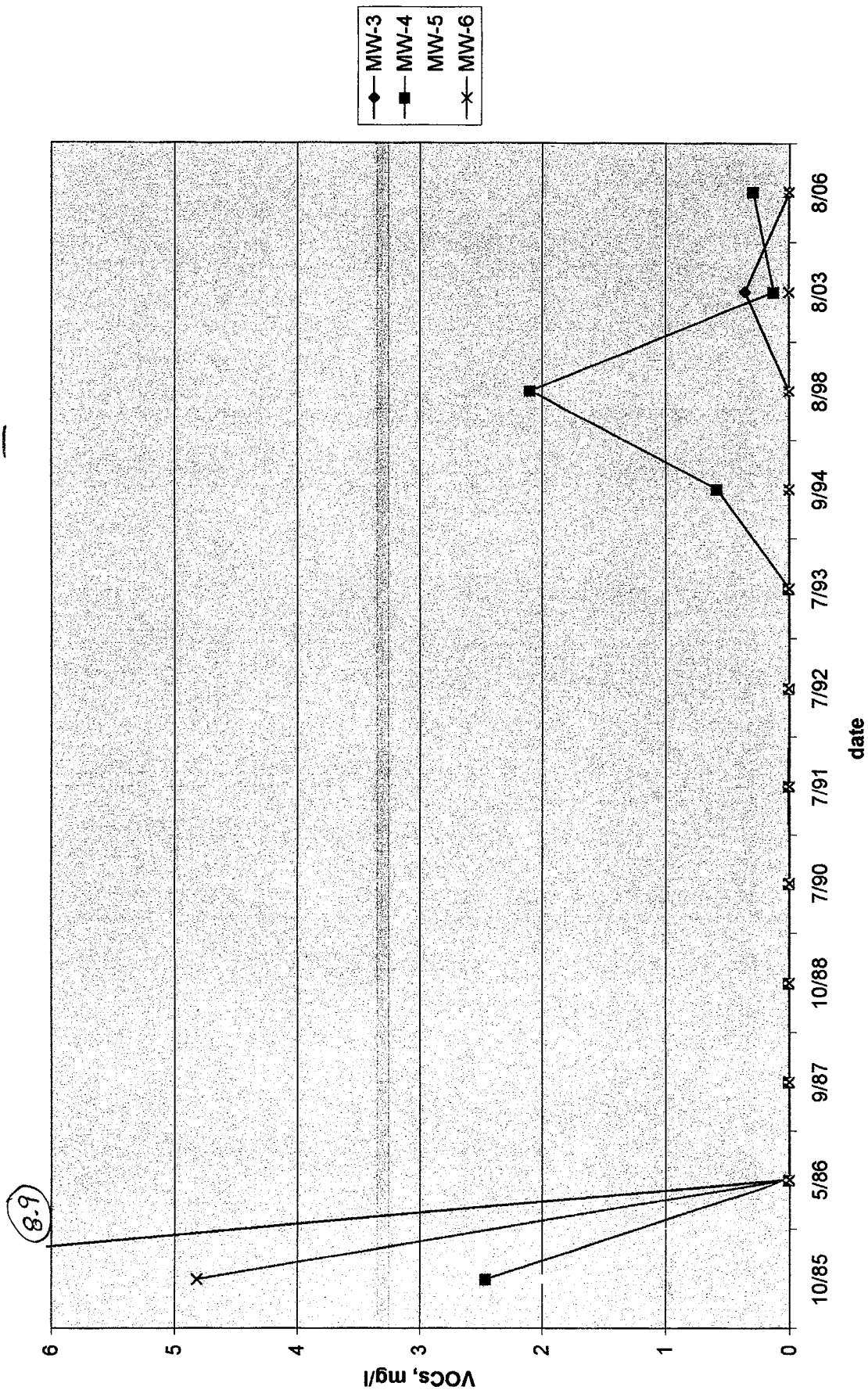
ATTACHMENT "D1"

ATTACHMENT DI

	PALMER ST. LANDFILL; MOENCH CO.											
	TOTAL VOLATILE ORGANICS											
	MW3, MW4, MW5, MW6; ALL SCREENED L IN WASTE											
	10/85	5/86	9/87	10/88	7/90	7/91	7/92	7/93	9/94	8/98	8/03	8/06
MW-3	8.97	0.005	0.005	0.005	0.005	0.011	0.005	0.005	0.005	0.005	0.005	0.36 dry
MW-4	2.46	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.586	2.1	0.125	0.293
MW-5	2.02	0.005	0.005	0.005	0.022	0.002	0.019	0.005	0.005	0.005	dry	dry
MW-6	4.82	0.005	0.005	0.005	0.005	0.003	0.009	0.003	0.004	0.005	0.005	0.005
	l.t.	l.t.	l.t.	l.t.								

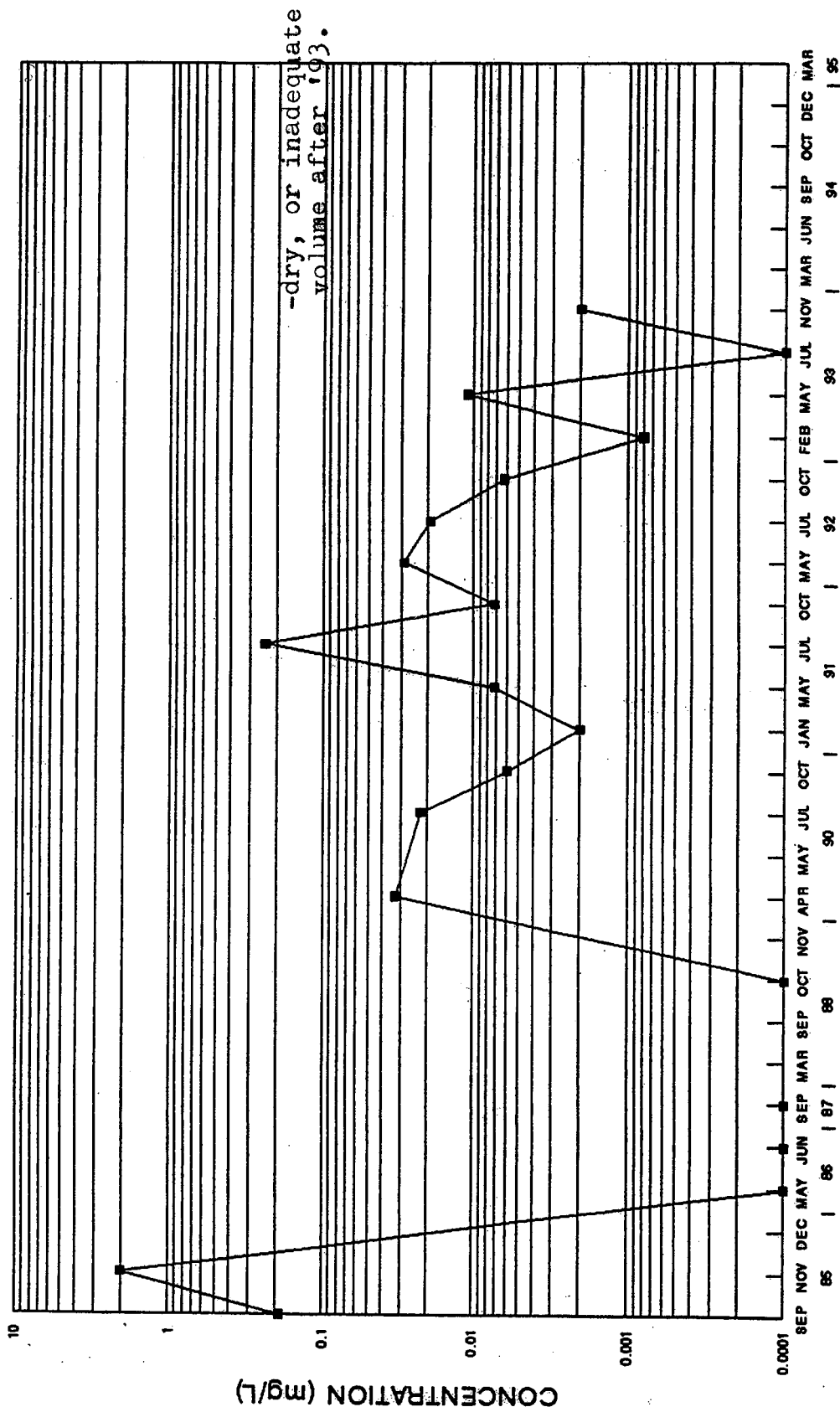
WELLS IN WASTE. TOTAL VOC

Palmer I/fill; VOC wells in waste (TOTAL)



PALMER STREET LANDFILL
TOTAL VOLATILE ORGANICS (screened in the waste)
MW-5

"
ATTACHMENT D1
"



ATTACHMENT D1

	PALMER ST. LANDFILL; MOENCH CO.					
	MW-3D : VOC TOTAL; BEDROCK					(TOTAL)
	9/87	11/88	7/90	7/91	7/92	7/93
						8/06
MW-3D	0.005	0.005	0.005	0.007	0.001	0.005
					l.t.	l.t.
						0.005

ATTACHMENT "E"

* FIELD MEASUREMENT DATA SHEETS;

SAMPLE EVENTS: April '06 & Aug. '06, & prior.

*Individual "field data sheets" were submitted with prior actual sample event reports. Contact Moench if you require them.

ATTACHMENT "F"

ANALYTICAL DATA EVENTS: Apr. '06 & Aug. '06, & prior.

***Analytical data from Severn Trent Laboratory, Amherst, New York,
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.
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.
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 PERFORMANCE SYSTEM EVALUATION, PREPARED BY GEOMATRIX CONSULTANTS, 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 ELIMINATION OF THE PERFORMANCE MONITORING PLAN-COVER SYSTEM EVALUATION.



Geomatrix

July 27, 2006

REF. ✕ 10

Mr. Stan Radon
New York State Department of Environmental Conservation
Region 9 Office
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: Revised Monitoring Program Summary
Palmer Street Landfill – Moench Company Site
Gowanda, New York

Dear Mr. Radon:

Geomatrix Consultants, Inc. (Geomatrix) and Moench Company appreciate your time on July 19, 2006 discussing the results of landfill cover system performance evaluations and nearly two decades of groundwater quality monitoring at the landfill site. This letter summarizes the conclusions from our meeting and identifies actions that will be undertaken by Moench.

Cover system performance evaluations have demonstrated that the alternative cover system installed at the landfill more than 15 years ago adequately limits vertical infiltration of precipitation and steady-state groundwater quality conditions exist at the site. It was agreed that an effective and efficient method of assessing cover system performance is through continued evaluation of downgradient groundwater quality data obtained from wells screened in the overburden (that sometimes includes saturated waste) and upper bedrock located closest to Cattaraugus Creek. In addition to sampling of wells near the Creek, evaluation of water quality data from sampling bank seeps existing along the Creek bank would be sufficient to assess potential releases from the landfill. The evaluation of these data would be conducted in-lieu of the stand-alone landfill cover system performance evaluation reports that have been submitted to the Department previously on a five year basis.

During our discussion, it was mutually agreed upon that the following downgradient and upgradient monitoring wells and bank seeps would be sampled on a semi-annual basis:

Downgradient Wells			Upgradient Wells	Bank Seeps
<u>Overburden/Waste</u>		<u>Bedrock</u>		
MW-3		MW-3D	MW-7D	BS-1
MW-4SR		MW-4D	MW-8D	BS-2
MW-5		MW-6D		BS-3
MW-6				

July 27, 2006
NYSDEC, Page 2

No changes to the parameter list were discussed.

It should be recognized that some of the wells screened in the waste do not always yield representative water samples. This is due to the fact that the cover system has lowered the saturated level in the landfill and has caused some of the wells to yield insufficient quantities of water to be sampled. Wells will not be sampled if they are dry or have less than 0.5 ft of standing water (water collecting in the bottom sump at the well bottom from condensation). Water level monitoring will continue to be measured in the detection wells listed above and other on-Site wells in order to prepare potentiometric surface maps for the overburden and upper bedrock water-bearing zones. In addition, measurements will be recorded in the infiltrometers used to evaluate infiltration through the cover.

The change to the monitoring program was agreed to be effective for the second sampling event in 2006 (scheduled for August 2006). It was also agreed that Moench will incorporate these plan modifications into a revised Post-Closure Monitoring Plan for the Site to be submitted to the Department prior to the first sampling event in 2007.

Please contact the undersigned or Mr. Jeff Smith at Moench Company (716) 532-2201 if these changes are not documented as discussed during our meeting or if you have any questions.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.



Richard H. Frappa, P.G.
Senior Hydrogeologist

cc: J. Smith (Moench)

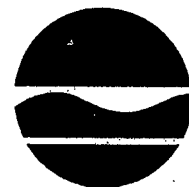
New York State Department of Environmental Conservation

Division of Solid and Hazardous Materials, Region 9

270 Michigan Avenue, Buffalo, New York, 14203-2999

Phone: (716) 851-7220 • FAX: (716) 851-7226

Website: www.dec.state.ny.us



Denise M. Sheehan
Commissioner

REF # 11

September 7, 2006

Mr. Jeffrey Smith
Site Manager
Moench Company
Division of Brown Shoe Company
465 Palmer Street
Gowanda, New York 14070

Mr. Smith:

Alternate Groundwater Monitoring Program

The New York State Department of Environmental Conservation (the "Department") has reviewed your July 27, 2006 (sent by Geomatrix) letter, as well as prior correspondence associated with the proposed alternate Groundwater Monitoring System. The following are the Department's comments.

The Department approves of the groundwater monitoring network provided in the July 27, 2006 letter. As a result of the consistent cover system performance evaluations, the modified groundwater monitoring network, and steady-state groundwater quality conditions, the Department agrees to eliminate the requirement of future cover system performance evaluations. Moench shall submit a revised Post-Closure Monitoring Plan that incorporates all modifications to the Department by December 31, 2006.

If you have any questions regarding this letter, please contact me at (716)851-7220.

Sincerely,

Stanley Radon
Senior Engineering Geologist

cc: Mr. James Strickland, DEC Buffalo
Mr. Richard Frappa, Geomatrix Consultants, Inc.