86107

000009

ADDENDUM 1
MONITORING WELL INSTALLATION REPORT

GSS-MW1, GSS-MW3, GSS-MW3D, GSS-MW4, GSS-MW5, GSS-MW6, GSS-MW8, GSS-M29, GSS-MW10, GSS-MW11, GSS-MW12, GSS-MW13, GSS-P3, GSS-P4

for the
GRANVILLE SOLVENTS SITE
GRANVILLE, OHIO

Submitted to:

The United States Environmental Protection Agency
Emergency Response Branch, Region V
Chicago, Illinois

Developed for:

Granville Solvents PRP Group
Columbus, Ohio

Prepared by

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December 1996

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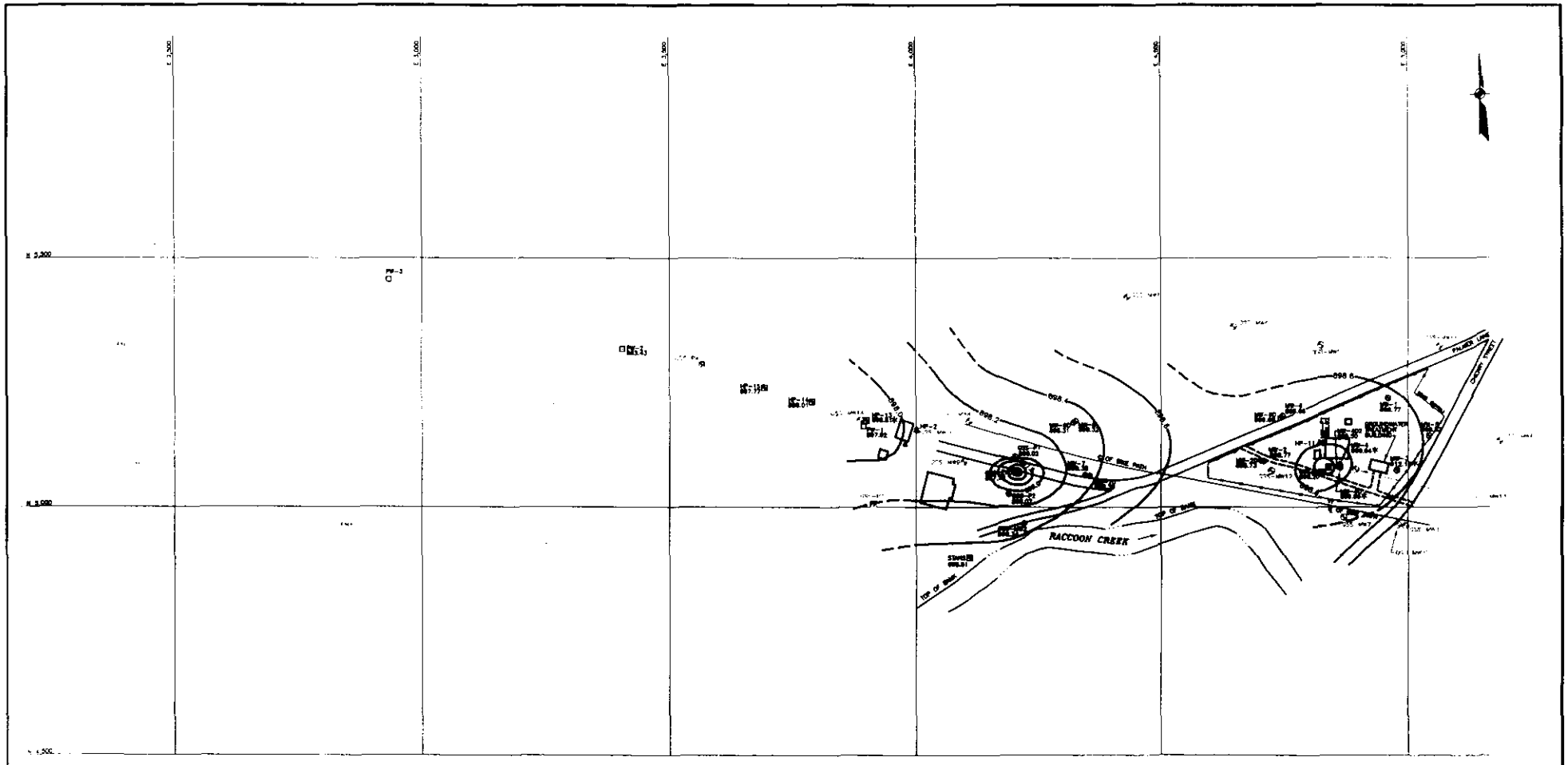
GSS-MW4, GSS-MW12, and GSS-MW14

I. TABLES

TABLE A-1
PUMPING CONDITIONS DURING THE MEASUREMENTS OF THE POTENTIOMETRIC SURFACE

Date	Pumping Rate (gallons per minute)				
	EW-1	EW-2	PW-2	PW-3	PW-4
January 30, 1995	200	200	750	-	-
June 6, 1995	155	91	750	-	-
September 29, 1995	156	107	750	-	-
November 17, 1995	153	106	750	-	-
January 18, 1996	150	102	750	-	-
May 13, 1996	160	73	-	850	-
July 17, 1996	185	68	750	-	-
October 11, 1996	147	105	750	-	-

II. FIGURES



EXPLANATION

- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL
- MONITOR WELL NOT YET INSTALLED
- PIEZOMETER NOT YET INSTALLED

* WATER LEVEL NOT USED IN CONTOURING

NOTES:
OSS-EW1 PUMPING AT 200 GPM
OSS-EW2 PUMPING AT 100 GPM
VILLAGE WELL PW-3 PUMPING AT ABOUT 700 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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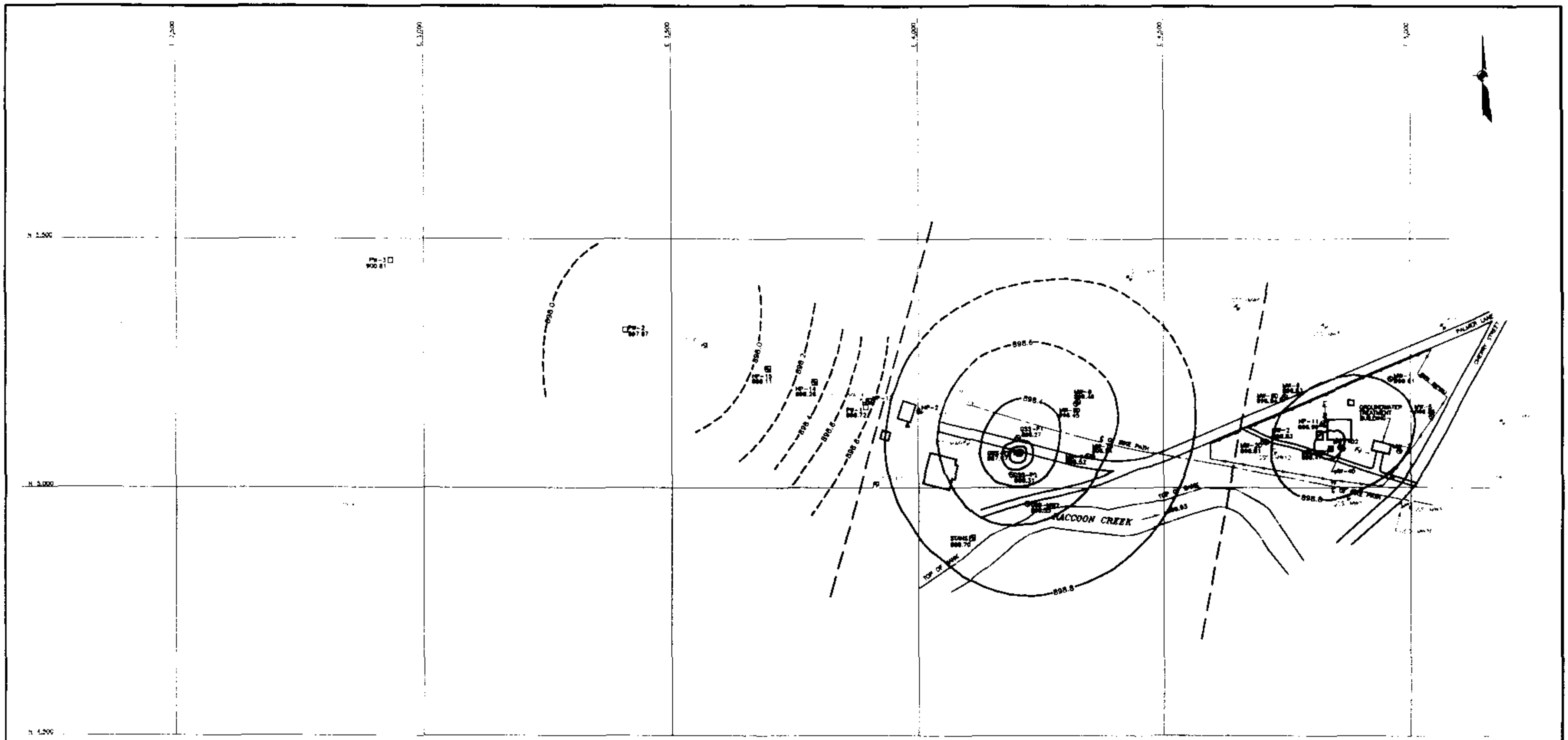
GRANVILLE SOLVENTS SITE

JANUARY 30, 1995 POTENTIOMETRIC SURFACE

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
GRNJ30GW	BC	TPF/CAP	DEC 96	016688	A-1



EXPLANATION
- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL
- MONITOR WELL NOT YET INSTALLED
- PIEZOMETER NOT YET INSTALLED

NOTES:
GSS-EW1 PUMPING AT 151 GPM
GSS-EW2 PUMPING AT 81 GPM
VILLAGE WELL PW-2 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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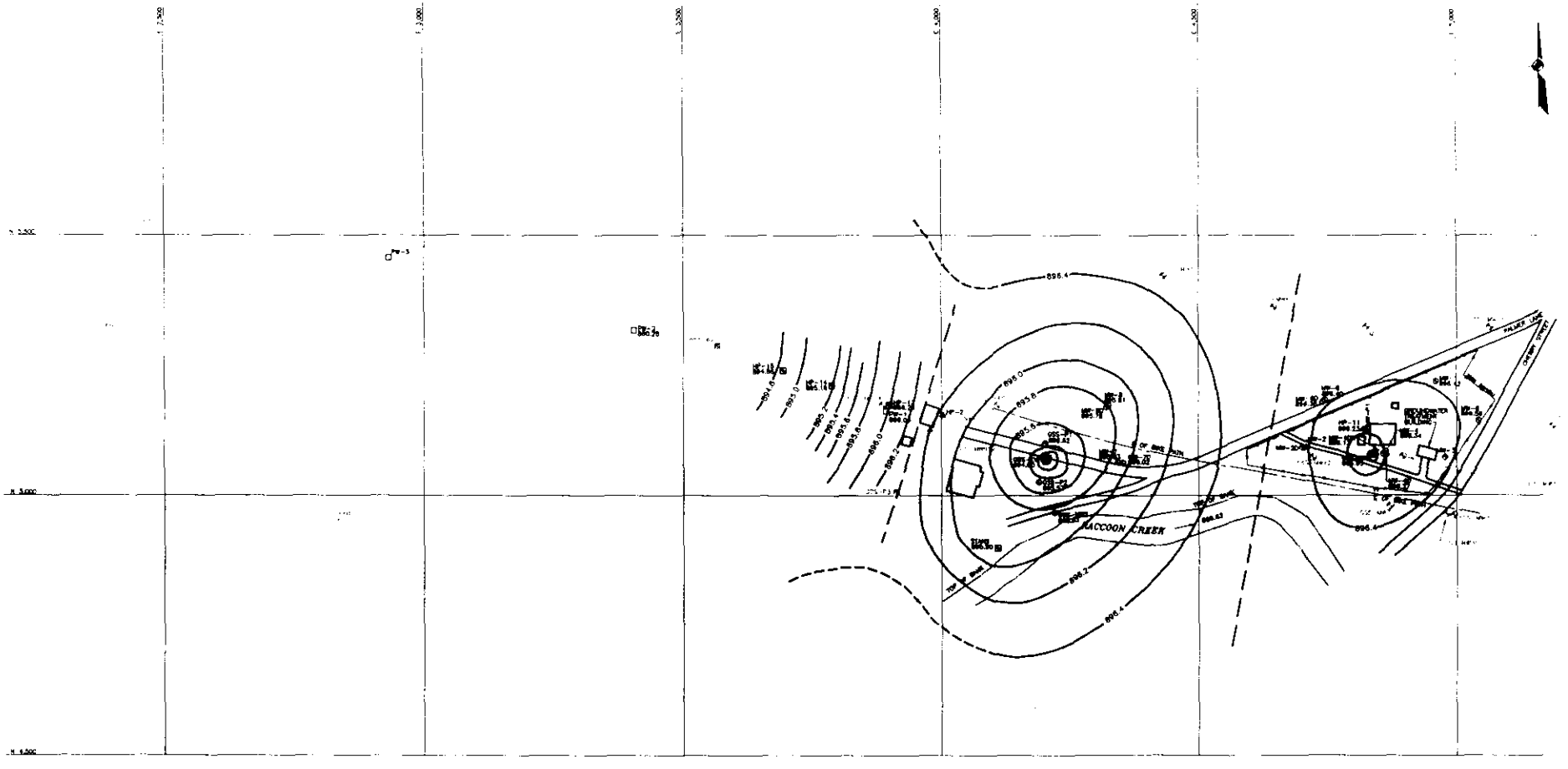
GRANVILLE SOLVENTS SITE
JUNE 6, 1995
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTJUN95	BC	TPF/CAP	DEC 96	016688	A-2



EXPLANATION

- MONITOR WELLS
- JER MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL
- MONITOR WELL NOT YET INSTALLED
- PIEZOMETER NOT YET INSTALLED

NOTES:
GRS-EW1 PUMPING AT 126 GPM
GRS-EW2 PUMPING AT 107 GPM
VILLAGE WELL PW-2 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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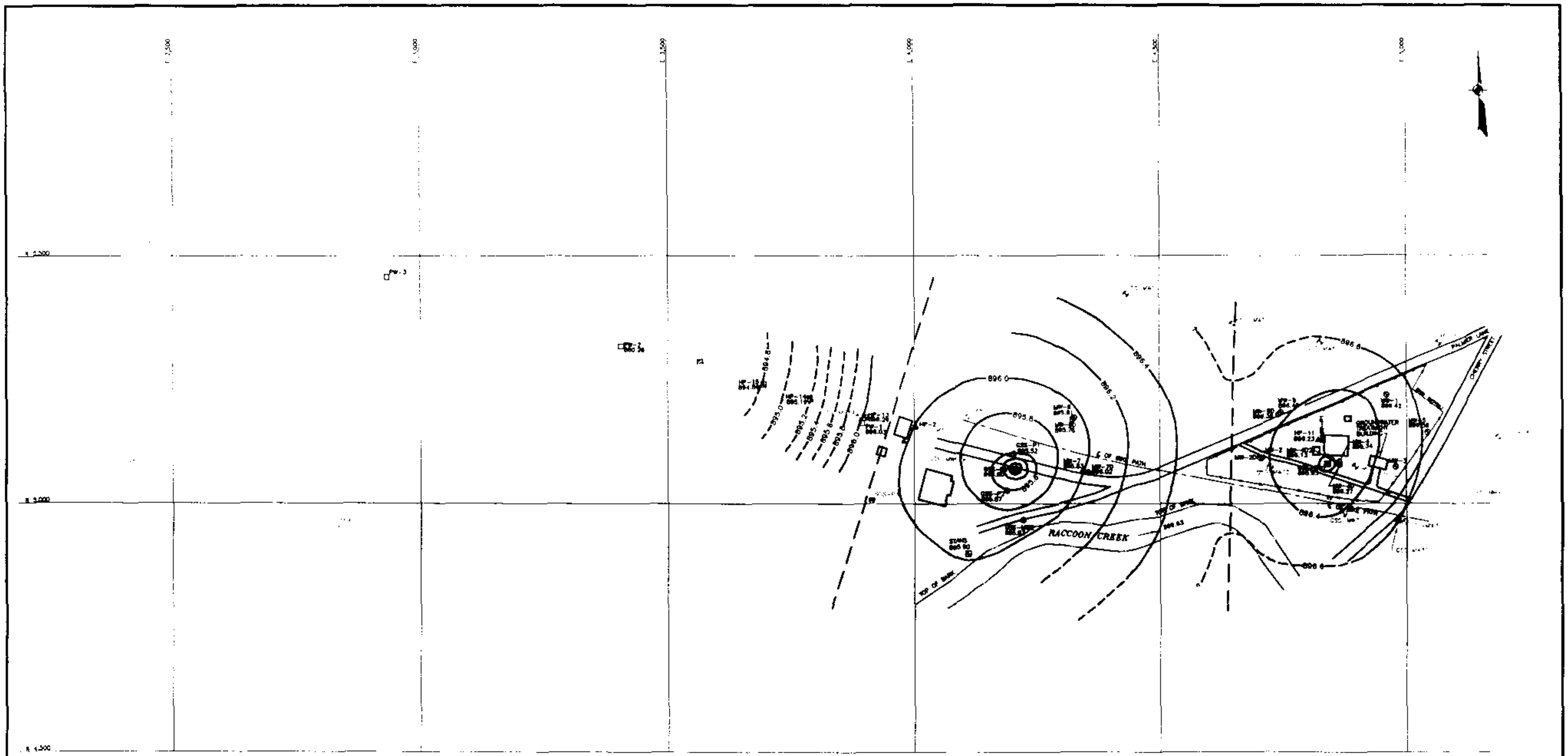
GRANVILLE SOLVENTS SITE
SEPTEMBER 29, 1995
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTSEP95	BC	TPF/CAP	DEC 96	016688	A-3



EXPLANATION
- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL
- MONITOR WELL NOT YET INSTALLED
- PIEZOMETER NOT YET INSTALLED

NOTES:
GSS-EW1 PUMPING AT 163 GPM
GSS-EW2 PUMPING AT 106 GPM
VILLAGE WELL PW-2 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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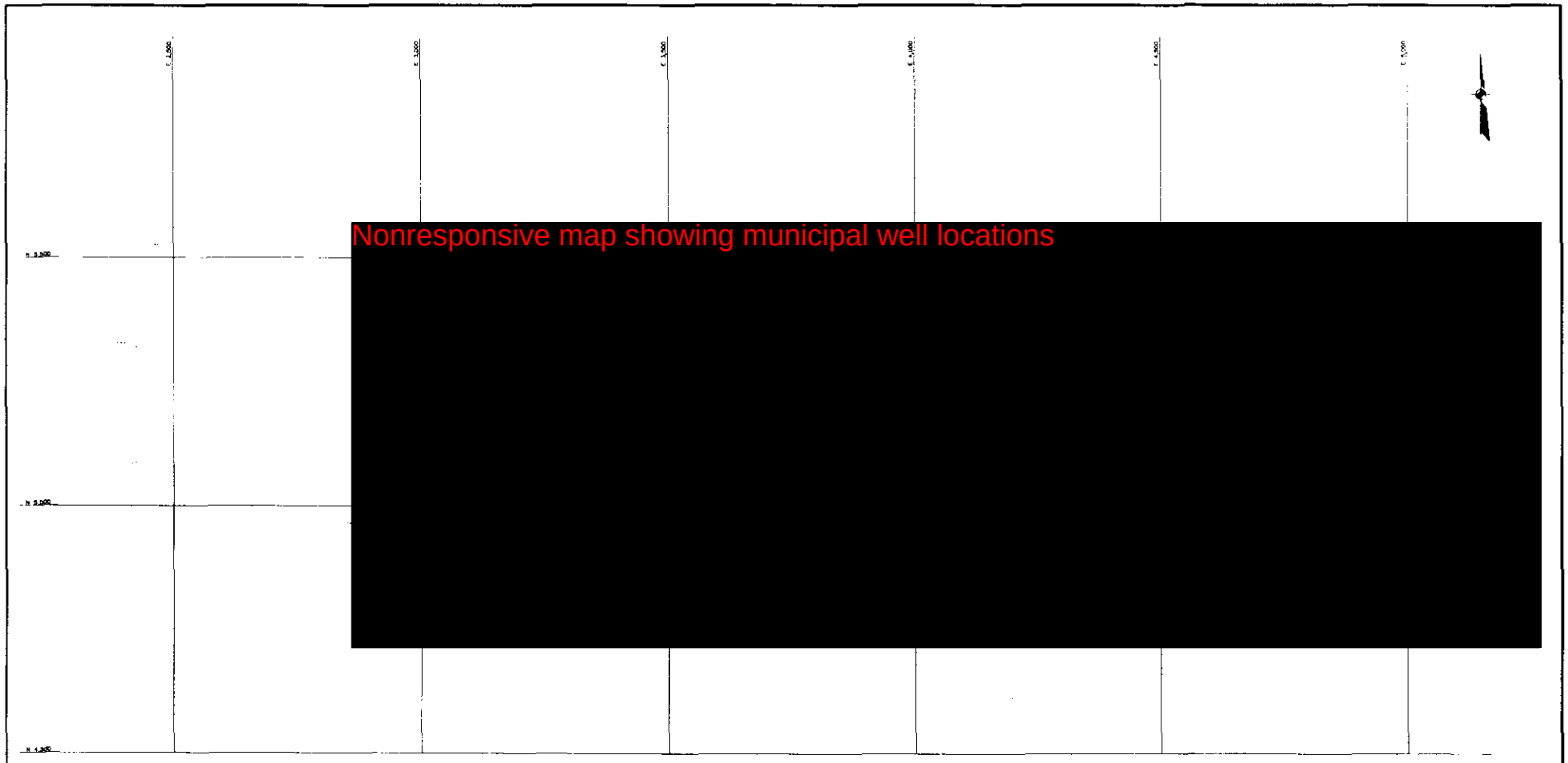
GRANVILLE SOLVENTS SITE
NOVEMBER 17, 1995
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTNOV95	BC	TPF/CAP	DEC 96	016688	A-4



EXPLANATION

- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL

PIEZOMETER NOT YET INSTALLED

NOTES:
EX3-EW1 PUMPING AT 150 GPM
EX2-EW2 PUMPING AT 102 GPM
VILLAGE WELL PW-2 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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GRANVILLE SOLVENTS SITE
JANUARY 18, 1996
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTJAN96	BC	TPF/CAP	DEC 96	016688	A-5

Nonresponsive map showing municipal well locations

[redacted]

EXPLANATION

- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL

NOTES:
GES-EW1 PUMPING AT 180 GPM
GES-EW2 PUMPING AT 73 GPM
VILLAGE WELL PW-1 PUMPING AT ABOUT 500 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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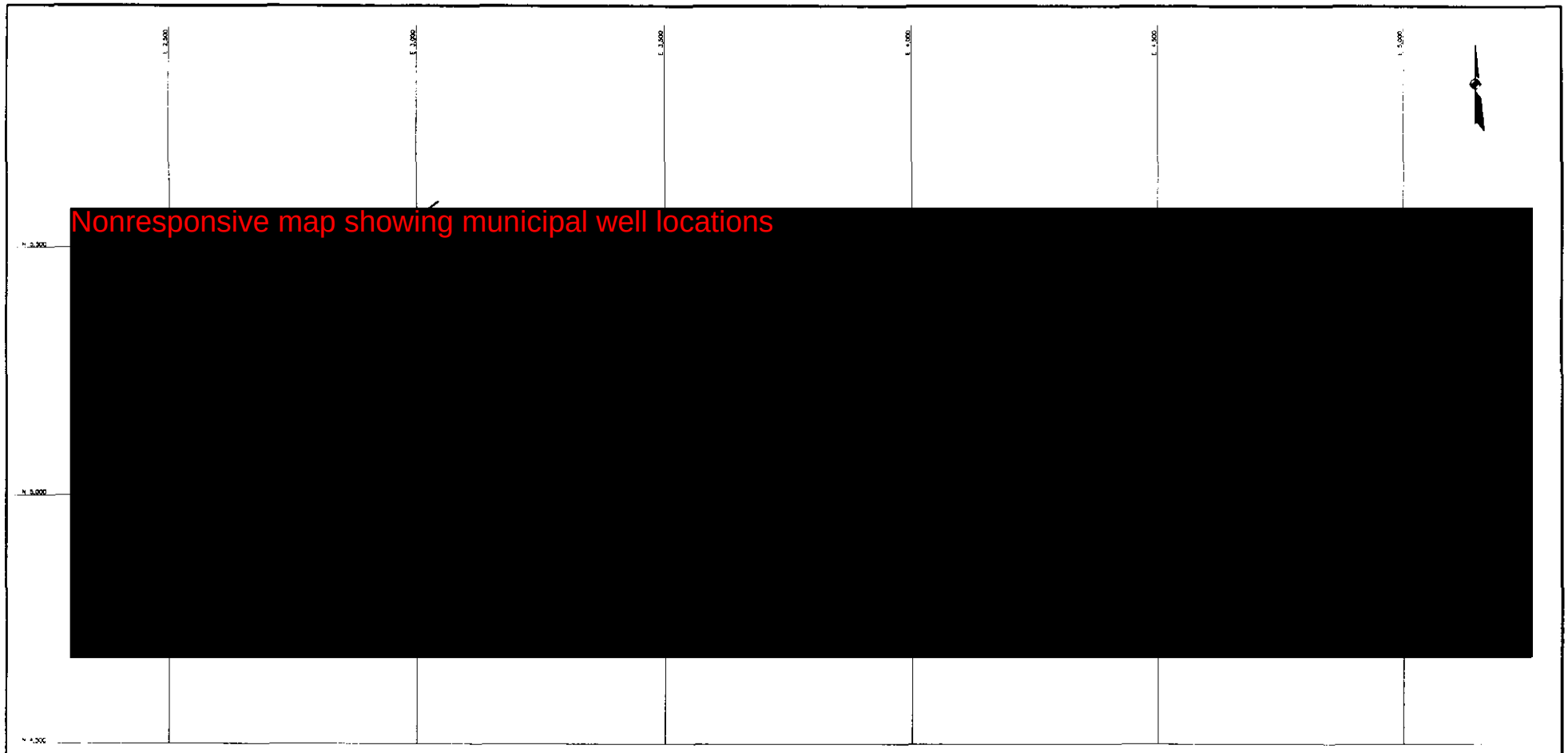
GRANVILLE SOLVENTS SITE
MAY 13, 1996
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTMAY96	BC	TPF/CAP	DEC 96	016688	A-6



EXPLANATION

- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- OBSERVATION WELL

NOTES:
GRS-EW1 PUMPING AT 165 GPM
GRS-EW2 PUMPING AT 80 GPM
VILLAGE WELL PW-2 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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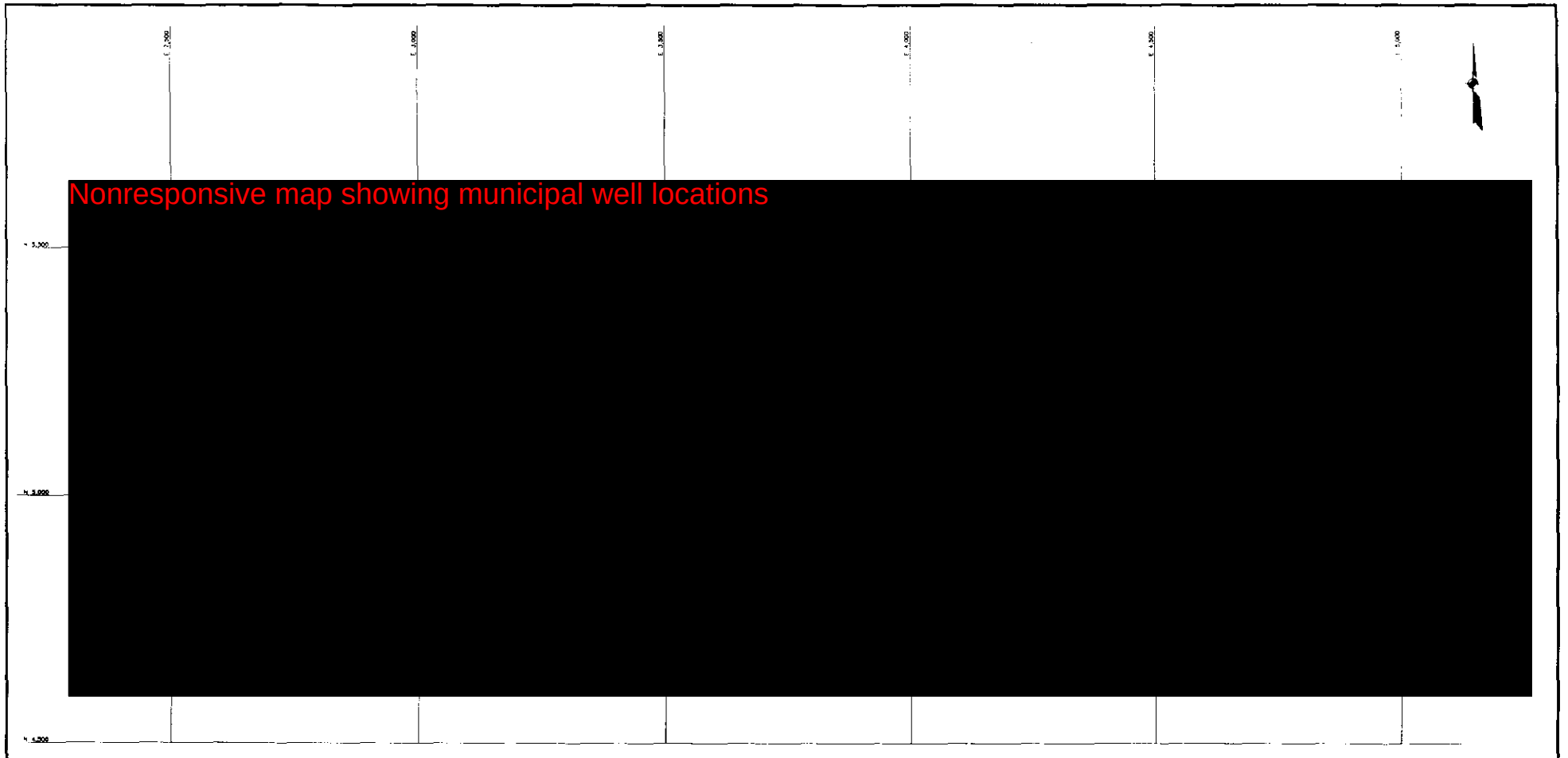
GRANVILLE SOLVENTS SITE
JULY 17, 1996
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTJUL96	BC	TPF/CAP	DEC 96	016688	A-7



EXPLANATION

- MONITOR WELLS
- AIR MONITORING STATIONS
- EXTRACTION WELLS
- VILLAGE PRODUCTION WELLS
- DISTRIBUTION WELL

NOTES:
OSR-EW1 PUMPING AT 147 GPM
OSR-EW2 PUMPING AT 108 GPM
VILLAGE WELL PW-1 PUMPING AT ABOUT 750 GPM

CONTOUR INTERVAL = 0.2 FEET

SCALE IN FEET
0 100 200

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GRANVILLE SOLVENTS SITE
OCTOBER 11, 1996
POTENTIOMETRIC SURFACE
GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
POTOCT96	BC	TPF/CAP	DEC 96	016688	A-8

III. SOIL BORING LOGS

GSS-MW1
GSS-MW3
GSS-MW3D
GSS-MW4
GSS-MW5
GSS-MW6
GSS-MW8
GSS-MW9
GSS-MW10
GSS-MW11
GSS-MW12
GSS-MW13
GSS-MW14
GSS-P3
and GSS-P4

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016668
LOG-OF GSS-MW1
COORD-N 5422 25205 E(W) 4431 18858
GROUND-ELEV 953 7000
RISER-ELEV -
BOREHOLE-TO 36 0
BEGAN-DRILLING 12/8/95
END-DRILLING 12/8/95

DRILLING-CO HAD INC
DRILLER K Ries
DRILLING-METHOD CME 75/HSA 4 1/4
GEOLOGIST Mark Andrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						Hand dug, limestone, dark brown, topsoil
				60	100%		TOPSOIL, dark brown, silty loam, 10YR 3/2, 10% sand, trace sm gravel, medium soft
950 0	-5 00						SILT (ML), trace sand, firm, non-plastic, dense, organic clasts, some horizontal bedding, wicer, 10YR 4/4
				48	80%		SILT as above
945 0	-10 00						SAND (SM) very fine grained, saturated perched zone
				54	90%		SAND (SM), coarse, well sorted, 10% silt, 10% SM gravel, loose, friable, saturated
940 0	-15 00						SILTY CLAY (CL), 20% coarse till, sand, 5% gravel, firm, nonplastic, dense, dark olive brown, black 5Y 2 5/2
935 0	-20 00						SILTY CLAY (CL) as above, 20% SM, medium gravel, 10% sand, 20% silt, firm, dark brown, gray at base
930 0	-25 00						TILL, SILTY CLAY, as above, less gravel
				60	100%		SILTY CLAY (CL), 20% gravel, 10% sand, 20% silt, weathered, reddish brown, 10YR 4/4, dark gray sand at 30
925 0	-30 00						

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PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO [illegible]
LOG-OF GSS-MW1
COORD-N 5422 25205 E(W) 4931 18858
GROUND-ELEV 953 7000

DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 86 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/8/95
GEOLOGIST Mark Andrew
END-DRILLING 12/8/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						SILTY CLAY (CL), 20% gravel, 10% sand, 20% silt, weathered, reddish brown, 10YR 4/4, dark gray sand at 30
				27	80%		SILTY SAND w/GRAVEL AND COBBLES, 20% gravel, 10% cobbles, poorly sorted, moist
920 0	35 00						SAND (SM), 20% SM-medium gravel, 10% silt, cobble (Byer), at base, moist
				6	10%		SAND AND GRAVEL GM/SM, poor recovery, moist
915 0	40 00						
				48			SAND AND GRAVEL as above, moist not yet wet
910 0	45 00						
							SAND AND GRAVEL, dry
905 0	50 00						
							SAND AND GRAVEL, GM/SM, as above, wet to saturated
900 0	55 00						
							SHALE, dark gray, auger to 59' in shale, tricone on air to 65 water at 84-85
							END BORING AT 86 0 FEET
895 0	60 00						

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PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW30
COORD-N 4965 22025 E(W) 4981 09210
GROUND-ELEV 914 2500
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 96 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/14/95
GEOLOGIST Becky Chavez
END-DRILLING 12/14/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						
		CS		1 5'	90%		TOPSOIL, rootzone, brown pebbles surrounded to rounded, medium density, low plasticity, sand seam 3" medium grained, brick fragments
		CS		5 0'	100%		SAND seam medium grained, asphalt chunk
							SITLY CLAY (CL), w/asphalt, high density, low plasticity, gray mottling, rust staining, trace pebbles and rootzone, light brown
950 0							SILTY CLAY (CL), as above, no pebbles
	-5 00						CLAY (CH) grey mottling, rust staining, roots, low density, high plasticity, light brown
		CS		5 0'	100%		SILTY CLAY (CL), yellowish brown, low plasticity, high density, grey mottling, rust staining, black organics, dry
945 0							
	-10 00						
		CS		5 0'	100%		SILTY CLAY (CL), grey w/yellow discoloring, plastic w/medium density, rootzone, very fine sands, moist
940 0							
	-15 00						
		CS		5 0'	100%		SILTY CLAY as above, moist
935 0							
	-20 00						CLAY (CL), light gray w/dark gray mixing, plastic, medium density, very soft, moist
		CS		5 0'	100%		Same SILTY CLAY as 19 0-22 0'
930 0							
	-25 00						SAND (SM) dark grey, very fine to fine grained, poorly graded, some silts, moist
		CS		3 0'	40%		SAND very fine to fine, medium gray, low density, low plasticity, poorly graded, wet
925 0							
	-30 00						

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PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW30
COORD-N 4965 22025 E(W) 4981 09210
GROUND-ELEV 914 2500
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 96 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/14/95
GEOLOGIST Becky Chavez
END-DRILLING 12/14/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	-30 00						SAND very fine to fine, medium gray, low density, low plasticity, poorly graded, wet
		CS		5 0'	100%		Same material as above
920 0							
	-35 00						SAND AND GRAVEL (GW), light brown, well graded, poorly sorted, rounded gravel, sand fine to medium grained, wet
		CS		2 0			Same material as above
915 0							
	-40 00						
		CS		2 0'	40%		Same material as above
910 0							
	-45 00						
		CS		0 0	0%		NO RECOVERY
905 0							
	-50 00						
		CS		1 0'	20%		SAND AND GRAVEL, as 42 0-47 0'
900 0							
	-55 00						
		CS		1 0'	20%		Same material as above
895 0							
	-60 00						

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PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW30
COORD-N 4955 22025 E(W) 4981 09210
GROUND-ELEV 914 2500
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 96 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/14/95
GEOLOGIST Becky Chavez
END-DRILLING 12/14/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	60 00						SAND AND GRAVEL, as 42 0-47 0'
		CS		0 0	0%		Same material as above
							NO RECOVERY, we are switching over to splitspoon
890 0							
	65 00						
885 0							
	70 00						
		SS	5, 5, 6, 9	-			Heave in splitspoon
880 0							
	75 00						
875 0		SS		6"			SAND AND GRAVEL, dark gray, as 42 0-47 0' interval
	80 00						
		SS	7, 7, 7, 7	0 0	0%		Heave in splitspoon, gravel in bottom
870 0							
	85 00						
865 0		SS	9, 10 11, 13	1"			CLAYEY SILT (ML), brownish grey, medium plasticity, low
	90 00						

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PROJECT Granville Solvents
LOCATION Granville Ohio
PROJECT-NO 016668
LOG-OF GSS-MW30
COORD-N 4965 22025 E(W) 4981 09210
GROUND-ELEV 914 2500
ORILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 95 0
ORILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/14/95
GEOLOGIST Becky Chavez
END-DRILLING 12/14/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	-90 00						CLAYEY SILT (ML), brownish grey, medium plasticity, low density, firm, only 1" in spoon, moist
860 0		SS	13, 15 18, 27	1"			SAND AND GRAVEL (GW), light brown, as in interval 42-47
	-95 00						Stopped splitspoons at 96', drilled past target depth of 97' to prevent recve
							END BORING AT 96 0 FEET
855 0							
	-100 00						
850 0							
	-105 00						
845 0							
	-110 00						
840 0							
	-115 00						
835 0							
	-120 00						

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PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW4
COORD-N 5132 12276 E(W) 5183 91812
GROUND-ELEV 925 1200
RISER-ELEV -
BOREHOLE-TO 48 0
BEGAN-DRILLING 11/30/95
END-DRILLING 11/30/95
DRILLING-CO HAD INC
DRILLER K Ries
DRILLING-METHOD Hollowstem Augers
GEOLOGIST Mark Andrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00	HO HO					TOPSOIL, SILTY CLAY (CL), w/organics w/silt, roots, moist, soft, loose, non-plastic, dark brown 10YR 4/2
							SILTY CLAY (CL), clay silt (ML), 50-50, moist, loose, non-plastic, dark yellowish brown, 10YR 4/4
950 0	-5 00	CS		3 0	100		SILT (ML) W/CLAY, trace fine sand, moist, soft, non-plastic, yellowish brown, 10YR 5/6
		CS		5 0	100		SILT as above
945 0	-10 00						SAND (SM), very fine grained w/40% silt, soft, friable, damp, non-plastic
		CS		3 5	20		SAND, as above, saturated, tight zone, perched zone
							SAND as above
940 0							SAND as above, dryer
	-15 00						SILTY CLAY (CL) w/gravel, firm, moist, medium plasticity, damp
		CS		5 0	100		SILTY CLAY (CL), 20% gravel, 10% sand, 20% silt, firm, moist, medium plasticity, dark olive gray, 5Y 3/2
935 0	-20 00						
		CS		4 5			SILT (ML), tight, damp and saturated, dark gray, 5Y 4/1
930 0	-25 00						SAND AND GRAVEL (SM)/(GM) w/40% silt, compact, firm
							SILTY CLAY (till) as above, 18-23', dark gray
		CS		1 0	20		GRAVEL (GM), w/sand 40%, 20% silt, iron staining
925 0	-30 00						POOR RECOVERY, GRAVEL W/SAND, iron staining, (GM) trace silt, saturated

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PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 016688
LOG-OF: GSS-MW4
COORD-N: 5132 12276 E(W): 5183 31812
GROUND-ELEV: 925 1200
DRILLING-CO: HAD, INC
RISER-ELEV: -
DRILLER: K Ries
BOREHOLE-TD: 48 0
DRILLING-METHOD: Hollowstem Augers
BEGAN-DRILLING: 11/30/95
GEOLOGIST: Mark Andrew
END-DRILLING: 11/30/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						POOR RECOVERY, GRAVEL W/SAND, iron staining, (GM) trace silt, saturated
		CS		4 5	90		
920 0							SAND (SM), coarse w/gravel
	35 00						COBBLES (GM) w/GRAVEL SILT
							SAND AND GRAVEL (SM)(GM)
		CS		3 0	60		GRAVEL W/SAND (GM)(SM)
915 0							GRAVEL W/SAND (GM)(SM)
	40 00						COBBLES w/GRAVEL AND SAND (GM)(SM)
				2 0	40		GRAVEL (GM) coarse w/SAND, 30%
910 0							SAND (heave) - coarse sand and w/cobbles placed into shoe of sampler
	45 00						
905 0							END OF BORING AT 48 0 FT
	50 00						
900 0							
	55 00						
895 0							
	60 00						

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 216688
LOG-OF: GSS-MW5
COORD-N: - E(W): -
GROUND-ELEV: 960
RISER-ELEV: -
BOREHOLE-TD: 76.0
BEGAN-DRILLING: 12/5/95
END-DRILLING: 12/5/95
DRILLING-CO: HAD, INC
DRILLER: T. Bromley
DRILLING-METHOD: CME 85/HSA 4 1/4
GEOLOGIST: Becky Chavez

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0.00						NO SAMPLE TAKEN
950.0		SS	2, 3, 5, 8	6"	25%		SILTY CLAY (CL), 10YR 4/3, brown, medium plasticity, low density, pebbles, trace gravel, some sand, fine, moist. rock in shoe
	-5.00	SS	5, 6, 8, 9	6"	25%		SILTY CLAY (CL), 10YR 5/8, yellowish brown, medium to low plasticity, low density, pebbles, rust staining, dry
		SS	5, 9, 9, 8	12"	50%		SAND AND GRAVEL (GW), 10YR 5/4, yellowish brown, sand fine to medium, gravel, subrounded to rounded, rust stains, dry
945.0	-10.00	SS	4, 5, 7, 6	12"	50%		Same material as above, dry
		SS	6, 8, 8, 7	12"	50%		SILTY CLAY (CL), 10YR 5/4, yellowish brown, rust staining, black discoloration, 3", dense, low plasticity, yellowish discoloring, dry
940.0		SS	2, 8, 11, 11	12"	50%		Same material as above, dry
	-15.00	SS	11, 3, 9	18"	75%		SILTY CLAY (CL), 10YR 5/1, grey, plastic, medium density, trace of sand, 6" seam, trace pebbles, pebbles subrounded to rounded, moist
		SS	5, 6, 6, 9	18"	75%		Same SILTY CLAY as 14-16 interval
935.0	-20.00	SS	2, 8 11, 16	12"	50%		Same material as above, cobble fragments (limestone), throughout, dry
		SS	3, 9 12, 15	18"	75%		Same SAND AND GRAVEL, 8-10' interval
930.0		SS	5, 13 15, 12	12"	50%		Same material as above
	-25.00	SS	3, 5, 8, 9	6"	25%		Same material as above with very fine to fine sand
		SS	5, 12 11, 9	12"	50%		Same material as above
925.0	-30.00	SS	7, 5, 7, 9	18"	75%		

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW5
COORD-N 5325 04940 E(W) 4824 69191
GROUND-ELEV 959 5400
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER T Bromley
BOREHOLE-TD 76 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/5/95
GEOLOGIST Becky Chavez
END-DRILLING 12/5/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00	SS	3, 5, 7, 9	18"	75%		Same SAND AND GRAVEL, 8-10' interval
		SS	2, 7, 14, 11	6"	25%		Same material as above
							Same material as above
920 0		SS	5, 10 11, 13	12"	50%		Same material as above
	35 00	SS	3, 6, 8, 9	6"	25%		Same material as above
		SS	3, 8, 9, 10	6"	25%		Same material as above
915 0	40 00	SS	2, 5, 8, 9	12"	50%		Same material as above
		SS	2, 2, 4, 6	6"	25%		Same material as above
910 0		SS	3, 7 14, 18	12"	50%		Same material as above
	45 00						Same material as above
905 0		SS	2, 8 11, 12	12"	50%		Same material as above, moist
	50 00						
900 0		SS	5, 13 13, 9	6"	25%		Same material as above, moist
	55 00						
895 0		SS	3, 10 11, 11	12"	50%		Same material as above, moist
	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW5
COORD-N 5325 04940 E(W) 4824 69191
GROUND-ELEV 959 5400
ORILLING-CO HAD INC
RISER-ELEV -
ORILLER T Bromley
BOREHOLE-TD 76 0
ORILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/5/95
GEOLOGIST Becky Chavez
END-DRILLING 12/5/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	60 00						Same SAND AND GRAVEL, 8-10' interval
							Same material as above, moist
890 0		SS	3, 7, 7, 13	12"	50%		
	65 00						Same material as above, wet
885 0		SS	3, 11, 24, 25	12"	50%		
	70 00						SAND (SW), well graded, poorly sorted, 10YR 4/3, brown, trace fines and cobble
880 0		SS	5, 18, 18, 33	12"	50%		
	75 00						Same SAND as above
							END BORING AT 76 0 FEET
875 0							
	80 00						
870 0							
	85 00						
865 0							
	90 00						

M&E

PROJECT	Granville Solvents	LOG-OF	GSS-MW6
LOCATION	Granville, Ohio	COORD-N	5362 16398 E(W) 4547 65934
PROJECT-NO	016588	GROUND-ELEV	961 4800
DRILLING-CO	HAD, INC	RISER-ELEV	-
DRILLER	K Ries	BOREHOLE-TD	85 0
DRILLING-METHOD	CME 85/HSA 4 1/4	BEGAN-DRILLING	12/5/95
GEOLOGIST	Mark Andrew	END-DRILLING	12/5/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						NO SAMPLE TAKEN
		CS		4'	80%		SILTY CLAY - SILT (CL/ML), 20% sand, 10% gravel, 5% cobbles, 30% silt, soft, medium reddish brown, 10YR 4/3, low-medium plasticity, dense, moist
950 0	-5 00						
		CS		4'	80%		Same material as above
945 0	-10 00						
							SAND/GRAVEL (GM), 40% gravel, 40% sand, 20% silt, friable, moist-dry, difficult to drill, SM, cobbles in shoe, switch to splitspoon
940 0	-15 00						
		SS	30, 15 9, 7	1 5'	75%		SAND/GRAVEL as above 10 5-13 0'
935 0	-20 00						SILT (ML), 10% coarse sand, 10% fine sand, 20% clay, 10YR 5/3, dark reddish brown, medium firm, damp, dense
		SS	11, 11 12, 10	1 5'	75%		SAND/GRAVEL as above 10 5-13 0'
930 0	-25 00						
		SS	9, 13 11, 12	1 5'	75%		SAND/GRAVEL as above
925 0	-30 00						

M&E

PROJECT Granville Solvents
LOCATION Granville Ohio
PROJECT-NO 016688
LOG-OF GSS-MW5
COORD-N 5362 16398 E(W) 4547 65934
GROUND-ELEV 951 4800
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 65 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/5/95
GEOLOGIST Mark Andrew
END-DRILLING 12/6/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						
		SS	9, 10 15, 17	1 3'	65%		SAND/GRAVEL as above dry
920 0	35 00						
		SS	9, 10 9, 18	0 8'	40%		SAND/GRAVEL as above
915 0	40 00						
		SS	12, 14 12, 15	1 5'	75%		SAND/GRAVEL (SM/GM), 15% silt, dry
910 0	45 00						
		SS	11, 13 14, 15	1 5'	75%		SAND/GRAVEL (SM/GM), 15% silt, dry
905 0	50 00						
		SS	10, 12 14, 14	1 8'	90%		SAND (SM), less gravel, 10% silt
900 0	55 00						
		SS	18, 18 18, 18	1 5'	75%		SAND, less gravel as above
895 0	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW6
COORD-N 5362 16398 E(W) 4547 65934
GROUND-ELEV 961 4800
RISER-ELEV -
BOREHOLE-TD 85 0
BEGAN-DRILLING 12/5/95
END-DRILLING 12/6/95

DRILLING-CO HAD INC
DRILLER K Ries
DRILLING-METHOD CME 85/HSA 4 1/4
GEOLOGIST Mark Andrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	60 0						
		SS	13, 14 13, 10				SAND, as above, moist-damp
890 0							
	65 0						
		SS	12, 15 18, 27	2 0'	100%		SILTY CLAY (CL), 20% large gravel, 20% coarse-medium sand, 20% silt, firm, moist, non-plastic, dark olive brown, 2 5Y 3/2
885 0							
	70 0						
		SS	7, 14 21, 21	2 0'	100%		SILTY CLAY (CL), as above, moisture sediment - wet, dark gray, 2 5Y 4/1
880 0							
	75 0						
		SS	10, 10 15, 18				Dark gray, SILTY CLAY, gradual to bedrock, dark gray shale, silty clay in shoe, dark gray soft shale and dark gray clay (weathered shale at base)
875 0							
	80 0						
			70/4				SILTY CLAY, same material as 78 0-80 0'
870 0							
	85 0						END BORING AT 85 0 FEET
865 0							
	90 0						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW7
COORD-N 4980 11222 E(W) 4970 87557
GROUND-ELEV 914 9600
RISER-ELEV -
BOREHOLE-TD 37 0
BEGAN-DRILLING 12-5-95
END-DRILLING 12-5-95

DRILLING-CO HAD, INC
DRILLER K Ries
DRILLING-METHOD CME 85/HSA 4 1/4
GEOLOGIST Mark Andrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						Railroad bed cinders
				6"	10%		Railroad bed cinders
950 0							
	-5 00						
				4 0	80%		SILTY CLAY (CL), 20% silt, (very fine), soft, dark brown gray mottling w/depth, moist, dense, 10YR 3/3
945 0							
	-10 00						
				5 0	100%		SILTY CLAY as above, gray, 10YR 4/1, sandy at base, trace gravel, wet at base
940 0							
	-15 00						
				4 0	80%		SANO (SM), 25% SILT, very fine grained, soft - cohesive due to surface water, saturated
935 0							
	-20 00						
				4 5	90%		SILT/SANO (SM/ML), as above
930 0							
	-25 00						SANO very fine grained with less silt than above, saturated
				4 0	80%		SANO as above
925 0							SILTY CLAY (CL), 10% SM gravel, 10% sand, dark olive brown/ gray, 5Y 3/2, moist, firm, dense
	-30 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW7
COORD-N 4990 11222 E(W) 4870 87557
GROUND-ELEV 914 9600
RISER-ELEV -
BOREHOLE-TD 37 0
BEGAN-DRILLING 12-5-95
END-DRILLING 12-5-95

ORILLING-CO HAD INC
ORILLER K Ries
ORILLING-METHOD CME 85/HSA 4 1/4
GEOLOGIST Mark Andrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						SILT (ML), very firm, tight, damp
				< 5	90%		SILTY SAND (SM/ML), fine grained - medium, 10-20% silt
920 0	35 00						
							Screen entire interval 37-17, due to tight poor producing formation, to drill deeper would compromise near surface monitoring
915 0	40 00						END BORING AT 37 0 FEET
910 0	45 00						
905 0	50 00						
900 0	55 00						
895 0	60 00						

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 016688
LOG-OF: GSS-MW8
COORD-N: 5173 51511 E(W): 4107 19201
GROUND-ELEV: 917 2600
RISER-ELEV: -
CRILLING-CO: HAD INC
DRILLER: K Reis
BOREHOLE-TO: 42 0
DRILLING-METHOD: CME 85/HSA 4 1/4
BEGAN-DRILLING: 12-8-95
GEOLOGIST: Mark Andrew
END-DRILLING: 12-8-95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 30						Railroad Fill - LIMESTONE
				5'	100%		
							Same as above
950 0							SILT (ML) w/10% SM gravel, 20% sand, dark brown, 10YR 3/2, firm, moist, dense
	-5 00						
							SAND/GRAVEL (GM/SM), poorly sorted, 10% silt, coarse, dry
				4'	80%		
							SAND (SM), interbedded, coarse to very fine grained, poorly sorted to very well sorted, dry
945 0							
	-10 00						
				3 5'	70%		
							SAND (SM), 20% SM gravel, 10% silt, poorly to medium sorted, friable, dry
940 0							
	-15 00						
				3 5'	70%		
							Same material as above, some larger gravel (20 mm)
935 0							
	-20 00						
				1 5'	30%		
							Same material as above, saturated
930 0							
	-25 00						
				2 0'	40%		
							Same material as above, 1' heave
925 0							
	-30 00						

M&E

PROJECT Groov 'e Solvents
LOCATION Groveville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW8
COORD-N 5173 5151 E(W) 4107 1920
GROUND-ELEV 917 2500
DRILLING-CO HAC INC
RISER-ELEV -
DRILLER K Reis
BOREHOLE-TO 42 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12-8-95
GEOLOGIST Mark Andrew
END-DRILLING 12-8-95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						SAND (SM), 20% SM gravel, 10% silt, poorly to medium sorted, friable, dry
				0 5'	10%		Same material as above, 1' heave
							Same material as above, 2' heave
920 0							
	5 00						
				1 0'	20%		
							Same material as above, 3' heave
915 0							
	10 00						
							END BORING AT 42 0 FEET
910 0							
	15 00						
905 0							
	20 00						
900 0							
	25 00						
895 0							
	30 00						

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 016688

LOG-OF: GSS-MW9
COORD-N: 5091 17967 E(W): 4096 87938
GROUND-ELEV: 917.2500

DRILLING-CO: HAD, INC
RISER-ELEV: -
DRILLER: T. Bromley
BOREHOLE-TD: 37.0
DRILLING-METHOD: Hollowstem Auger 4 1/4"ID
BEGAN-DRILLING: 11/29/95
GEOLOGIST: Becky Chavez
END-DRILLING: 11/29/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0.00						
		SS		5.0	100%		TOPSOIL
950.0							SANDY CLAY (CL), low plasticity, low density, pebbles, subrounded to subangular, trace cobbles, very fine to medium sand, 10YR 4/3 (brown), trace organics (moist/dry)
	-5.00	CS		0	0%		NO RECOVERY
945.0							
	-10.00	CS		1'	25%		SAND AND GRAVEL (SW), well graded, poorly sorted, low density, low plasticity, subangular to subrounded, moist/dry
940.0							
	-15.00	CS		0	0%		NO RECOVERY
935.0							
	-20.00	SS	4, 5, 4, 4	18"	0%		SAND AND GRAVEL (GP), very dary grey, 10Yr 3/2, fine to medium sand, subrounded to rounded, low density, low plasticity, trace cobbles, well sorted, poorly graded, moist/dry
		SS	1, 3, 4, 4	12"	75%		SAND AND GRAVEL, as above, no cobbles, wet
930.0		SS	4, 6, 4, 4	12"	50%		SAND AND GRAVEL, as above, wet
	-25.00	SS	4, 3, 5, 5	12"	50%		SAND AND GRAVEL, as above, sand very fine to fine, wet
		SS	6, 5, 7	12"	50%		SAND AND GRAVEL, as above, wet
925.0							
	-30.00	SS	5, 6, 6, 7	18"	75%		

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 015688
LOG-OF: GSS-MW9
COORD-N: 5091 17967 E(W) 4096 87938
GROUND-ELEV: 917 2600
ORILLING-CO: HAD INC
RISER-ELEV: -
ORILLER: T Bromley
BOREHOLE-TO: 37 0
DRILLING-METHOD: Hollowstem Auger 4 1/4"ID
BEGAN-DRILLING: 11/29/95
GEOLOGIST: Becky Chavez
END-DRILLING: 11/29/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00	SS	5, 6, 6, 7	18"	75%		SAND AND GRAVEL, as above, wet
		SS	2, 4, 6, 5	18"	75%		SAND AND GRAVEL, as above, wet
920 0		SS	4, 7, 8, 5	18"	75%		SAND AND GRAVEL, as above, wet
	35 00	SS					
							END BORING AT 37 0 FEET
915 0	40 00						
910 0	45 00						
905 0	50 00						
900 0	55 00						
895 0	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville Ohio
PROJECT-NO 016688
LOG-OF GSS-MW10
COORD-N 5153 92489 E(W) 4008 41076
GROUND-ELEV 916 8600
ORILLING-CO HAD INC
RISER-ELEV -
ORILLER T Bromley
BOREHOLE-TO 37 0
DRILLING-METHOD Hollowstem Augers
BEGAN-DRILLING 11/29/95
GEOLOGIST Becky Chavez
END-DRILLING 11/30/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00	SS		24"	100%		TOPSOIL, dark brown, pebbles, trace of silty clay, low plasticity, soft
950 0							
	-5 00	SS	1, 1, 5, 7	12"	50%		SAND (SW) 2 5Y 4 3, olive brown, well graded, trace pebbles, subrounded to rounded, rust staining, dry
		SS	1, 4, 5, 5	12"	50%		SAND as above
945 0							
	-10 00	SS	4, 5, 5, 7	18"	75%		SAND as above
		SS	3, 7, 8, 7	12"	50%		SAND as above
940 0		SS	2, 4, 4, 3	12"	50%		SAND, as above
	-15 00	SS	4, 7, 5, 5	12"	50%		SAND as above, dry
		SS	2, 3, 5, 7	12"	50%		SAND as above, dry
935 0							
	-20 00	SS	4, 5, 7, 4	12"	50%		SAND as above, dry
		SS	4, 4, 4, 4	6"	25%		SAND AND GRAVEL (GP), very dark grey, 10Yr 3/2, very fine to medium sand, rounded to subrounded, low density, low plasticity, well sorted, poorly graded, wet
930 0		SS	3, 3, 5, 4	6"	25%		SAND AND GRAVEL as above
	-25 00	SS	5, 4, 4, 5				SAND AND GRAVEL as above with trace of cobbles
		SS	3, 4, 5, 5	6"	25%		SAND AND GRAVEL as above
925 0							
	-30 00	SS	1, 2, 5, 6	12"	50%		

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW10
COORD-N 5153 92489 E(W) 4008 41076
GROUND-ELEV 916 8600
RISER-ELEV -
BOREHOLE-TD 37 0
BEGAN-DRILLING 11/29/95
END-DRILLING 11/30/95

DRILLING-CO HAD INC
DRILLER T Bromley
DRILLING-METHOD Hollowstem Augers
GEOLOGIST Becky Chavez

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00	SS	1, 2, 5, 5	12"	50%		SAND AND GRAVEL as above
		SS	5, 4, 5, 7				SAND AND GRAVEL as above
920 0							END OF BORING AT 37 0 FT
	35 00						
915 0							
	40 00						
910 0							
	45 00						
905 0							
	50 00						
900 0							
	55 00						
895 0							
	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW11
COORD-N 5323 39801 E(W) 5063 76295
GROUND-ELEV 953 0500
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 70 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/4/95
GEOLOGIST Mark Andrew
END-DRILLING 12/5/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	1 00	CS CS		1 5 4 3	100% 80%		TOPSOIL, SILTY loam, dark brown, topsoil - black, 10YR 2/1
							SILTY CLAY (CL), dark brown w/10% gravel, 20% sand, 10YR 3/3, moist, medium soft, low plasticity
950 0	5 00						SILTY CLAY (CL), w/20% gravel, 10% sand, 40% silt, soft-medium, low-medium plasticity, moist-wet, 2" sand, stream at 4 5, 10YR 4/3, siltier at base
		CS		3 0	60%		SILTY CLAY material as above
945 0	10 00			5 0	100%		SILTY CLAY material as above
940 0	15 00			4 5			SAND (SM) w/gravel 15%, 20% soft, very fine grained, moist-wet, dark reddish brown, iron staining
935 0	20 00			4 0	80%		SAND as above, HNU background, moist zone at 16-17'
930 0	25 00			4 0	80%		GRAVEL with sand, (GW), 10% silt, dry, localized iron stains, some cobbles
							Yellowish brown sandy silt (ML), 30% sand and gravel, localized iron stains, dry to moist, slightly to moderately friable, HNU background
							SAND (SM), w/30% GRAVEL, 20% silt, poorly sorted, compacted, tight
925 0	30 00						SILTY CLAY (CL), 20% gravel, 10-15% sand, firm, low plasticity, moist, dark reddish brown, refusal at 30'.

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW11
COORD-N 5323.39801 E(W) 5063.76296
GROUND-ELEV 953.0500
RISER-ELEV -
BOREHOLE-TD 70.0
BEGAN-DRILLING 12/4/95
END-DRILLING 12/5/95
DRILLING-CO HAD INC
DRILLER K. Ries
DRILLING-METHOD CME 75/HSA 4 1/4
GEOLOGIST Mark Arcrew

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30.00						
920.0	35.00	SS	18, 9 8, 7	1.0	50%		Sample w/splitspoon (2") S', GRAVEL (GM), w/30% sand, freshly fractured, dry, friable
915.0	40.00	SS	2, 7 9, 12	0.5	25%		GRAVEL as above
910.0	45.00	SS	7, 8 10, 15	0.5	25%		GRAVEL as above, fractured, dry
905.0	50.00	SS	11, 10 10, 10	1.8	75%		GRAVEL as above
900.0	55.00		10, 10 9, 14				GRAVEL, as above, possible hint of water
895.0	60.00	SS	4, 4, 4, 5		65%		SAND (SM), w/GRAVEL (50/50), some silt, saturated

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW11
COORD-N 5323 89801 E(W) 5063 76295
GROUND-ELEV 953 0500
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Ries
BOREHOLE-TD 70 0
DRILLING-METHOD CME 75/HSA 4 1/4
BEGAN-DRILLING 12/4/95
GEOLOGIST Mark Andrew
END-DRILLING 12/5/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	50 00						
		SS	4, 9, 7, 6	1 5	75%		
890 0							SAND as above, 1" heave (6" in spoon)
	65 00						
		SS	7, 9, 8, 7	1 5	75%		
885 0							SAND as above
	70 00						Auger to 75', attempt to sample 10' heave
							END BORING AT 70 0 FEET
880 0							
	75 00						
875 0							
	80 00						
870 0							
	85 00						
865 0							
	90 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW12
COORD-N 5073 19350 E(W) 4723 18143
GROUND-ELEV 923 6600
ORILLING-CO HAD INC
RISER-ELEV -
ORILLER T Gromley
BOREHOLE-TD 95 0
ORILLING-METHOD Hollowstem Augers
BEGAN-DRILLING 10/12/95
GEOLOGIST Becky Chavez
END-DRILLING 10/12/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00	cs cs			100%		TOPSOIL, 2 SY 3/1, very dark grey, SILTY CLAY, low plasticity, medium stiffness, rootzone, 10YR 4/4, dark yellowish brown, tree root
							SILT, organics, 10YR 4/6, dark yellowish brown, moist
950 0		cs					SILT w/Fine SAND, 10YR 6/6, brownish yellow, crumbly, dry
	-5 00	cs			25%		SAND, 10YR 6/6, brownish yellow, well graded, 15%-20% gravel, friable, rust staining, moist
945 0							
	-10 00						NO RECOVERY, coarse GRAVEL
940 0							
	-15 00	cs			0		Coarse GRAVEL, SAND, fine to medium, 10YR 4/3, brown, rust staining, moist
935 0							
	-20 00				0		Cobbles in spoon, yellowish brown, wet
930 0							
	-25 00				0		SAND AND GRAVEL, trace of fines, yellowish brown, wet
925 0							
	-30 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW12
COORD-N 5073 19350 E(W) 4723 18143
GROUND-ELEV 923 6600
RISER-ELEV -
BOREHOLE-TD 95 0
BEGAN-DRILLING 10/12/95
END-DRILLING 10/12/95

DRILLING-CO HAD, INC
DRILLER T Gromley
DRILLING-METHOD Hollowstem Augers
GEOLOGIST Becky Chavez

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						SAND, trace cobbles, poorly graded, 10YR 3/1, very dark grey, wet
920 0							
	35 00						Cobbles, coarse SAND AND GRAVEL, 2 5Y 5/4, light olive brown, wet
915 0							
	40 00						Coarse SAND AND GRAVEL, some cobbles, wet
910 0							
	45 00						Coarse SAND AND GRAVEL, wet
905 0							
	50 00						DRILL TO TARGET DEPTH OF 95 FT, End of boring at 95'
900 0							
	55 00						
895 0							
	60 00						

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 016688
LOG-OF: GSS-MW3
COORD-N: 5075 09356 E(W): 4895 13524
GROUND-ELEV: 916.4300
ORILLING-CO: HAD INC
RISER-ELEV: -
ORILLER: T. Bromley
BOREHOLE-TD: 76.0
DRILLING-METHOD: CME 85/HSA 4 1/4
BEGAN-DRILLING: 12/6/95
GEOLOGIST: Becky Chavez
END-DRILLING: 12/7/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (Feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0.00	SS	3, 5, 12, 8	12"	50%		TOPSOIL, SILTY CLAY, pebble, low density, medium plasticity, little cobble fragments, subrounded, 7.5YR 3/3, dark brown, moist
		SS	3, 4, 4, 6	12"	50%		SILTY CLAY (CL), 7.5YR 4/6 (strong brown), same material as above
950.0		SS	2, 4, 3, 5	24"	100%		Same material as above
	-5.00	SS	2, 2, 2, 4	6"	25%		Same material as above
		SS	2, 3, 3, 5	6"	25%		
945.0							SAND AND GRAVEL (GP), 10YR 5/4, yellowish brown, fine to medium, subrounded to rounded, rust staining, dry
	-10.00	SS	3, 5, 6, 9	6"	25%		Same material as above, dry
		SS	5, 11, 9, 8	12"	50%		Same material as above, dry
940.0		SS	8, 7, 10, 12	12"	50%		Same material as above, dry
	-15.00	SS	2, 7, 9, 9	12"	50%		Same material as above, moist
		SS	2, 2, 8, 9	12"	50%		Same material as above, wet
935.0	-20.00	SS	6, 5, 4, 5	6"	25%		Same material as above, wet, some cobble fragments
		SS	4, 4, 11, 13	18"	75%		Same material as above, wet
930.0		SS	5, 5, 5, 7	12"	50%		Same material as above, wet
	-25.00	SS	10, 11, 10	18"	75%		Same material as above, wet
		SS	5, 9, 10, 10	12"	50%		Same material as above, wet
925.0	-30.00	SS	1, 6, 7, 10	6"	25%		

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW13
COORD-N 5075 09366 E(W) 4895 13524
GROUND-ELEV 916 4300
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER T Bromley
BOREHOLE-TD 76 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/6/95
GEOLOGIST Becky Chavez
END-DRILLING 12/7/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00	SS	1, 5, 7, 10	6"	25%		Same material as above, dry
		SS	4, 4, 4, 7	12"	50%		Same material as above, wet
							Same material as above, wet
920 0		SS	3, 8 14, 11	18"	75%		Same material as above, wet
	35 00	SS	5, 5 10, 10	18"	75%		Same material as above, wet
		SS	1, 9, 6, 7	12"	50%		Same material as above, wet
915 0	40 00	SS	2, 7, 8, 7	6"	25%		Same material as above, wet
910 0		SS	2, 4, 4, 6	6"	25%		SAND AND GRAVEL (GP), well graded, poorly sorted, 7 5YR 4/1, dark gray, subrounded to subangular, fine to coarse sand, loose density, wet
	45 00						
905 0		SS	3, 5, 6, 8	6"	25%		Same material as above, wet
	50 00						
900 0		SS	3, 5, 6, 5	6"	25%		Same material as above, wet
	55 00						
895 0		SS	2, 4, 6, 5	6"	25%		Same material as above, wet
	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-MW13
COORD-N 5075 09366 E(W) 4995 13524
GROUND-ELEV 916 4300
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER T. Bromley
BOREHOLE-TD 76 0
DRILLING-METHOD CME 95/HSA 4 1/4
BEGAN-DRILLING 12/6/95
GEOLOGIST Becky Chavez
END-DRILLING 12/7/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	60 00						SAND AND GRAVEL (GP), well graded, poorly sorted, 7 5YR 4/1, dark gray, subrounded to subangular, fine to coarse sand, loose density, wet
							Some material as above, wet
890 0		SS	3, 4, 3, 5	2"	10%		
	65 00						Some material as above, wet
885 0		SS	6, 5, 4, 4	6"	25%		
	70 00						Some material as above, wet
880 0			6, 8 14, 14	6"	25%		
	75 00						Some material as above, wet
							END BORING AT 76 0 FEET
875 0							
	80 00						
870 0							
	85 00						
865 0							
	90 00						

ENGINEERS

GEOLOGIC LOG

PROJECT: Granville Solvents Inc.		SHEET 1 OF	BORING NO. GSS-HP-13 / MW14
SITE LOCATION: 3' North of PW-1	JOB NO. 0166GSS		
	LOCATION: GSS-MW14	GROUND ELEV.	TOTAL DEPTH 95'
DRILL CONTRACTOR: hucksar drilling	ENG/GEO: Mark Andrew	BEGUN: 5-14-94	
DRILL RIG:	DRILLER: Jim hucksar	FINISHED: 5-14-94	
HOLE SIZE: 6"	WEATHER: Cloudy ≈60°F	GROUND WATER (DEPTH/ELEV.): /	
DRILLING METHOD: 4 1/4" ID HSA	DRILLING FLUID/SOURCE:	TOP OF ROCK (DEPTH/ELEV.): NA.	

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (Sampler & Hammer) OR DRILLING TIME (min/ft)	% RECOVERY OR RQD	SAMPLE DESCRIPTION
		0-1				TOPSOIL SILT LOAM. DK BROWN. MOIST
		1-7				SILT (ml) 10% FINE SAND DK YELLOW BROWN. - DK BROWN @ BASE MOIST.
		7-20				SILTY CLAY (ML) TR FINE SAND 20% SILT. YELLOWISH BROWN 7-12' LT GRAY 12-20'
		20-45				SAND (SM) & GRAVEL (GM) INTERBEDDED COARSE - FINE GRAINED

SAMPLE TYPES
SS=SPLIT SPOON, ST=SHELBY TUBE
B=ROCK CORE, O=OTHER

NOTES:

BORING NO.: HP-13 / GSS-MW14

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-P3
COORD-N 5006 82502 E(W) 3913 19387
GROUND-ELEV 905 0800

DRILLING-CO HAD, INC
DRILLER K Ries
DRILLING-METHOD CME 75/HSA 4 1/4
GEOLOGIST Mark Andrew
RISER-ELEV -
BOREHOLE-TD 68 0
BEGAN-DRILLING 11/29/95
END-DRILLING 11/29/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00	SS		5 0	100%		TOPSOIL, dark brown, SILTY CLAY (CL), 10% gravel, low plasticity, soft
							SILT (ML) w/SAND 40%, yellowish brown, soft, non-plastic, moist
950 0	-5 00	CS		0	0%		SILT as above
							SAND (SM) w/SILT, non-plastic
							Mo st, medium reddish brown, grades to GRAVEL, grey w/SAND 20%, and silt 30%
945 0	-10 00	CS		1'	25%		As above, gravel (GM), w/20% sand, 40% silt
							SAND (SM) w/10% SM medium gravel, 20% silt, poorly sorted, subrounded, dark gray, medium loose, friable, saturated, dark gray, 2 5YR 2/1
940 0	-15 00	CS		0	0%		SAND (SM) coarse, w/40% SM gravel, 5-10% silt, saturated, friable, loose
935 0	-20 00	SS	4, 5, 4, 4	18"	0%		SAND, medium (SM), heave 1' at base or gravel fell out of sampler, well sorted, 10% SM gravel, silty at base, loose, friable, saturated
		SS	1, 3, 4, 4	12"	75%		
930 0		SS	4, 6, 4, 4	12"	50%		SAND as above
	-25 00	SS	4, 3, 5, 5	12"	50%		GRAVEL (GM), sm-medium, grained, 40% medium sand (SM), loose, friable, heave 7', drill base to 28, retrieve, sampler 2'-0 fine
		SS	6, 5, 7	12"	50%		
925 0	-30 00	SS	5, 6, 6, 7	18"	75%		SAND (SM), 10% silt, loose, friable, possible heave, shoe - sand (SM), 20%, SM gravel w/10-20% silt-clay, tightly packed into sampler shoe

M&E

PROJECT Granville Solvents | LOG-OF GSS-P3

LOCATION Granville, Ohio | COORD-N 5006 82502 | E(W) 3913 19387

PROJECT-NO 016688 | GROUND-ELEV 906 0800

ORILLING-CO HAG INC | RISER-ELEV -

ORILLER K Ries | BOREHOLE-TO 68 0

ORILLING-METHOD CME 75/HSA 4 1/4 | BEGAN-DRILLING 11/29/95

GEOLOGIST Mark Andrew | END-DRILLING 11/29/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00	SS	5, 5, 5, 7	18"	75%		
		SS	2, 4, 6, 5	18"	75%		SAND (SM), 10% silt, loose, friable, possible heave, shoe - sand (SM), 20% SM gravel w/10-20% silt-clay, tightly packed into sampler shoe
920 0		SS	4, 7, 8, 6	18"	75%		1 5' heave from previous run
	35 00	SS					SAND AND GRAVEL (GM/SM), 10%-15% silt, varies, poorly sorted, firm in silty zones, friable in open zones
915 0	40 00						1 3' very fine SAND (heave), 2 sand SM w/gravel (GM), firm, 10%-15% clay
910 0	45 00						SAND (SM), medium-fine grained, possibly heave, loose, saturated, poor recovery
905 0	50 00						SAND as above, heave, sand and gravel from shoe indicative of poorly sorted gravel GM w/sand and silt, trace clay
900 0	55 00						SAND as above, drilling sand and gravel
895 0	60 00						3' heave, SAND AND GRAVEL in shoe

M&E

PROJECT: Granville Solvents
LOCATION: Granville, Ohio
PROJECT-NO: 016688

LOG-OF: GSS-P3
COORD-N: 5006 82502 E(W): 3913 19387
GROUND-ELEV: 906.0800

DRILLING-CO: HAC, INC
DRILLER: K. Ries
DRILLING-METHOD: CME 75/HSA 4 1/4
GEOLOGIST: Mark Andrew

RISER-ELEV: -
BOREHOLE-TD: 68.0
BEGAN-DRILLING: 11/29/95
END-DRILLING: 11/29/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	50.00						3' heave, SAND AND GRAVEL in shoe
890.0	65.00						SAND AND GRAVEL as above, 2.5'
885.0	70.00						END BORING AT 68.0 FEET
880.0	75.00						
875.0	80.00						
870.0	85.00						
865.0	90.00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-24
COORD-N 5296 87482 E(W) 3565 77073
GROUND-ELEV 907 1300
ORILLING-CO HAD, INC
RISER-ELEV -
DRILLER K Reis
BOREHOLE-TD 37 0
ORILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/8/95
GEOLOGIST Mark Andrew
END-DRILLING 12/8/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	0 00						
		CS		2'	100%		18" TOPSOIL, SILTY LOAM (ML), dark brown, firm, damp, 10YR 3/2
				5'	100%		SILT (ML) 20% clay, firm, dense, dark reddish brown, w/gray, mottling, damp, blocky texture
950 0							Same material as above
	-5 00						
				5'	100%		SILT (ML), 20% clay, dark gray, saturated
945 0							
	-10 00						SAND (SM), 10% SM, gravel, 10% silt, rocks friable, iron staining at silt contact
				3'	60%		SAND (SM), 30% gravel, 10% silt
940 0							
	-15 00						
				2'	40%		Same material as above
935 0							
	-20 00						
				2'	40%		Same material as above, less gravel
930 0							
	-25 00						
				2'	40%		More GRAVEL, swabbed sand, 8' in pulling, 27-32 sampler, go to splitspoons
925 0							
	-30 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016688
LOG-OF GSS-P4
COORD-N 5286 87482 E(W) 3565 77073
GROUND-ELEV 907 1300
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Reis
BOREHOLE-TD 37 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/8/95
GEOLOGIST Mark Andrew
END-DRILLING 12/8/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	30 00						More GRAVEL, swabbed sand, 8' in pulling, 27-32 sampler, go to splitspoons
				2'	20%		GRAVEL (GM), in 40% sand, 10% silt
920 0	35 00						
				1'	20%		Same material as above
915 0	40 00						
				5'	10%		SAND/GRAVEL (SM/GM), 10% silt, finer grained (heave)
910 0	45 00						
				1 5'	30%		SAND (SM) w/5% SM cobbles, 30% gravel, 10-20% silt
905 0	50 00						
				1'	20%		Same material as above
900 0	55 00						
				1'	20%		Same material as above
895 0	60 00						

M&E

PROJECT Granville Solvents
LOCATION Granville, Ohio
PROJECT-NO 016668
LOG-OF GSS-P4
COORD-N 5296 87492 E(W) 3565 77073
GROUND-ELEV 907 1300
DRILLING-CO HAD INC
RISER-ELEV -
DRILLER K Beis
BOREHOLE-TD 37 0
DRILLING-METHOD CME 85/HSA 4 1/4
BEGAN-DRILLING 12/8/95
GEOLOGIST Mark Andrew
END-DRILLING 12/9/95

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE	BLOW COUNT OR DRILLING TIME	RECOVERY (feet)	RECOVERY (%)	PROFILE	DESCRIPTION
	50 00						SAND (SM) w/5% SM cobbles, 30% gravel, 10-20% silt
							Same material as above
890 0							
	65 00						
		ss					
							SAND AND GRAVEL, auger to 72 set well
885 0							END BORING AT 69 0 FEET
	70 00						
880 0							
	75 00						
875 0							
	80 00						
870 0							
	85 00						
865 0							
	90 00						

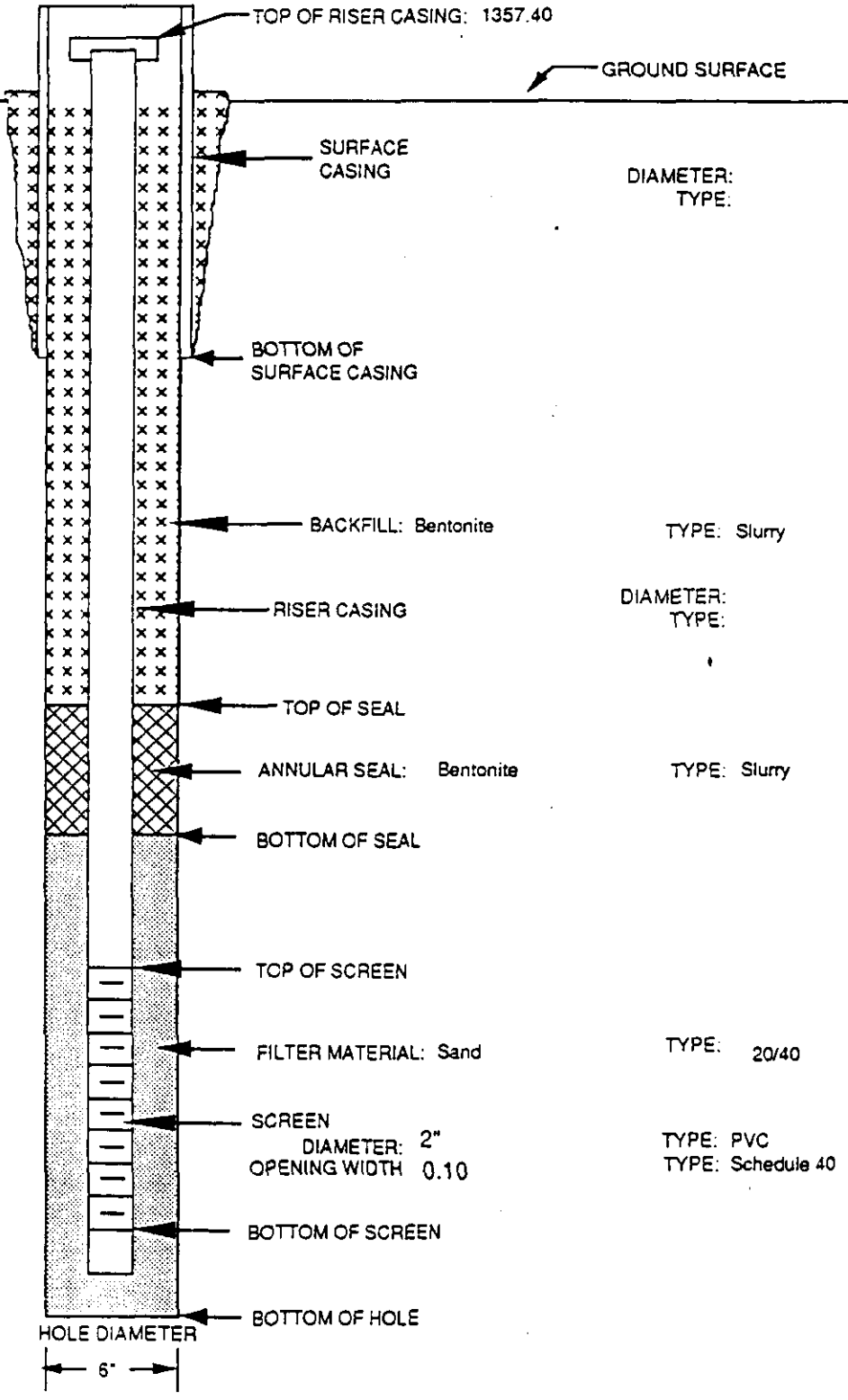
IV. WELL CONSTRUCTION DIAGRAMS

GSS-MW4
GSS-MW12
and GSS-MW14

MONITORING WELLCONSTRUCTION	PROJECT: Granville Solvents	JOB NO. 016688	WELL NO. GSS-MW4
DRILLING CONTRACTOR: HAD, Inc.	COORDINATES: N: 5132.12276	E: 5183.91812	

BEGUN: 11/30/95	SUPERVISOR: M. Andrew	WELL SITE:	WATER LEVEL:	DEPTH/ELEV:
FINISHED: 11/30/95	DRILLER: K. Ries	Munson Street		925.1200

REFERENCE POINT & ELEVATION:



DEPTH IN FEET	ELEV. IN FEET
34.0	
36.0	
38.0	
48.0	
50.0	

METHOD DRILLED: 4.25 inch I.D. HSA

COMMENTS:

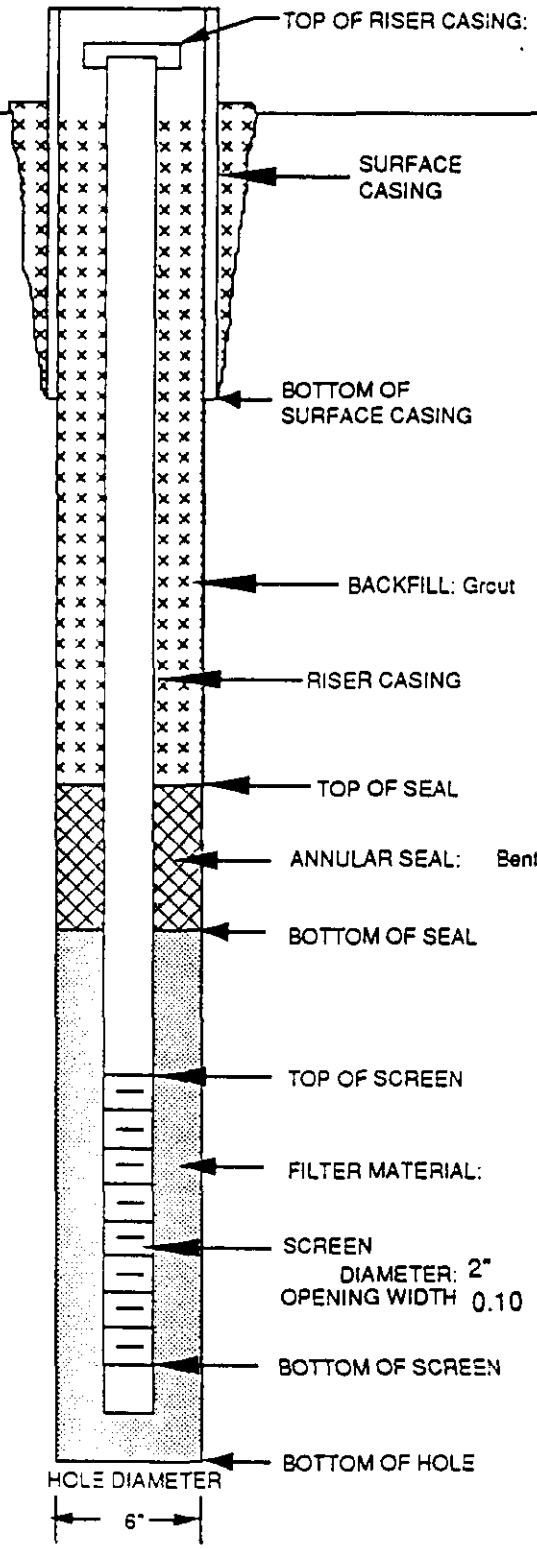
METHOD DEVELOPED:

Metcalf & Eddy

MONITORING WELLCONSTRUCTION	PROJECT: Granville Solvents	JOB NO. 016688	WELL NO. GSS-MW-3
DRILLING CONTRACTOR: HAD, Inc.	COORDINATES: N: 5073.19350	E: 4723.18143	

BEGUN: 12/1/95	SUPERVISOR: B. Chavez	WELL SITE: Approximately 5 feet east of road entering site and 5 feet North of MW-2	WATER LEVEL:	DEPTH/ELEV
FINISHED: 12/4/95	DRILLER: T. Bromley			923.6600

REFERENCE POINT & ELEVATION:



	DIAMETER:	TYPE:	DEPTH IN FEET	ELEV. IN FEET
SURFACE CASING				
BACKFILL: Grout		TYPE:		
RISER CASING	DIAMETER: 2-inch	TYPE: Schedule 40 PVC	63.0	
TOP OF SEAL				
ANNULAR SEAL: Bentonite Slurry		TYPE: Baroid	75.0	
BOTTOM OF SEAL				
TOP OF SCREEN			77.0	
FILTER MATERIAL:		TYPE: #7 Sand Baroid		
SCREEN	DIAMETER: 2"	TYPE: PVC		
	OPENING WIDTH 0.10	TYPE: Schedule 40		
BOTTOM OF SCREEN			97.0	
BOTTOM OF HOLE			97.0	

METHOD DRILLED: 4.25 inch I.D. HSA

COMMENTS:

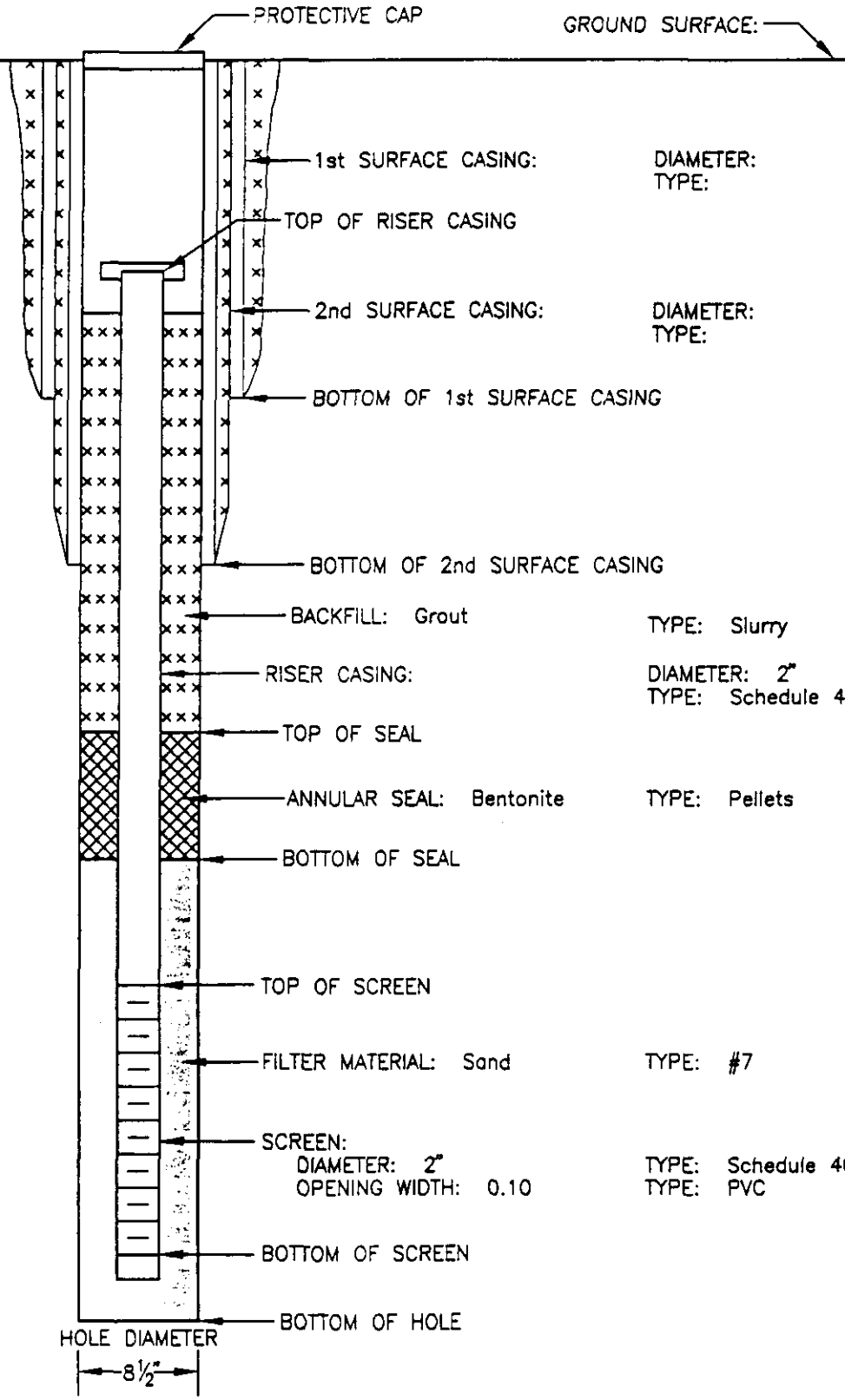
METHOD DEVELOPED:

Metcalf & Eddy

MONITORING WELL CONSTRUCTION

PROJECT: Granville Solvents	JOB NO. 016688	WELL NO. HP-13/GSS-MW14	
DRILLING CONTRACTOR: Bucksar Drilling	COORDINATES: N 5174.62864 E 3886.38605		
BEGUN: 5-14-94	SUPERVISOR: Mark Andrew	WELL SITE: 3' North PW-1	WATER LEVEL: DEPTH/ELEV. 907.00'
FINISHED: 5-14-94	DRILLER: Jim Bucksar		

REFERENCE POINT & ELEVATION:



DEPTH IN	ELEV. IN
0	
	907.00'
74	
80	
84	
94	
94	

METHOD DRILLED: 4¼" ID HSA

COMMENTS:

METHOD DEVELOPED: Pump and Surge

M&E Metcalf & Eddy

HB13LOG.DWG

ADDENDUM 1
SOIL DATA REPORT

for the

REMEDIATION OF IMPACTED SOILS
at the
GRANVILLE SOLVENTS SITE
GRANVILLE, OHIO

Submitted To:

The United States Environmental Protection Agency
Emergency Response Branch, Region V
Chicago, Illinois

Developed for:

Granville Solvents PRP Group
Columbus, Ohio

Prepared by:

METCALF & EDDY, INC.
2800 Corporate Exchange Drive, Suite 250
Columbus, Ohio 43231

December 1996

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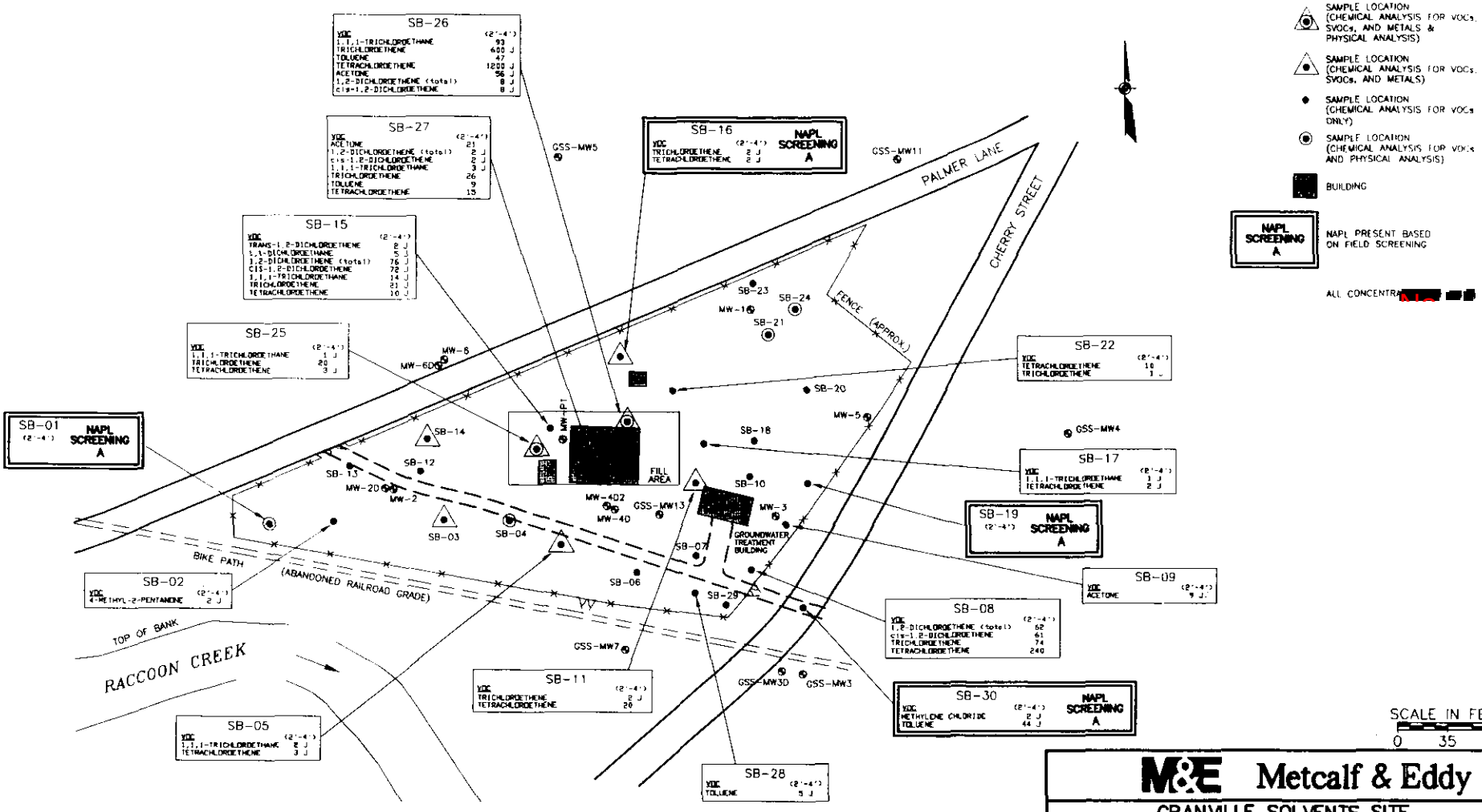
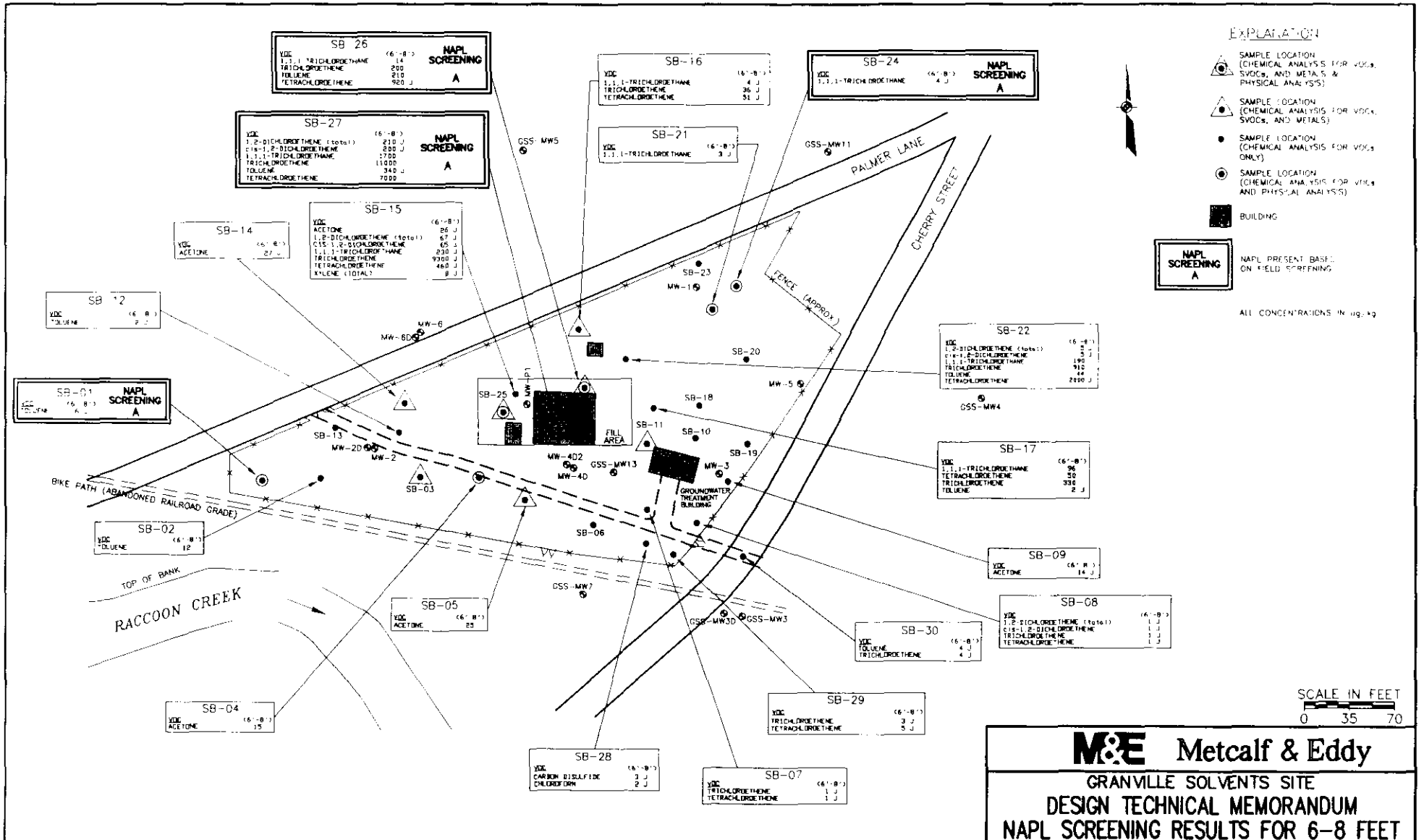
Figure A-2 NAPL Screening Results for 6-8 Feet
Figure A-3 NAPL Screening Results for 12-14 Feet
Figure A-4 NAPL Screening Results for 18-20 Feet
Figure A-5 Soil Sampling Results for Background Metals at All Intervals


EXPLANATION
SAMPLE LOCATION (CHEMICAL ANALYSIS FOR VOCs, SVOCs, AND METALS & PHYSICAL ANALYSIS)
SAMPLE LOCATION (CHEMICAL ANALYSIS FOR VOCs, SVOCs, AND METALS)
SAMPLE LOCATION (CHEMICAL ANALYSIS FOR VOCs ONLY)
SAMPLE LOCATION (CHEMICAL ANALYSIS FOR VOCs AND PHYSICAL ANALYSIS)
BUILDING
NAPL SCREENING A
NAPL PRESENT BASED ON FIELD SCREENING
ALL CONCENTRA
SB-26
VOC (2'-4')
1,1,1-TRICHLOROETHANE 93
TRICHLOROETHENE 400 J
TOLUENE 47
TETRACHLOROETHENE 1200 J
ACETONE 56 J
1,2-DICHLOROETHENE (total) 8 J
cis-1,2-DICHLOROETHENE 8 J
SB-27
VOC (2'-4')
ACETONE 21
1,2-DICHLOROETHENE (total) 2 J
cis-1,2-DICHLOROETHENE 2 J
1,1,1-TRICHLOROETHANE 3 J
TRICHLOROETHENE 26
TOLUENE 9
TETRACHLOROETHENE 15
SB-15
VOC (2'-4')
TRANS-1,2-DICHLOROETHENE 2 J
1,1-DICHLOROETHANE 5 J
1,2-DICHLOROETHENE (total) 76 J
CIS-1,2-DICHLOROETHENE 72 J
1,1,1-TRICHLOROETHANE 14 J
TRICHLOROETHENE 21 J
TETRACHLOROETHENE 10 J
SB-25
VOC (2'-4')
1,1,1-TRICHLOROETHANE 1 J
TRICHLOROETHENE 20
TETRACHLOROETHENE 3 J
SB-01 (2'-4') NAPL SCREENING A
SB-02
VOC (2'-4')
4-METHYL-2-PENTANONE 2 J
SB-05
VOC (2'-4')
1,1,1-TRICHLOROETHANE 2 J
TETRACHLOROETHENE 3 J
SB-11
VOC (2'-4')
TRICHLOROETHENE 2 J
TETRACHLOROETHENE 20
SB-16
VOC (2'-4')
TRICHLOROETHENE 2 J
TETRACHLOROETHENE 2 J
NAPL SCREENING A
SB-22
VOC (2'-4')
TETRACHLOROETHENE 10
TRICHLOROETHENE 1 J
SB-17
VOC (2'-4')
1,1,1-TRICHLOROETHANE 1 J
TETRACHLOROETHENE 2 J
SB-19 (2'-4') NAPL SCREENING A
SB-09
VOC (2'-4')
ACETONE 9 J
SB-08
VOC (2'-4')
1,2-DICHLOROETHENE (total) 62
cis-1,2-DICHLOROETHENE 61
TRICHLOROETHENE 74
TETRACHLOROETHENE 240
SB-30
VOC (2'-4')
METHYLENE CHLORIDE 2 J
TOLUENE 44 J
NAPL SCREENING A
SB-28
VOC (2'-4')
TOLUENE 5 J
GSS-MW5
GSS-MW11
GSS-MW4
GSS-MW13
GSS-MW7
GSS-MW3D
GSS-MW3
PALMER LANE
CHERRY STREET
FENCE (APPROX.)
FILL AREA
GROUNDWATER TREATMENT BUILDING
BIKE PATH
(ABANDONED RAILROAD GRADE)
TOP OF BANK
RACCOON CREEK
SB-23
SB-24
SB-21
SB-20
SB-18
SB-10
SB-14
SB-12
SB-13
SB-03
SB-04
SB-06
SB-07
SB-29
MW-1
MW-1D
MW-6
MW-6D
MW-20
MW-2
MW-4D2
MW-4D
MW-3
MW-5
SCALE IN FEET
0 35 70
M&E Metcalf & Eddy
GRANVILLE SOLVENTS SITE
DESIGN TECHNICAL MEMORANDUM
NAPL SCREENING RESULTS FOR 2-4 FEET
GRANVILLE, OHIO
FILE NAME NAPL-1
CHECKED BC
DRAWN CAP
DATE DEC 96
PROJECT NO. 016688
FIGURE A-1



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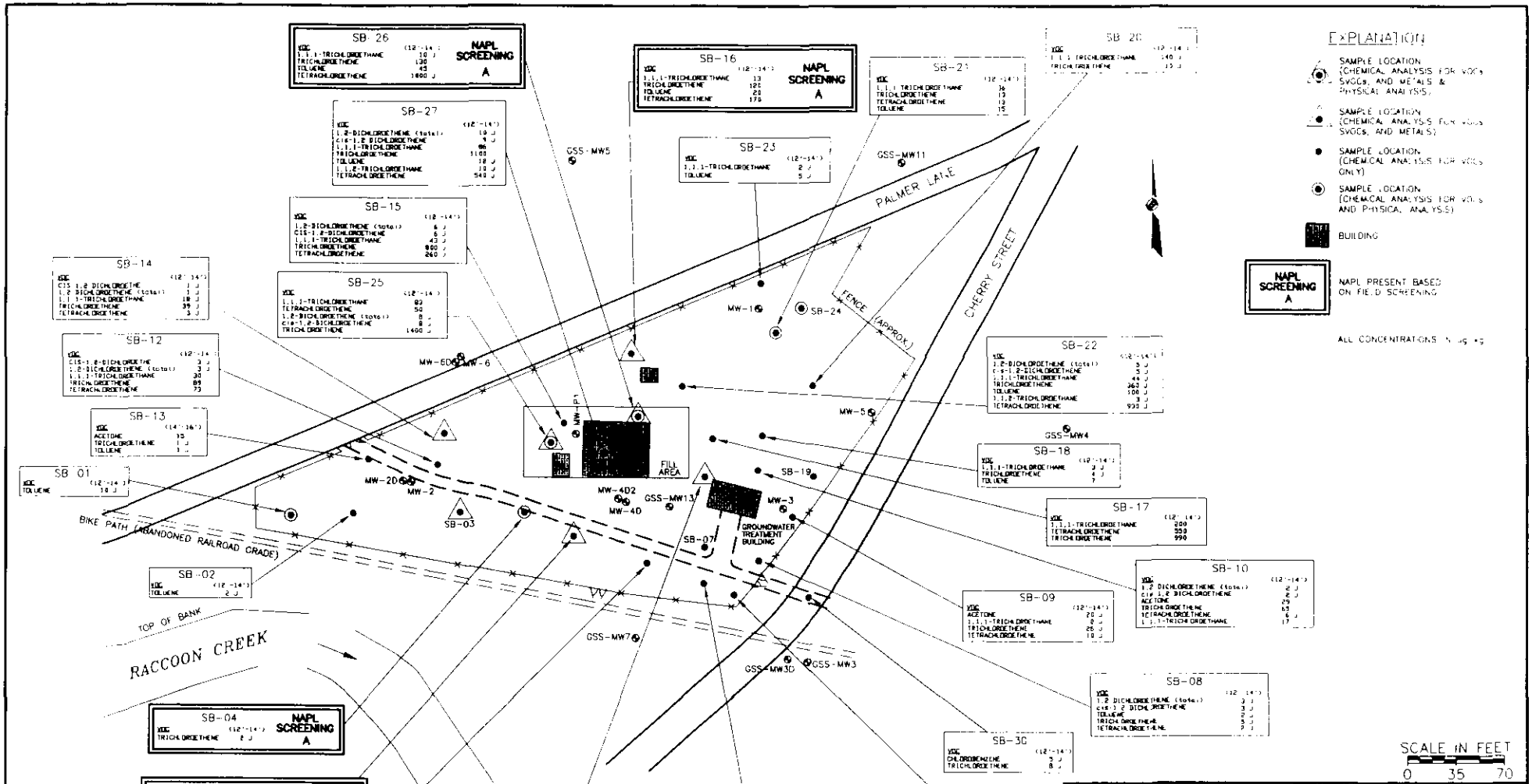
GRANVILLE SOLVENTS SITE

DESIGN TECHNICAL MEMORANDUM
NAPL SCREENING RESULTS FOR 6-8 FEET

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
NAPL-1	BC	CAP	DEC 96	016688	A-2



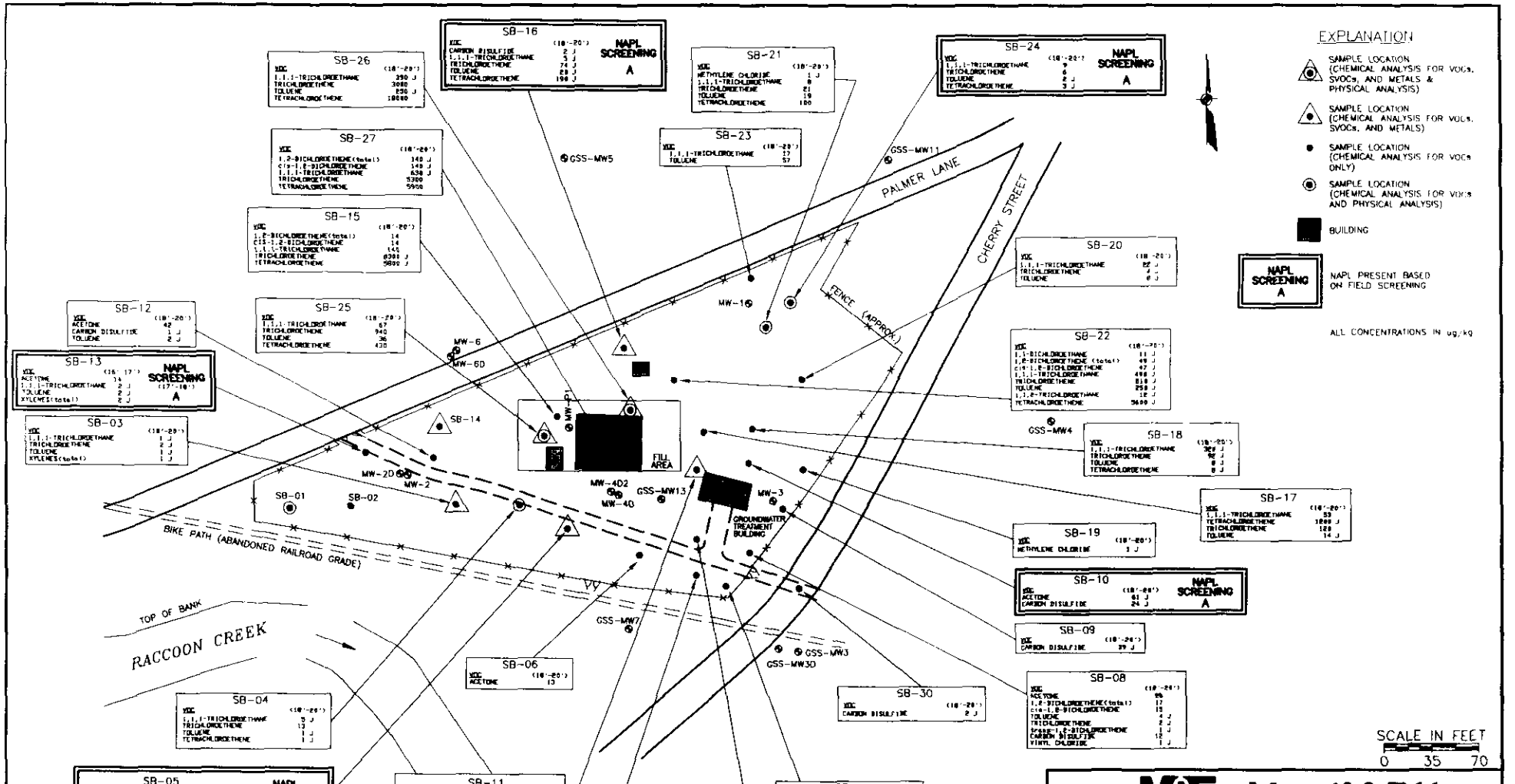
Metcalf & Eddy

GRANVILLE SOLVENTS SITE

DESIGN TECHNICAL MEMORANDUM
NAPL SCREENING RESULTS FOR 12-14 FEET

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO	FIGURE
NAPL-1	BC	CAP	DEC 96	016688	A-3



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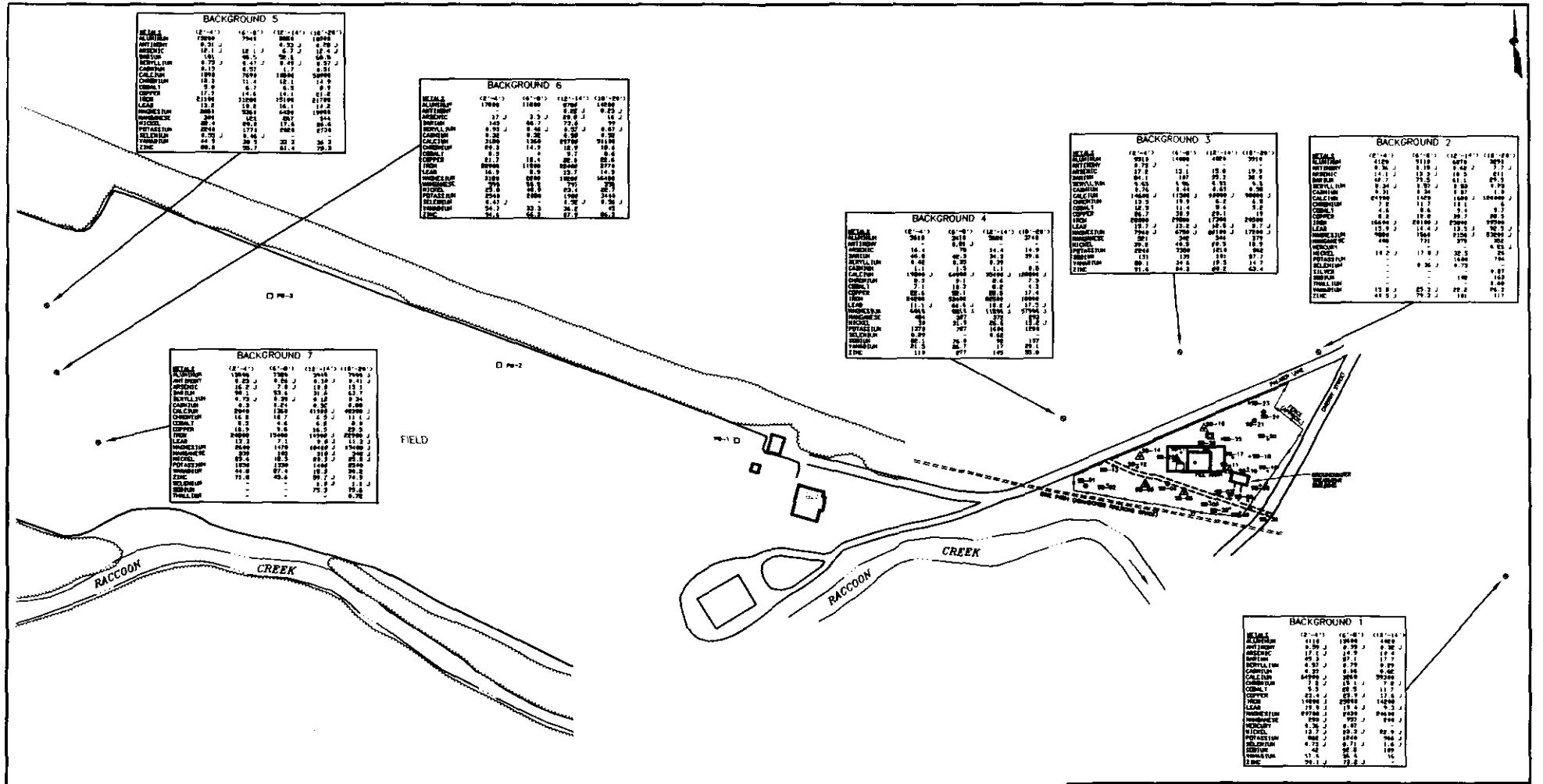
GRANVILLE SOLVENTS SITE

DESIGN TECHNICAL MEMORANDUM
NAPL SCREENING RESULTS FOR 18-20 FEET

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
NAPL-1	BC	CAP	DEC 96	016688	A-4



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GRANVILLE SOLVENTS SITE

DESIGN TECHNICAL MEMORANDUM SOIL SAMPLING RESULTS FOR BACKGROUND METALS AT ALL INTERVALS

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
GRV-PSP1	BC	TPF	DEC 96	016688	A-5