SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-20 Project Location AREA 1 / NORT.&WEST. R.R.

Sample No. SW1-1 Date 9-26-97

Sample Point Description BOREHOLE for SW1-1

SAMPLE COLLECTION

Equipment Used B-61 MOBIL DRILL

QA/QC samples collected? NO.

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-1,0-2	0-2ft	SOIL	1-1qt 2,-4oz	*
SW1-1,2-40	2-40ft	SOIL.	1, 1qt 2, 4oz.	*
*TAL	Metals,	TCL VOCs, TCL SVOCs,		
TCL	PEST/PCBs			

Comments

Sample collector (s) (STEPHEN R. ZAYKO)

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-20 Project Location S.A. 1 - NSRR

Sample No. SW1-2 Date 9/25/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used Bl61 Drill Rig

QA/QC samples collected? yes - field blank

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-2	0-2	Soil	1-32 oz, 2-4 oz	*
S1-2FB	0-2	water		* no asbestos
SW1-2	2-4	Soil	1-32 oz, 2-4 oz	*
* TAL metals, TCL VOCs, TCL SVOCs,				
TCL PESTS/PCBs, Asbestos, TOC, hexchrome				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-21 Project Location SA 1 - Tanner

Sample No. SW1-3 Date 9/24/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? yes - MS/MSD, Field Blanks

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-3	0-2	Soil	2-4oz, 1-32oz	*
SW1-3 MS/MSD	0-2	Soil	1-32oz, 2-4oz	*
SW1-3, 4-6 FB	-	water	2-40ml, 4-1L, 1-1L, 2-500ml, 1-125ml	* except Asbestos
* TAL Metals, TCL VOCs, TCL SVOCs, TCL PCBs, TCL PESTS, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. WO021-001-21 Project Location S.A.1-Tanner

Sample No. SW1-3, Date 9/25/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? no (yesterday-field blank)

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-3	2-3ft	soil	1-32oz, ~~4~~ 2-4oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL PCBs, TCL PESTs, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-22 Project Location SA1 - PVS

Sample No. SW1-4 Date 9/23/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? yes - Dups

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-4	0-2	soil	1-32oz, 2-4oz	*
DUP8	(0-2)	soil	1-32oz, 2-4oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL PESTS, TCL PCBS, ~~TCL~~ TCS HEX CHROME, TOC, ASBESTOS				

Comments

Sample collector (s) Stephen R. Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-22 Project Location S.A.1- PVS

Sample No. SW1-4 Date 9/24/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-4	2-42	soil	1-32 oz, ~~1~~ 2-4 oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL PESTS, TCL PCBS, HEX CHROME, TOC, ASBESTOS				

Comments

Sample collector (s) Stephen R. Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-23 Project Location S.A.1 - ASR

Sample No. SW1-5 Date 9/17/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-5	0-2	Soil	1-4oz, 2-16oz	*
SW1-5	2-40	Soil	1-4oz, 2-16oz	*
* TAL	Metals, TCL VOCs, TCL SVOCs, TCL PESTS,			
TCL	PCBs, Hex Chrome, TOC, ASBESTOS			

Comments Note - Split Samples Collected at this location given to Kevin Valentine (1-4oz, 2-16oz)

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. WO021-001-24 Project Location Area 1, Painesville, Ohio

Sample No. SW1-6 Date 9/30/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drilling

QA/QC samples collected? yes - field blank

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-6	0-2	Soil	2-4oz, 1-32oz	*
SW1-6	2-20	Soil	2-4oz, 1-32oz	*
SW1-6 F.B.	0-2			*
* TAL Metals, TCL VOCs, TCLSVOCs, TCL Pests/PCBs, TOC, Hex Chrome, Asbestos				

Comments

Sample collector (s)

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-34 Project Location SA1-Chelmsford

Sample No. SW1-7 Date 10/1/97

Sample Point Description 125' south of SE corner of Grandow Bldg

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? None -

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW1-7	0-2	Soil	2-4oz, 1-32oz	*
SW1-7	2-36	Soil	2-4oz, 1-32oz	*
* TAL metals, TCL VOCs, TCL SVOCs, TCL Pests/PCBs, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Reuben Kent

STUDY AREA 2

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-26/19 Project Location S. A-2

Sample No. SW2-1 Date 10/7/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61-Drill Rig

QA/QC samples collected? yes - Field Blank, Dup

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
-26 SW2-1	0-2	soil	1-32oz, 2-4oz	*
SW2-1, FB	20-22	water	many (10 total)	* not Asbestos
SW2-1	2-42	soil	1-32oz, 2-4oz	*
DUP 12	2 ~~inch~~	soil	1-32oz, 2-4oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W6021-001-26/19 Project Location Study Area 2

Sample No. SW2-2 Date 10/7/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? yes - MS/MSD

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
-26 SW2-2	0-2	Soil	1-32oz, 2-4oz	*
- SW2-2	2-34	Soil	1-32oz, 2-4oz	*
SW22, MS/MSD	2-34	Soil	1-32oz, 2-4oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-026 Project Location Study Area 2

Sample No. SS2-1 Date 9/3/97

Sample Point Description 100 ft north of road (not paved) and 125 ft east of existing fence; old building to north east, Phillips Metals to Southeast

SAMPLE COLLECTION

Equipment Used 3" hand auger

QA/QC samples collected? yes - MS/MSDs

Sample No.	Depth	Type of Material	Container Size	Analysis Requested*
SS2-1	0-2'	soil	16 oz glass	
SS2-1	0-2'	soil	16 oz glass	
SS2-1	0-2'	soil	4 oz glass	TCL VOCs
SS2-1 MS/MSD	0-2'	soil	16 oz glass	
SS2-1 MS/MSD	0-2'	soil	16 oz glass	
SS2-1 MS/MSD	0-2'	soil	4 oz glass	TCL VOCs
SS2-1 MS/MSD	0-2'	soil	4 oz glass	TCL VOCs
SS2-1 MS/MSD	0-2'	soil	16 oz glass	
*note: all 16 oz analysis = TAL metals, TCL, Asbestos; TCL SVOCs, PESTS				Hex Cr, PCBs,

Comments no odors or staining observed

Sample collector (s) Teresa Szuper / Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-26 Project Location Study Area 2

Sample No. SS2-2 Date 9/4/97

Sample Point Description approx 600' (W) from N/S road, approx 450 feet from road to sample point (north of road), immediately south from large pile of cinders

SAMPLE COLLECTION

Equipment Used 3" hand auger

QA/QC samples collected? yes

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS2-2	0-2'	soil	16 oz glass	TAL METALS, TOC, ASBESTOS, TCL VOCs, PESTS, PCBs.
SS2-2	0-2'	soil	16 oz glass	
SS2-2	0-2'	soil	4 oz glass	VOCs
Field Blanks		water	10 containers	same as
Duplicate 1	0-2'	soil	16 oz glass	soil
		soil	16 oz glass	same as
		soil	4 oz glass	above

Comments no odor or staining; native clay

Sample collector (s) Teresa Szuper

STUDY AREA 3

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location S. A. 3 - CLH

Sample No. SB3-1 Date 10/1/97

Sample Point Description ~400' NE OF INTERSECTION WHERE "B←" SIGNIS, ~250' SE OF INTERSECTION OF ROAD IN FRONT OF O.A.S. GATE

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? yes - field blank, duplicate MS/MSD

	Sample No.	Depth	Type of Material	Container Size	Analysis Requested
11:20	SB3-1, 0-2	0-2	Soil	2-4 oz, 1-32 oz	*
11:20	SB3-1, 0-2 FB	0-2	water	Many	*
11:20	SB3-1,	2-34	Soil	2-4 oz, 1-32 oz	*
	DUP 11	2-34	Soil	2-4 oz, 1-32 oz	*
	SB3-1, 2-34 MS/MSD	Same as SB3-1, 2-34			
	* TAL Metals, TCL VOCs, TCL SVOCs,				
	TCL PESTS, PCBs, Hex Chrome, TOC				

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location S.A. 3 CLH

Sample No. SB3-2 Date 9/26/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? yes - MS/MSD, DUP

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB3-2	0-2	soil	1-32oz, 1-4oz	*
SB3-2 MS/MSD	0-2	soil	1-32oz, 1-4oz	*
DUP 9	0-2	soil	1-32oz, 1-4oz	*
* TAL metals, TCL VOCs, TCL SVOCs, Hex Chrome, TCL PESTIS/PCBS, TOC				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location SA3 - CLH

Sample No. SB3-2 Date 9/29/97

Sample Point Description ~200 ft west of fence line at east of property;

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? Field Blank

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB3-2	22-24	water	Field blank	*
SB3-2	2-40	soil	1-32oz, 1-4oz	*
*TAL metals, hex chrome, TOC, TCL PCBs, TCL Pests, TCL VOCs, TCL SVOCs				

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Study Area 3

Sample No. SS3-1 Date 8/27/97

Sample Point Description APPROX 350' East of ~~[illegible]~~ One Acre Site, along the angle of the South fence (note: 350' from center of road leading into O.A.S.)

SAMPLE COLLECTION

Equipment Used Hand auger

QA/QC samples collected? NOT applicable

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS3-1	0-2'	SOIL	16 oz glass	TCL SVOCS, PCBs, PESTICIDES
SS3-1	0-2'	SOIL	16 oz glass	TOC, HEX CR, TAL METALS
SS3-1	0-2'	SOIL	4 oz glass	VOCs (TCL)

Comments No odor or staining observed

Sample collector (s) Teresa C. Szuper

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Study Area 3

Sample No. SS3-2 Date 8/27/97

Sample Point Description ~ 315' east of SB3-1, approx 50-60' west of berm on east side of Area 3, boring is in a clearing

SAMPLE COLLECTION

Equipment Used Hand Auger

QA/QC samples collected? Not applicable

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS3-2	0-2'	SOIL	16 oz glass	TAL METALS, TOC, HEX CR, TAL PCBs, SVOCS, PEST
SS3-2	0-2'	SOIL	16 oz glass	
SS3-2	0-2'	SOIL	4 oz glass	VOCs (TCL)

Comments No odor or staining observed

Sample collector (s) Teresa C. Szuper

STUDY AREA 4

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. WOD21-001-27 Project Location S. A.4 - Little Seedling

Sample No. SB4-1 Date 9/12/97

Sample Point Description 250 ft south of fence along Fairport Nursery Road, 50 ft east of centerline of RR tracks

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-1	0-2	soil	1-4oz ; 2-16oz	*
SB4-1	2-20	soil	1-4oz ; 2-16oz	*
SB4-1	22-28	soil	1-4oz ; 2-16oz	*
SB4-1	30-46	soil	1-4oz ; 2-16oz	*
* TAL metals; TCL SVOCs, VOCs, Pests, PCBs; Hex Chrome, Asbestos, TOC				

Comments

Sample collector (s) Stephen Bayless

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W00021-001-28 Project Location S.A.4 - Roadway

Sample No. SB4-2 Date 9/16/97

Sample Point Description See Boring location form; Boring is to SE of Roadway Express Bldg

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? yes - MS MSDs

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-2	0-2	soil	1-4oz, 2-16oz	*
SB4-2MS/MSD	0-2	soil	2-4oz, 3-16oz	*
SB4-2	2-39	soil	2-16oz, 1-4oz	*
SB4-2 MS/MSD	2-39	soil	2-4oz, 3-16oz	*
* TAL Metals, TCL VOCs, SVOCs, Pests, PCBs; Hexchrome, TOC, Asbestos				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W00021-001-29 Project Location S.A.4, Fairport Mach.

Sample No. SB4-3 Date 9/11/97

Sample Point Description 50 ft east of middle of Fairport Machine Bldg

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-3	0-2	soil	1-4oz, 2-16oz	*
* TAL metals, TCL Pests PCBS, VOCs, SVOCs; Hex Chrome; TOC; Asbestos				

Comments

Sample collector (s) Stephen Zaykho

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-29 Project Location S.A.4- Fairport Machine

Sample No. SB4-3 Date 9/12/97

Sample Point Description 50 ft east of middle of Fairport Mach. Bldg

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-3	2-42	soil	2-16oz, 1-4oz	*
* TAL metals; TCL SVOCs, VOCs, Pests, PCBs; Asbestos, Hex Chrome, TOC				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Area 4

Sample No. SB4-4 Date 10/3/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? No

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-4, 0-2	0-2	soil	2-4oz, 1-32oz	*
SB4-4, 12-14	12-14	Soil	2-4oz, 1-32oz	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, TOC, Hex Chrome, Asbestos				

Comments Analysis - Asbestos, TAL Metals, CN, TCL VOC's, TCL SVOC's, TCL Pest/PCB's, Hex Chrome, TOC

Sample collector (s) [signature]

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 T01 Project Location Area 4 - CLH

Sample No. SB4-4 Date 10/6/97

Sample Point Description Area 4

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SB4-4	39-42	Soil	1-32oz, 2-4oz	*
*TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, Hex Chrome, TOC, Asbestos				

Comments

Sample collector (s) Reubenkent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location S.A.4 - CLH

Sample No. SW4-1 Date 9/10/97

Sample Point Description East of Middle Bldg near bare fields, ~660' to east

SAMPLE COLLECTION

Equipment Used B 61 Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-1	0-2	Soil	1-4oz; 2-16oz	*
* TAL metals, TCL SVOCs, VOCs, PESTS, PCBs; Hex Chr, TOC, ASBESTOS				

Comments

Sample collector (s) Stephen Zapko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. WSDA1-001-19 Project Location S.A.4-CLH

Sample No. SW4-1 Date 9/11/97

Sample Point Description east of middle Bldg near ballfields; ~660' to east

SAMPLE COLLECTION

Equipment Used Bull Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-1	24-36	soil	2-16 oz, 1-4 oz	*
SW4-1	2-24	Settled solids	2-16 oz; 1-4 oz	*
* TCL SVOCs, VOCs, PESTS, PCBs; TAL Metals; Hex Chr, TOC; ASBESTOS				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location S.A.4-CLH

Sample No. SW4-2 Date 10/2/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used Bio Drill Rig

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-2	0-2	soil	2-4oz, 1-32oz	*
SW4-2	42-44	"	1-4oz	VOC
SW4-2	2-48	"	2-4oz, 1-32oz	*
SW4-2	48-53	"	2-4oz, 1-32oz	*
	*TAL Metals, TCL VOCs, TCL SVOCs, TCL Pests, PCBs; Hex Chromo, TOC, Asbestos			

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-30 Project Location S.A.4 - Board of Ed Ball fields

Sample No. SW4-3 Date 9/16/97

Sample Point Description NW corner of property, outside of ballfield fence - see boring location form

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? yes - Field blanks

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-3	0-2	soil	1-4 oz, 2-16 oz	*
SW4-3 FIELD BLANKS	0-2	water	4-1L amber, 1L plastic, 125ml amber, 2 40 ml plastic	*
SW4-3	2-14	soil	1-4 oz, 2-16 oz	*
SW4-3	14-15	soil	1-4 oz, 2-16 oz	*
Field blanks	20-22	water		

* Tal metals, TCL VOCs, SVOCs, PESTS, PCBS; Hex Chrome; TOC, Asbestos (Field blanks no asbestos)

Comments no well installed - dry hole

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-31 Project Location S.A.4- Grantham

Sample No. SW4-4 Date 9/15/97

Sample Point Description 230' EAST OF NE CORNER OF MJM INDUSTRIES BLDG

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? yes - duplicates (0-2)

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-4	0-2	Soil	1-4oz, 2-16oz	*
DUPLICATES	0-2	Soil	1-4oz, 2-16oz	*
SW4-4	2-22	Soil	1-4oz - 2-16oz	*
DUPLICATES	2-22	Soil	1-4oz, 2-16oz	*
* TAL Metals, TCL VOCs, SVOCs, PESTS, PCBs, Hex Chrome, Asbestos, TOC,				

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-01 Project Location CLH Area 4

Sample No. SW4-5 Date 10/6/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? No

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW4-5, 0-2	0-2	Soil	1-32oz 2-4oz	
SW4-5, 2-6	2-6			
SW4-5, 8-23	8-23			
SW4-5, 23-26	23-26	Soil	1-32oz 2-4oz	
+ TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, TOC, HexChromo, Asbestos				

Comments

Sample collector (s)

STUDY AREA 5

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

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Project No. W0621-001-19 Project Location Area 5 - CLH

Sample No. ~~S~~PB5-1 Date 9/30/97

Sample Point Description PB5-1, 100' east of entrance fence pole, 50' South of fence on F. Nursery Rd

SAMPLE COLLECTION

Equipment Used B61 Drill Rig

QA/QC samples collected? Duplicate 10 PB5-1, 2-~~16~~ comp 11-16FB 4/30/97 1610

PB5-1, 2-16 comp MS/MSD 4/30/97 1610

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
1550 PB5-1 0-2	0-2	Soil	2-8oz 1-quart	*
10 PB5-1, 2-16 comp	2-16	Soil	2-4oz, 1-32oz	*
DUP 10	2-16	Soil	2-4oz, 1-32oz	*

* TAL Metals, TCL VOCs, TCL SVOCs, CN, Hex Chrome, TCL Pests/PCBs, TOC, Asbestos

Comments

Sample collector (s) [signature]

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SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021 001 19 Project Location Area 5 CLH

Sample No. PB5-1 Date 10/2/97

Sample Point Description 100' East of entrance fence pole, 50' South of fence on E. Nursery Rd

SAMPLE COLLECTION

Equipment Used B61 Deedrick Rig 1 drum

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
PB5-1, 16-31	16-31	soil	2-4oz, ~~1-32oz~~ 1-32oz	*
PB5-1, 31-33	31-33	soil	2-4oz, ~~1-32oz~~ 1-32oz	*

Comments

Sample collector (s)

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Study Area 5

Sample No. SS5-1 Date 9/8/97

Sample Point Description 125 west of road, 175° angle to MW CL 5-1

SAMPLE COLLECTION

Equipment Used 3" hand auger

QA/QC samples collected? yes - duplicates and field blanks

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS5-1	0-2'	soil	16 oz glass	TOX METALS, TOC, HEX CROME, TCL's VOCS, PEST, PCBS; ASBESTOS
SS5-1	0-2'	soil	16 oz glass	
SS5-1	0-2'	soil	4 oz glass	VOCS
SS5-1 Field Blank		water	4 - 1 L amber	Same as above, no asbestos
			2 - 500 mL plastic	
			1 - 125 mL amber	
			2 - vials	
			1 - 1 L plastic	
DUPLICATE 2	0-2	soil	16 oz glass	same as above
"	"	soil	16 oz glass	
"	"	soil	4 oz glass	

Comments no sample or odor

Sample collector (s) Teresa Stupar

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Study Area 5

Sample No. SS5-2 Date 8/29/97

Sample Point Description ~ 160' west of road on berm, ⊥ to road @ 230°

SAMPLE COLLECTION

Equipment Used 3" hand auger

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS5-2	0-2'	soil	16 oz glass	TAL METALS, TCL, HEX CR, ASBESTOS, TCL SVOCs, PCBs, PESTS,
SS5-2	0-2'	soil	16 oz glass	
SS5-2	0-2'	soil	4 oz glass	TCL VOCs

Comments No odor or staining observed

Sample collector (s) Teresa C. Szuper

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location Study Area 5

Sample No. SS5-3 Date 9/8/97

Sample Point Description south west of gate into Study Area 6, see photos

SAMPLE COLLECTION

Equipment Used 3" hand auger

QA/QC samples collected? yes - MS/MSD's

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SS5-3	0-2'	soil	16 oz glass	TAL METALS, ASBESTOS, TOC, HEX CHROME, TCL SVOCs, PCBs, PESTS
SS5-3	0-2'	soil	16 oz glass	
SS5-3	0-2'	soil	4 oz glass	TCL VOCs
SS5-3 MS/MSD	0-2'	soil	3 - 16 oz glass	
SS5-3 MS/MSD	0-2'	soil	2 - 4 oz glass	

Comments ~~See~~ no odor or staining observed

Sample collector (s) Teresa Super

STUDY AREA 7

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location STUDY AREA 7 / BASIN 4

Sample No. SB7-1 Date 9-3-97

Sample Point Description APPROXIMATELY 600 ft FROM EDGE OF BASIN ALONG PATH TO SW7-1 AND 100 ft SOUTH OF PATH.

SAMPLE COLLECTION

Equipment Used 2"x24" SPLIT SPOON DRIVEN WITH 140 lb. HAMMER DROPPED 30"/BLOW.

QA/QC samples collected? NO.

Sample No.	Depth	Type of Material	Container Size	Analysis Requested *
SB7-1, 0-2	0ft - 2ft	SOIL	4oz	VOCs
SB7-1, 0-2	0ft - 2ft	SOIL	2-16oz	
SB7-1 32-34	32-34	SOIL	1-4oz, 2-16oz	
	* VOCs (TCL), TCL SVOCs, TCL PCBs, TCL PESTS, HEX CHR., TOC, TAL METALS			

Comments

Sample collector (s) STEPHEN T. ZAYKO

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location STUDY AREA 7

Sample No. SB7-2 Date 9-5-97

Sample Point Description SE CORNER OF AREA 7 OUTSIDE OF ~~[illegible]~~ BASIN 4.

SAMPLE COLLECTION

Equipment Used 2"x24" SPLIT SPOON DRIVEN WITH 140lb. HAMMER DROPPED 30"/BLOW

QA/QC samples collected? NO.

Sample No.	Depth	Type of Material	Container Size	* Analysis Requested
SB7-2 0-2	0ft-2ft	SOIL COMPOSITE	1-4oz, 2-16oz	
SB7-2, 2-30	2ft-30ft	SOIL COMPOSITE	2-16oz	
SB7-2, 0-4	0ft-4ft	SOIL GRAB	1-4oz	
	* TAL METALS, TOC, HEX CHR.,			
	TCL VOCs, SVOCs, PCBs, PESTS			

Comments

Sample collector (s) [signature]

STEPHEN R. ZAPPIO

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-19 Project Location STUDY AREA 7 / BASIN 4

Sample No. SW 7-1 Date 9-4-97

Sample Point Description MIDDLE OF BASIN 4

SAMPLE COLLECTION

Equipment Used 2"x24" SPLIT SPOON DRIVEN WITH 140lb. HAMMER DROPPED 30"/BLOW

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested *
SW7-1, 0-2	0Ft-2Ft	SOIL COMPOSITE	1-40z, 2-16oz	
SW7-1, 2-29	2Ft-29Ft	SOIL COMPOSITE	2-16oz	
SW7-1, 2-29	2Ft-29Ft	SOIL GRAB	1-40z	
SW7-1 32-34	32Ft-34Ft	SOIL GRAB	1-40z; 2-16oz	
		* TAL METALS, HEX CHR, TOC; TCL VOCs, SVOCs, PESTS, PCBs		

Comments

Sample collector (s) STEPHEN R. ZAYKO

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-32 Project Location

Sample No. SW7-2 Date 10/14

Sample Point Description 20' from Riverbank, east of concrete block on top of slope of landfill

SAMPLE COLLECTION

Equipment Used Dietrich ATV Drill Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW7-2	0-2	soil	1-32 oz, 1-4 oz	*
SW7-2	2-10	soil	1-32 oz, 1-4 oz	*
	* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, hex chrome, TOC			

Comments

Sample collector (s) RJK

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-33 Project Location S.A.7 Nacelle

Sample No. SW7-3 Date 9/10/97

Sample Point Description 100' west of road, in line w/ Elm St. (Due west of intersection of Elm & Elm @ Red gate)

SAMPLE COLLECTION

Equipment Used B-61 Drill Rig

QA/QC samples collected? yes

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
SW7-3	0-2	soil	2-16oz, 1-4oz	*
SW7-3	2-16	soil	2-16oz; 1-4oz	*
SW7-3	0-2	water	FIELD BLANK	*
SW7-3	10-12	water	FIELD BLANK	*
DUP 3	0-2	soil	2-16oz; 1-4oz	*
DUP 4	2-16	soil	2-16oz; 1-4oz	*
*analyses -		TAL metals, TCL SVOCs, VOCs, PEST, PCBs; Hex Chrome, TOC		

Comments

Sample collector (s) Stephen Zayko

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-33 Project Location ~~B~~ AREA 7 - BETWEEN 2 BRINE PONDS

Sample No. SW 7-4 Date 9-8-97

Sample Point Description IN AREA 7 ON NACELLE CAND Mgmt. PROPERTY BETWEEN 2 BRINE PONDS NEAR S.W. GATE IN FENCE AROUND PONDS.

SAMPLE COLLECTION

Equipment Used 2"x24" SPLIT SPOONS DRIVEN WITH 140 lb. HAMMER DROPPED APPROX 30 INCHES.

QA/QC samples collected?

Sample No.	Depth	Type of Material	Container Size	Analysis Requested*
SW7-4, 0-2	0Ft-2Ft	SOIL COMPOSITE	1-4oz 2-16oz.	
SW7-4, 0-2 MS/MSD	0f-2Ft	SOIL COMPOSITE	2-4oz 3-16oz	
SW 7-4, 2-40	2ft-40ft	SOIL COMPOSITE	1-4oz, 2-16oz	
SW7-4, 2-40 MS/MSD	2ft-40Ft	SOIL COMPOSITE	2-4oz, 3-16oz.	
	* TAL METALS, HEX CHR., TOC,			
	TCL VOCs, SVOCs, PESTS, PCBs			

Comments

Sample collector (s)

BACKGROUND

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-02 Project Location Background - Huntington Rd

Sample No. BG1 Date 10/14/97

Sample Point Description

SAMPLE COLLECTION

Equipment Used BG1 Drill Rig

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
BG1	0-2	soil	1-32 oz, 1-4 oz	*
BG1	4-6	soil		*
BG1	~~6-8~~ 10-12 RS	soil		*
BG1	20-22	soil		*
BG1	14-16	soil		*
	* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pests/PCBs, TOC, hex chrome			

Comments

Sample collector (s) RJK

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-02 Project Location Background - off site

Sample No. BG2 Date 10/10/97

Sample Point Description Background; approx 345' South of Elm St, on CLH property; east of house on corner; in field (SE corner)

SAMPLE COLLECTION

Equipment Used Bell Drill Rig

QA/QC samples collected? NO

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
BG2,	0-2	soil	1-32 oz, 1-4 oz	*
BG2,	4-6	soil	↓ ↓	*
BG2,	6-8	soil		*
BG2,	14-16	soil		*
BG2,	24-26	soil		*
* TAL Metals, TCL SVOCs, TCL VOCs, TCL Pest/PCBs, hex Chrome, TOC				

Comments

Sample collector (s) Reuben Kent

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021-001-02 Project Location BACKGROUND - SKINNER

Sample No. BG3 Date 10/13/97

Sample Point Description Between houses 899 & 887 on westside of skinner; approx 350' from road

SAMPLE COLLECTION

Equipment Used Dietrich model 50 ATV Rig

QA/QC samples collected? no

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
BG3	0-2	Soil	1-32 oz, 1-4 oz	*
BG3	4-6	Soil	↓	*
BG3	6-8	Soil	↓	*
BG3	14-16	Soil	↓	*
BG3	22-24	Soil	↓	*
* TAL Metals, TCL VOCs, TCL SVOCs, TCL Pest / PCBs, Hexchrome, TOC				

Comments

Sample collector (s) RJK

SOIL SAMPLING RECORD

Painesville Works Site

Painesville, Ohio

Project No. W0021001 02 Project Location Painesville, Ohio

Sample No. BG-4 Date 10/15/97

Sample Point Description East Street - Irbanick

SAMPLE COLLECTION

Equipment Used Bel Drill Rig

QA/QC samples collected? BG-4, 0-2 MS/MSD

Sample No.	Depth	Type of Material	Container Size	Analysis Requested
BG-4 0-2	0-2	soil	1-32oz, 1-4oz	*
BG-4, 10-12	10-12			*
BG-4, 14-16	14-16			*
BG-4, 22-24	22-24			*
BG-4, 38-40	38-40	soil	1-32oz, 1-4oz	*

Comments * TAL metals, CN, TCL VOCs, TCL SVOCs, TCL Pest/PCBs, Hex Chrom

Sample collector (s) [signature]

APPENDIX A

BORING LOGS

WELL/BORING NAME SB1-1 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 ASR, Front Parking Lot

PAGE 1 OF 3 COMPLETED BY Stephen R. Zayko DATE 9/17-9/18/97

SECOR # W0021-001-23

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 15:15
COMPLETED: 11:00 9/18
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2,3,4	14	25 35	67		4.6	11.7	Dry						Black and white	Med-Coarse Sand w/gravel	GP	Slight	Gravel parking lot
2			32 20			BG=4.5	BG=7.8								Silty med.sand		Slight	Fly ash/cinder fill
3	5	6	7 5	14		7.8	14.1	Dry						Yellow-grayish brown	Silty gravely med-coarse sand	GM	Slight	
4			9 12			BG=7.9	BG=13.8										Slight	
5	6		10 12	26		14.3	14.1	Dry-Moist						10 YR 6/1 to 5/6	Clayey fine-sandy-silt	SM to MC	Slight	
6			14 7			BG=14.4	BG=14.4							Gray to yellowish brown				
7	7	18	6 8	21		14.1	14.2	Moist						10 YR 6/1 to 5/6	Clayey fine-sandy-silt	MC	Slight	
8			13 14			BG=14.2	BG=14.4							Gray to yellowish brown				
9	8	18	5 9	20		14.1	14.3	Moist-Dry						10 YR 5/6 to 6/4	Clayey fine-sandy-silt	MC	Slight	
10			11 11			BG=14.1	BG=14.2							Yellowish brown-light yellow brown				
11	9	24	9 14	34		14.0	14.1	Moist						10 YR 5/6 to 6/4	Clayey fine-sandy-silt	MC	Slight	
12			20 20			BG=14.1	BG=14.1							Yellowish brown-light yellow brown				
13	10	0	22 22	49		NR	NR			No Recovery								No recovery
14			27 25			NR	NR											
15	11	22	11 12	32		13.6	11.0							Gray brown, light brown to dark -	Clayey sandy silt	MC	Slight	Till
16			20 15			BG=13.6	BG=10.0							Gray	Clay w/rock fragments	CL	Poor	
17	12	20	7 10	90		13.0	11.1							10 YR 5/1	Clay with rock fragments	CC	Poor	Till
18			80 /8"			BG=13.0	BG=10.0							Gray				
19	13		5 7	14		NR	10.7							Gray	Clay with rock fragments	CC	Poor	Till
20			7 8			NR	BG=9.8											
21	14		6 9	20		12.7	11.3							Gray	Clay with rock fragments	CC	Poor	Till
22			11 14			BG=12.5	BG=9.8											
23	15		7 9	18		12.5	10.0							Gray	Clay with rock fragments	CC	Poor	Till
24			9 12			BG=12.4	BG=9.5											

WELL/BORING NAME SB1-1 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 ASR, Front Parking Lot

PAGE 2 OF 3

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/17-9/18/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 15:15
COMPLETED: 11:00 9/18
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25 26	16	24	4 5 7 12	12		12.4 BG=12.4	10.2 BG=9.4	Moist						Gray	Clay with rock fragments	CL	Poor	Till
27 28	17	24	5 6 7 12	13		12.1 BG=11.9	10.1 BG=9.3	Moist						Gray	Clay with rock fragments	CL	Poor	Till
29 30	18	24	4 5 7 8	12		10.1 BG=10.0	8.6 BG=9.6	Moist						Gray	Clay with rock fragments	CL	Poor	Till
31 32	19	24	5 6 12 15	18		9.6 BG=9.6	8.2 BG=9.6	Moist						Gray	Clay with rock fragments	CL	Poor	
33 34	20	24	5 7 13 21	20		9.8 BG=9.8	8.3 BG=9.4	Moist						Gray	Clay with rock fragments	CL	Poor	
35 36	21	24	10 12 14 14	26		9.6 BG=9.6	8.6 BG=8.3	Moist						Gray	Clay with rock fragments	CL	Poor	
37 38	22	24	7 12 12 12	24		9.5 BG=9.7	9.2 BG=10.3	Moist-Dry						Gray	Clay with rock fragments	CL	Poor	
39 40	23	24	4 9 11 12	20		9.1 BG=9.1	10.7 BG=10.3	Moist-Dry						Gray	Clay with rock fragments	CL	Poor	
41 42	24	24	9 11 12 14	23		9.8 BG=9.8	10.2 BG=9.8	Moist-Dry						Gray	Clay with rock fragments	CL	Poor	Till At 18:45 on 9/17/97, stop drilling - out of augers
43 44	25	24	17 22 21 30	43		11.4 BG=11.5	10.2 BG=9.3	Moist-Dry						5Y 4/1(dark gray) Gray	Clay with rock fragments	CL	Poor	At 7:30 on 9/18/97 resume drilling Till, wet mush at top (sluff)
45 46	26	24	24 27 31 38	58		11.4 BG=11.5	11.0 BG=9.5	Dry-Moist						5Y 4/1(dark gray) Gray	Clay with rock fragments	CL	Poor	Till
47 48	27	24	N R N R			8.5 BG=8.4	13.0 BG=11.2	Dry-Moist						5Y 4/1(dark gray) Gray	Clay with rock fragments	CL	Poor	Till with coarser spot at 47 feet, dry

WELL/BORING NAME SB1-1 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 1

PAGE 3 OF 3 Area 1 ASR, Front Parking Lot

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/17-9/18/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 15:15 9/17
COMPLETED: 11:00
METHOD: 9/18
REMARKS: 4 1/4" HSA
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
49 50	28	24	6 13 14 20	27		10.2 BG=10.1	12.3 BG=11.4	Dry-Moist						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	Till
51 52	29	24	13 19 19 30	38		11.5 BG=11.4	14.0 BG=11.2	Dry-Moist						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	Till
53 54	30	24	10 22 32 41	54		11.7 BG=11.4	13.2 BG=10.7	Dry-Moist						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	Till
55 56	31	24	17 25 35 46	60		10.9 BG=10.9	14.5 BG=11.1	Dry-Moist						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	Till
57 58	32	9	29 51/3" N R	100		10.1 BG=10.1	13.7 BG=9.6	Dry						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments, more shale fragments	CL	Poor	Till with shale fragments Broke bearing housing, 15 minutes downtime
59 60	33	9	5 4/3" 50 /3"	100		9.1 BG=4.9	14.4 BG=4.0	Dry						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments, weathering in layers/shale?	CL/weathere rock	Poor	
61 62	34	6	100 /6" N R	100		NR NR	13.7 BG=3.3	Dry						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	
63 64	35	18	28 39 54 50/3"	93		3.7 BG=3.6	13.4 BG=1.8	Dry						5Y 4/1 to 4/N4, Dark gray	Clay with rock fragments	CL	Poor	
65 66	36	<4	60 /5"	100		2.8 BG=2.7	13.0 BG=2.0	Dry						5Y 4/1 to 4/N4, Dark gray	Shale	Shale	Poor	Shale
																		Refusal and end of boring at 66 feet below ground surface
																		Boring Notes: BG=Background NR=No Reading

WELL/BORING NAME: SB1-2
PAGE 1 OF 4
SECOR # W0021-001-23

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 1
ASR
DATE: 9/19-9/23/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:45 9/19
COMPLETED: 1:00 9/23
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2,3,4	18	21 36	92		2.6	NR	Dry							Silty, fine gravely			
2			56 /6"			BG=2.5	NR								Medium sand			Stopped after spilt spoons at 14:10
3	5 - see note*	3	N R	10		4.4	10.3	Dry						Red	Brick	NA	NA	Resume drilling at 13:45 on 9/22/97
4	6		5 19			BG=4.4	BG=4.3											
5	7	8	10 6	23		4.5	21.0	Wet						Red	Brick	GM	Mod	Wet sandy fill, base material
6			17 17			BG=4.5	BG=7.0							Gray/white	Coarse sand, fine coarse sand			
7	8	14	12 36	48		4.4	11.0	Wet						5B 5/1 to white	Medium-coarse-	SW	Mod	Blue-gray, sandy fill
8			12 10			BG=4.4	BG=7.0							Bluish gray to white	sand and gravel			Wet
9	9	0	12 26	100		NR	NR			No Recovery								No recovery
10			80 /6"			NR	NR											
11	10	8	16 13	25		7.5	14.7	Wet						2.5Y 4/4		SW	Mod	Fill
12			12 6			BG=7.5	BG=7.4	Moist-Wet						Olive brown	Clayey silt with rock fragments	MH/ML	Poor	Natural?
13	11	16	10 11	26		7.0	11.4	Moist						4/N4	Sitly clay with rock fragments	CL	Poor	Till
14			15 29			BG=7.0	BG=7.3							Dark gray				
15	12	18	8 9	22		8.2	13.5	Moist						4/N4	Sitly clay with rock fragments	CL	Poor	Till
16			13 18			BG=8.2	BG=7.5							Dark gray				
17	13	20	6 7	19		7.3	13.6	Moist						4/N4	Sitly clay with rock fragments	CL	Poor	Till
18			12 13			BG=7.3	BG=7.5							Dark gray				
19	14	20	8 9	22		7.4	14.2	Moist						4/N4	Sitly clay with rock fragments	CL	Poor	Till, black ring of silt around auger return, = silt, no PID hit, not oily
20			13 5			BG=7.2	BG=7.5							Dark gray				
21	15	14	7 7	19		8.2	14.4	Moist						4/N4	Sitly clay with rock fragments, more silt	CL	Poor	
22			12 15			BG=7.8	BG=7.8							Dark gray				
23	16		6 9	26		7.3	15.4	Moist						4/N4	Sitly clay	CL	Poor	
24			17 18			BG=7.3	BG=7.9							Dark gray				

* First spoon on 9/22/97 (2-4 feet) still above brick layer, will redo a spoon at 3-4 feet

WELL/BORING NAME SB1-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 1

PAGE 2 OF 4 Area 1 ASR

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/19-9/23/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:45 9/19
COMPLETED: 1:00 9/23
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25 26	17	16	6 8 11 9	19		7.9 BG=7.9	19.8 BG=7.8	Moist						Gley 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till
27 28	18	14	9 8 8 7	16		8.4 BG=7.9	21.8 BG=8.1	Moist						Gley 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till
29 30	19	20	7 7 10 14	17		8.4 BG=7.9	15.1 BG=8.1	Moist						Gley 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till
31 32	20	22	7 7 10 16	17		9.0 BG=8.8	17.7 BG=8.7	Moist						Gley 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till
33 34	21	20	7 9 11 15	20		8.7 BG=8.8	NR NR	Moist						Gley 4/N4 Dark gray	Clay with rock-fragments, more silt	CL	Poor	Till At 17:05, stop rig.*
35 36	22	18	8 10 12 17	22		11.1 BG=10.9	10.5 BG=10.5	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till, resumed drilling at 7:25 on 9/23/97 (34 feet)
37 38	23	20	11 11 16 23	27		9.5 BG=9.6	15.4 BG=10.2	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till
39 40	24	18	8 10 12 16	22		12.1 BG=12.5	15.6 BG=12.0	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till
41 42	25	18	4 5 8 13	13		11.9 BG=11.9	16.2 BG=11.9	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till
43 44	26	16	8 7 13 16	20		11.7 BG=11.7	16.8 BG=10.2	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till
45 46	27	16	7 9 14 18	23		10.9 BG=10.9	16.8 BG=10.6	Moist						Gley 4/N4 Dark gray	Clay with coarse-sand sized rock fragments	CL	Poor	Till
47 48	28		12 16 25 32	41		11.4 BG=11.4	16.7 BG=8.7	Moist						5Y 4/1 Dark gray	Clay with coarse-sand and gravel sized rock frags	CL	Poor	Till

*Bruce K. (driller) got page and made phone call at 17:30. He decided to call it a day - good light till 20:00.

WELL/BORING NAME: SB1-2
PAGE 3 OF 4
SECOR # W0021-001-23

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 1
ASR
DATE: 9/19-9/23/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:45 9/19
COMPLETED: 1:00 9/23
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
49 50	29	18	5 11 20 25	31		10.8 BG=10.6	16.7 BG=9.2	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
51 52	30	12	20 12 13 20	25		9.4 BG=9.4	17.6 BG=9.5	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
53 54	31	16	7 11 17 20	28		10.2 BG=8.8	15.4 BG=7.4	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
55 56	32	20	8 14 25 29	39		9.6 BG=9.4	17.4 BG=7.4	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
57 58	33	16	14 14 34 36	48		8.5 BG=8.5	14.4 BG=7.1	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
59 60	34	24	21 19 31 45	50		8.7 BG=8.2	10.3 BG=3.0	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
61 62	35	10	15 NR 100 \5"	100		7.6 BG=7.0	15.3 BG=3.0	Moist-Dry						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till with larger shaley rock fragments, very silty at bottom
63 64	36	14	39 47 80 100/4"	100		3.0 BG=3.0	11.8 BG=3.7	Moist						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
65 66	37	14	31 65 100 /4"	100		3.6 BG=3.0	11.3 BG=6.0	Moist-Dry						5Y 4/1 Dark gray	Clay with rock fragments	CL	Poor	Till
67 68	38	10	65 NR 100 /5"	100		7.1 BG=7.1	13.4 BG=4.3	Moist-Dry						4/N4 (dark gray) 2.5 YR 4/2 (weak red)	Clay with rock fragments	CL	Poor	Till with some slight red tint/staining?
69 70	39	8	65 NR 100 /3"	100		7.1 BG=7.1	16.4 BG=4.1	Moist-Dry						5Y 4/1 to 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till with some slight red tint/staining?
71 72	40	6	100 /6" N R	100		7.7 BG=6.9	11.5 BG=3.2	Moist-Dry						5Y 4/1 to 4/N4 Dark gray	Clay with rock fragments	CL	Poor	Till with some slight red tint/staining?

WELL/BORING NAME SB1-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 1

PAGE 4 OF 4 Area 1 ASR

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/19-9/23/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:45 9/19
COMPLETED: 1:00 9/23
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
73	41	6	100 /6"	100	1 10 100	NR	5.9	Moist-Dry						Gray	Clay with rock fragments	CL	Poor	Till, big shaley fragments
74			N R			NR	BG=2.9											
75	42		100 /3"	100		3.3	NR	Moist-Dry						Gray	Shale	Shale rock	NA	Shale
76			N R			BG=2.9	NR											
																		Refusaat 74.5 feet below ground surface, end of boring at 76 feet
																		Boring Notes: BG=Background
																		NR=No Reading
																		NA=Not Applicable

WELL/BORING NAME SB1-3 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 1

PAGE 1 OF 3 Area 1 ASR

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/18 to 9/19/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:40 9/18
COMPLETED: 10:30 9/19
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2,3	16	7 10	41		3.4	6.0	Dry						10 YR 5/3	Silty sand	ML	Slight	
2	4,5		31 15			BG=3.4	BG=3.3							Brown	Clayey sandy silt	SM	Poor	
3	6	18	7 19	71		3.5	5.0	Dry						10 YR 5/3		ML to SW	Poor	At 3 feet, hard-hard-hard packed
4			52 18			BG=3.3	BG=3.8							Brown to black			Well	At 3.5 feet, flyash
5	7	24	5 6	13		3.3	4.0	Dry-Moist						10 YR 5/1 to 5/4 to 5/6	Slightly clayey, slightly sandy	ML	Mod	Natural?
6			7 14			BG=3.3	BG=3.5							gray to yellowish brown	Silt			
7	8	18	9 9	23		3.4	8.7	Dry-Moist						10 YR 5/1 to 5/3	Slightly clayey, slightly sandy	ML	Mod	
8			14 13			BG=3.4	BG=3.3							Gray to brown	Silt			
9	9	18	5 9	21		3.4	4.3	Dry-Moist						10 YR 5/1 to 5/3	Slightly clayey, slightly sandy	ML	Mod	
10			12 14			BG=3.4	BG=3.3							Gray to brown	Silt			
11	10	20	9 11	29		3.4	4.2	Dry-Moist						10 YR 5/1 to 5/3	Slightly clayey, slightly sandy	ML	Mod	
12			18 17			BG=3.4	BG=3.4							Gray to brown	Silt			
13	11	23	9 13	24		3.5	3.7	Dry-Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till
14			11 13			BG=3.5	BG=3.6							Dark gray				
15	12	14	8 13	24		3.4	3.8	Dry-Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till
16			11 11			BG=3.4	BG=3.2							Dark gray				
17	13	22	8 11	24		3.4	3.7	Dry-Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till
18			13 14			BG=3.4	BG=3.3							Dark gray				
19	14	22	5 11	24		3.4	3.7	Dry-Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till
20			13 16			BG=3.4	BG=3.3							Dark gray				
21	15	20	8 10	29		3.3	3.8	Dry Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till, 2 inch moist zone
22			19 15			BG=3.3	BG=3.4	Dry						Dark gray				No rock fragments
23	16	20	7 7	17		3.3	3.0	Dry-Moist						4/N4	Clay w/ rock fragments	CL	Poor	Till
24			10 13			BG=3.2	BG=3.4							Dark gray				At 24 feet, 16:00 on 9/18

WELL/BORING NAME SB1-3 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 1

PAGE 2 OF 3 Area 1 ASR

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/18 to 9/19/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:40
COMPLETED: 9/18
METHOD: 10:30
REMARKS: 9/19
4 1/4" HSA

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
25 26	17	24	4 4 6 7	10		3.3 BG=3.3	3.3 BG=3.1	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	Till
27 28	18	22	5 6 10 10	16		3.6 BG=3.6	3.1 BG=2.9	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	Till
29 30	19	24	3 6 7 10	13		3.4 BG=3.3	3.3 BG=2.9	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	
31 32	20		4 5 7 8	12		3.3 BG=3.3	3.3 BG=2.9	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	
33 34	21	24	4 4 5 6	9		2.9 BG=2.9	3.1 BG=3.0	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	
35 36	22	24	3 4 5 7	9		2.9 BG=2.9	3.0 BG=3.2	Moist						Gray to 4/N4 Gray to dark gray	Clay with occasional rock fragments	CL	Mod	
37 38	24	22	3 7 9 10	16		3.3 BG=3.3	3.0 BG=3.2	Moist to Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/silt Clay w/rock fragments	CL	Mod Poor	Back to classic till
39 40	25	20	6 10 7 10	17		3.0 BG=3.0	3.6 BG=2.9	Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/ rock fragments	CL	Poor	Till
41 42	26	24	6 6 7 10	13		3.1 BG=3.0	3.3 BG=3.0	Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/ rock fragments	CL	Poor	Till
43 44	27	24	4 5 7 9	12		3.0 BG=2.9	3.8 BG=3.3	Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/ rock fragments	CL	Poor	Till
45 46	28	24	5 7 9 2	16		3.0 BG=3.0	3.5 BG=2.9	Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/ rock fragments	CL	Poor	Till
47 48	29		9 11 15 19	26		3.0 BG=3.0	3.4 BG=2.9	Moist-Dry						Gray to 4/N4 Gray to dark gray	Clay w/ rock fragments	CL	Poor	Till At 48 feet, 17:40 on 9/18

WELL/BORING NAME: SB1-3
PAGE 3 OF 3
SECOR # W0021-001-23

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 1
ASR
DATE: 9/18 to 9/19/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:40 9/18
COMPLETED: 10:30 9/19
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
49	30	20	5 7	17		2.9	3.3	Dry-Moist						Gray to 5Y 4/1, 4/N4	Clay w/ rock fragments	CL	Poor	Till
50			10 17			BG=2.9	BG=2.7							Gray to dark gray				
51	31	16	15 13	23		2.9	3.8	Dry-Moist						Gray to 5Y 4/1, 4/N4	Clay w/ rock fragments	CL	Poor	Till
52			10 14			BG=2.9	BG=2.5							Gray to dark gray				
53	32	24	6 10	22		2.8	3.3	Dry-Moist						Gray to 5Y 4/1, 4/N4	Clay w/ rock fragments	CL	Poor	Till
54			12 17			BG=2.8	BG=2.6							Gray to dark gray				
55	33	24	8 12	26		2.6	4.4	Dry-Moist						Gray to 5Y 4/1, 4/N4	Clay w/ rock fragments	CL	Poor	Till
56			14 19			BG=2.6	BG=2.6							Gray to dark gray				At 56 feet, called it a day at 18:30 on 9/18
57	34	22	14 28	58		2.6	5.2	Dry-Moist						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Resumed drilling at 8:30 on 9/19
58			30 44			BG=2.6	BG=3.1							Dark gray				Rock fragments, fissile/shaley
59	35	22	7 17	43		2.1	6.3	Dry-Moist						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Rock fragments, fissile/shaley
60			26 33			BG=2.1	BG=1.9							Dark gray				
61	36	8	38 NR	100		1.9	17.2	Dry						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Till
62			62 /3"			BG=1.9	BG=2.3							Dark gray	Gravely silty sand clay w/rock frags	SW CL	Mod Poor	
63	37	8	60 NR	100		2.0	11.4	Dry						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Till
64			40 /3"			BG=2.0	BG=2.3							Dark gray				
65	38	7	100 /7"	100		2.6	12.6	Dry						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Till
66			N R			BG=2.6	BG=2.8							Dark gray				
67	39	10	30 70	100		2.7	12.3	Dry						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	Till, bottom 1inch looks like weathered rock
68			N R			BG=2.6	BG=3.3							Dark gray				
69	40	8	34 75	100		3.3	12.9	Dry						5Y 4/1 to 4/N4	Clay w/ rock fragments	CL	Poor	
70			N R			BG=3.3	BG=3.0							Dark gray				
71	41	4	70 30 /2"	100		2.9	13.4	Dry						5Y 4/1 to 4/N4	Weathered rock to rock	Rock	Poor	Weathered rock to rock
72			N R			BG=2.9	BG=3.0							Dark gray				Refusal and end of boring at 71 feet, 10:30 on 9/19/97.

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME: SB1-4
PAGE 1 OF 1
SECOR # W0021-001-19

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Teresa Szuper

WELL/BORING LOCATION: Area 1
DATE: 9/13/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
6 in	1	6	NR	NR	1 — 10	0.0	0.0	Dry						Light gray brown Light gray	Fill	ML	Mod	Slightly fine sandy clayey silt
12 in	2	6	NR	NR		0.0	0.0	Dry						Light gray	Fill	ML	Mod	Slightly fine sandy clayey silt
18 in	3	6	NR	NR		0.0	0.0	Dry						Light gray	Fill	ML	Mod	Slightly fine sandy clayey silt
24 in	4	6	NR	NR		0.0	0.0	Dry						Light gray	Fill	ML	Mod	Slightly fine sandy clayey silt

STARTED: 10:15
COMPLETED: 10:45
METHOD: 3" Hand Auger
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

End of boring at 2 feet below ground surface

Boring Notes: 12-18 inches selected for analysis

NA=Not Applicable

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME: SB1-5
PAGE 1 OF 1
SECOR # W0021-001-20

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Teresa Szuper

WELL/BORING LOCATION: Area 1
DATE: 8/28/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1–10)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
6 in	1	6	NR	NR		12.5	2.3	Dry						Black	Fill	SP	Slight	
12 in	2	6	NR	NR		4.6	0.7	Dry						Black	Fill	SP	Slight	
18 in	3	6	NR	NR		1.1	1.2	Dry						Black	Fill	SP	Slight	Bits (1/4") metal slag
24 in	4	6	NR	NR		4.3	1.5	Moist						Black	Fill	SC	Poor	

STARTED: 4:50
COMPLETED:
METHOD: 3" Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

End of boring at 2 feet below ground surface

Boring Notes: NA=Not Applicable

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME: SB1-6
PAGE 1 OF 1
SECOR #: W0021-001-19

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: T. Szuper, S. Zayko

WELL/BORING LOCATION: Area 1
DATE: 9/3/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
6 in	1	6	NR	NR		3.5	0.0	Dry						Light brown Light gray	Clayey fine sandy silt	ML	Slight-Mod	1 inch topsoil, dry crumbly clayey silt (slight fine sand)
12 in	2	6	NR	NR		16.6	0.0	Dry						Light gray	Clayey fine sandy silt	ML	Slight-Mod	Dry crumbly clayey silt (slight fine sand)
18 in	3	6	NR	NR		6.0	0.0	Dry						Light gray	Clayey fine sandy silt	ML	Slight-Mod	
24 in	4	6	NR	NR		6.0	0.0	Dry						Light gray	Clayey fine sandy silt	ML	Slight-Mod	
																		End of boring at 2 feet below ground surface
																		Boring Notes: NA=Not Applicable
																		Boring Notes: BG=Background NR=No Reading

STARTED: 9:10
COMPLETED: 9:45
METHOD: 3" Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

WELL/BORING NAME: SB1-7
PAGE 1 OF 1
SECOR # W0021-001-20

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: T. Szuper, S. Zayko

WELL/BORING LOCATION: Area 1
DATE: 8/28/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
6 in	1	6	NR	NR	1 — 10	>2999	NR	Dry						Brown	Sand	SP		
12 in	2	6	NR	NR		>2999	NR	Dry						Brown	Sand	SP		No odor or staining observed
18 in	3	6	NR	NR		>2999	NR	Dry-Moist						Red	Sandy clay	SC		
24 in	4	6	NR	NR		>2999	NR	Dry-Moist						Yellow-orange	Sandy clay	SC		
																		End of boring at 2 feet below ground surface
																		Boring Notes: NA=Not Applicable
																		Background PID=5.1 ppm
																		Boring Notes: BG=Background NR=No Reading

STARTED: 3:15
COMPLETED: 4:05
METHOD: 3" Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

WELL/BORING NAME SW1-1 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 Railroad

PAGE 1 OF 2

SECOR # W0021-001-20 COMPLETED BY Stephen R. Zayko DATE 9/26/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 7:40
COMPLETED: 9:55
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	16	6 5	8		12.2	26.0	Dry-Moist						Black	Topsoil Cinders	OL SP	Mod	Topsoil in upper portion, cinders in lower
2			3 5			BG=12.1	BG=10.5							Blue-gray	Clay	CL	Mod	Clay
3	3	22	3 2	5		11.9	22.0	Dry-Moist						5BG 5/1 to 10YR 5/8	Silty clay	CL	Mod	Mottled
4			3 5			BG=12.0	BG=11.4							Greenish gray to yellowish brown				
5	4	22	3 5	12		12.0	24.0	Dry-Moist						5BG 5/1 to 10YR 5/8	Silty clay	CL	Mod	Mottled
6			7 9			BG=11.5	BG=13.5							Greenish gray to yellowish brown				
7	5	24	3 6	15		11.8	24.0	Dry-Moist						10YR 5/8 w/some 6/1	Silty clay	CL	Mod	Mottled
8			9 11			BG=11.7	BG=11.3							Yellowish brown w/some gray				
9	6	22	2 9	18		11.4	24.1	Moist						10YR 4/3	Silty clay, clayey silt w/rock frags	CL ML	Mod Slight	
10			9 10			BG=11.6	BG=11.7							Brown	Silty sand, sandy silt w/rock frags	SM	Poor	
11	7	24	6 10	23		12.8	25.0	Moist-Dry						10YR 5/3 to 4/4	Silty clay	CL	Mod	
12			13 15			BG=12.6	BG=12.0							Brown to dark yellowish brown				
13	8	22	8 8	19		12.0	24.0	Moist						2.5Y 4/4 to 4/1	Silty clay	CL	Mod	Till
14			11 11			BG=12.0	BG=11.6							Olive brown to dark gray			Poor	
15	9	24	11 5	15		11.6	24.0	Moist						Gray	Silty clay with rock fragments	CL	Poor	Till
16			10 10			BG=11.6	BG=12.2											
17	10	24	4 6	12		12.0	20.6	Moist						5Y 4/1	Silty clay with rock fragments	CL	Poor	Till
18			6 7			BG=12.2	BG=5.5							Dark gray				
19	11	24	3 4	10		12.0	15.2	Moist						5Y 4/1	Silty clay with rock fragments	CL	Poor	Till
20			6 8			BG=11.9	BG=6.1							Dark gray				
21	12	22	3 9	15		11.2	18.9	Moist						5Y 4/1	Silty clay with rock fragments	CL	Poor	Till
22			6 10			BG=11.1	BG=5.7	Moist-Wet						Dark gray				
23	13	24	3 3	10		5.1	15.1	Moist						5Y 4/1	Silty clay with rock fragments	CL	Poor	Till
24			7 8			BG=5.3	BG=4.3	Moist-Wet						Dark gray				

WELL/BORING NAME SW1-1 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATI0N Area 1 Railroad

PAGE 2 OF 2

SECOR # W0021-001-20 COMPLETED BY Stephen R. Zayko DATE 9/26/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 7:40
COMPLETED: 9:55
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25 26	14	22	3 4 7 10	11		5.9 BG=6.1	13.2 BG=5.9	Moist						Gray to 5Y 4/1 gray to dark gray	Silty clay with rock fragments	CL	Poor	Till
27 28	15	22	4 6 7 9	13		4.4 BG=4.1	18.9 BG=5.0	Moist						Gray to 5Y 4/1 gray to dark gray	Silty clay with rock fragments	CL	Poor	Till
29 30	16	22	4 7 2 9	9		5.5 BG=5.5	15.2 BG=4.9	Moist						Gray to 5Y 4/1 gray to dark gray	Silty clay with rock fragments Clayey silt	CL ML	Poor Mod	Till
31 32	17	24	3 4 7 8	11		4.7 BG=4.4	17.1 BG=5.1	Moist, Moist-Wet						Gray to 5Y 4/1 gray to dark gray	Clayey silt with sparse rock fragments	ML	Slight to Poor	Till
33 34	18	22	4 4 7 8	11		3.4 BG=4.8	14.2 BG=5.6	Moist, Moist-Wet						Gray to 5Y 4/1 gray to dark gray	Clayey silt with sparse rock fragments	ML	Slight to Poor	Till
35 36	19	24	6 6 7 11	13		5.0 BG=4.9	13.9 BG=4.8	Moist						Gray to 5Y 4/1 gray to dark gray	Clayey silt with sparse rock fragments	ML	Slight to Poor	Till
37 38	20	24	5 7 9 13	16		5.5 BG=5.1	15.4 BG=4.7	Moist, Dry-Moist						Gray to 5Y 4/1 gray to dark gray	Clayey silt with sparse rock frags	ML CL	Slight Poor	Till
39 40	21	24	5 6 9 11	15		4.8 BG=4.8	13.8 BG=3.9	Dry-Moist						Gray to 5Y 4/1 gray to dark gray	Clay with rock fragments	CL	Poor	Till

End of boring at 40 feet below ground surface, auger only to 39 feet, stop at 9:55

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME: SW1-2
PAGE 1 OF 2
SECOR # W0021-001-20

JOB NAME/LOCATION: CLH Painesville, OH
Area 1
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 1
Railroad
DATE: 9/25/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:10
COMPLETED: 16:05
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1 2	1,2,3,4	2,2,10 10	3 4 8 9	12		5.6 BG=5.3	10.6 BG=4.5	Dry						Black w/gray and white specs	Sand and gravel sized cinders	SP	Mod-Slight	
3 4	5	14	11 10 10 4	20		4.7 BG=4.4	70.1 BG=4.6	Dry						Black w/gray and white specs, some Light brown near bottom	Sand and gravel, some silt	SP	Slight	
5 6	6	12	2 2 3 4	5		4.5 BG=4.4	20.0 BG=4.5	Moist						5BG 6/1 to 5Y 6/1 Greenish gray to gray	Silty clay	CL	Mod	
7 8	7	12	3 4 7 9	11		4.4 BG=4.3	15.3 BG=5.2	Moist						5BG 6/1 to 5Y 6/1, w/10YR 5/4 Green-gray,gray w/yellow-brown	Silty clay	CL	Mod	
9 10	8	1	4 6 9 11	15		4.7 BG=4.6	17.1 BG=4.4	Wet						Black	Sandy silt	MH	Mod	One inch recovery
11 12	9	16	6 11 15 16	26		4.7 BG=4.6	9.1 BG=5.7	Moist-Wet						5BG 6/1 to 10YR 4/6 Greenish gray,dark yellowish brown	Silty clay	MH	Mod	
13 14	10	1	10 11 16 20	27		4.7 BG=4.6	NR NR	Moist		NO RECOVERY								Only recovery of sluff, not representative
15 16	11	18	7 11 13 15	24		4.7 BG=4.7	6.6 BG=5.1	Moist						5Y 4/3 Olive	Silty clay with rock fragments	CL	Poor	Till, stained orange-brown and black on fracture planes
17 18	12	18	3 7 9 11	16		5.7 BG=5.7	9.0 BG=4.4	Moist-Wet						5Y 4/3 to 4/N 4 at bottom Olive to dark gray	Silty clay with rock fragments	CL to CH	Poor	Till, stained orange-brown and black on fracture planes All gray at bottom
19 20	13	22	7 11 13 12	24		4.4 BG=4.4	5.8 BG=3.6	Moist						5Y 4/3 to 4/N 4 at bottom Olive to dark gray	Clayey silt with rock fragments	CL to ML	Poor-Mod	Till, stained orange-brown and black on fracture planes Silty at bottom
21 22	14	3	11 12 11 13	23		4.2 BG=4.2	6.8 BG=4.4	Moist						5Y 4/3 to 4/N 4 at bottom Olive to dark gray	Silty clay with rock fragments	ML	Mod	
23 24	15	0.5 18	3 5 5 7	10		4.2 BG=4.2	7.9 BG=4.4	Moist						Gray to 4/N 4 Gray to dark gray	Silty clay to clayey silt with rock fragments	ML to OCL	Mod	

WELL/BORING NAME SW1-2 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 Railroad

PAGE 2 OF 2

SECOR # W0021-001-20 COMPLETED BY Stephen R. Zayko DATE 9/25/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25 26	16	24	4 8 8 11	16	1 10 100	4.3 BG=4.3	7.6 BG=4.3	Moist-Wet						4/N 4 to gray Dark gray to gray	Clay with rock fragments	CL	Poor	Fracture thick sandy spot, moist-wet
27 28	17	24	4 6 6 8	12		4.4 BG=4.4	5.7 BG=4.7	Moist-Wet Wet						4/N 4 to gray Dark gray to gray	Clay with rock fragments	CL	Poor	Till
29 30	18	24	3 4 4 5	8		4.4 BG=4.2	5.8 BG=4.7	Moist-Wet						4/N 4 to gray Dark gray to gray	Clay with sparse rock fragments	CH	Poor	Till, wet and pliable

STARTED: 14:10
COMPLETED: 16:05
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

End of boring at 30 feet below ground surface at 16:05 on 9/25, well set to 30 feet.

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME SW1-3 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 Tanner

PAGE 1 OF 2

SECOR # W0021-001-21 COMPLETED BY Stephen R. Zayko DATE 9/24-9/25/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 16:20 9/24
COMPLETED: 8:30 9/25
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N:

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2,3,4	16	4 10	17		2.7	NR	Dry						10YR 7/3 to 6/1 to 6/8 to 3/1	Well graded sand	SW	Slight	Broken concrete
2			7 8			BG=7.6	NR							Pale brown-gray-brn yello-drk gry	Clay	CL	Mod	Silty clay, multi-colored
3	5	14	5 9	15		3.2	5.4	Dry						10YR 7/3 to 6/1 to 6/8 to 3/1	Mottled silty clay	CL	Mod	Silty clay, multi-colored
4			6 9			BG=3.2	BG=3.6							Pale brown-gray-brn yello-drk gry				
5	6	20	6 12	24		3.3	9.9	Dry-Moist						A lot 10YR 6/4-6/8, some 5/1-2/1	Mottled silty clay	CL	Mod	Silty clay, multi-colored
6			12 14			BG=3.3	BG=3.7							Yellowish brown, gray-black				
7	7	20	7 9	22		3.7	14.1	Dry-Moist						Alot 10YR 6/4-6/8, some 5/1-2/1	Clayey silt	ML	Mod	Multi-colored, mostly 6/4-6/8
8			13 15			BG=3.7	BG=9.2							Yellowish brown, gray-black				Some cinders?
9	8	22	12 13	32		3.6	18.1	Dry-Moist						10YR 5/4 to 5/8 to 5/1 to 2/1	Clayey silt	ML	Mod	
10			19 23			BG=3.6	BG=7.8							Yellowish brown, gray-black				
11	9	24	9 18	34		3.7	17.6	Dry-Moist						10YR 4/6 to 5/1	Silty clay with rock fragments	CL	Mod	
12			16 20			BG=3.7	BG=8.6							Dark yellowish brown to gray		CL	Poor	Till
13	10	24	8 16	33		4.5	13.9	Dry-Moist						5Y 4/1 to 10YR 5/8	Clay with rock	CL	Poor	Till, vertically stained 10YR 5/8, the rest 6Y 4/1
14			17 22			BG=4.7	BG=7.6							Dark gray to yellowish brown				
15	11	24	4 8	18		8.8	12.8	Moist						5Y 4/1 to 10YR 5/8	Clay with rock fragments	CL	Poor	Very fractured, sandy and wet
16			10 12			BG=8.3	BG=7.4	Moist-Wet						Dark gray to yellowish brown				
17	12	24	4 4	10		7.4	12.6	Moist-Wet						Gray	Clay with rock fragments	CH	Poor	All gray till
18			6 8			BG=7.4	BG=7.4							4/N4 to 5Y 4/1 Dark gray				
19	13	20	2 3	10		7.7	16.2	Moist-Wet						Gray	Clay with rock fragments	CH	Poor	Gray till, some yellowish brown
20			7 7			BG=7.4	BG=8.6							4/N4 to 5Y 4/1 Dark gray				
21	14	24	3 4	9		NR	17.5	Moist-Wet						Gray	Clayey silt	ML	Mod	Silty till, wet seams
22			5 5			NR	BG=8.6							4/N4 to 5Y 4/1 Dark gray		MH		
23	15	24	7 7	17		8.5	14.9	Moist-Wet						Gray	Clayey silt	ML	Mod	Silty till, wet seams
24			10 10			BG=7.7	BG=8.4							4/N4 to 5Y 4/1 Dark gray		MH		

WELL/BORING NAME SW1-3 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 Tanner

PAGE 2 OF 2

SECOR # W0021-001-21 COMPLETED BY Stephen R. Zayko DATE 9/24-9/25/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 16:20
COMPLETED: 9/24
METHOD: 8:30
REMARKS: 9/25 4 1/4" HSA

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N:

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
25	16	24	4 5	14		9.1	13.3	Wet-Moist						Gray, 4/N4 to 5Y 4/1	Clayey silt	MH	Mod	Silty till
26			9 10			BG=8.6	BG=8.2							Gray, dark gray				
27	17	24	4 5	13		8.7	20.4	Wet-Moist						Gray, 4/N4 to 5Y 4/1	Clayey silt	MH	Mod	Silty till
28			8 8			BG=8.6	BG=8.6							Gray, dark gray				
29	18	24	4 4	13		8.2	22.8	Moist-Wet						Gray, 4/N4 to 5Y 4/1	Clayey silt with rock fragments	MH	Mod	Silty till
30			9 10			BG=7.8	BG=10.4							Gray, dark gray				
*33	19	14	5 7	16		12.7	27.1	Moist-Wet						Gray, 5Y 4/1	Silty clay with rock fragments	CH	Poor	Stop drilling at 18:50 on 9/24. Resume drilling at 7:50 on 9/25
34			9 11			BG=12.7	BG=13.4							Gray, dark gray				with 5 feet of water in hole.
35	20	20	4 9	20		12.9	28.2	Wet-Moist						Gray, 5Y 4/1	Silty clay with rock fragments	CH	Poor	
36			11 13			BG=12.9	BG=14.5							Gray, dark gray				

Boring terminated at 36 feet below ground surface, auger depth is 34 feet at 8:30 on 9/25.

Boring Notes: NR=No Reading
BG=Background

*Note: Driller thought he had taken 30-32 feet split spoon the evening before. Since augers are at 30 feet and drilled out 30-32 feet interval without taking a sample in morning when we started.

WELL/BORING NAME SW1-4 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 P.U.S.

PAGE 1 OF 2

SECOR # W0021-001-22 COMPLETED BY Stephen R. Zayko DATE 9/23-9/24/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 18:35
COMPLETED: 9/23
METHOD: 15:30
REMARKS: 9/24 4 1/4" HSA

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
1	1,2,3	18	6 10	25		7.7	56.5	Dry-Moist						Black to gray-white	Topsoil NA	OL SM	NA	Topsoil in top, cement in bottom
2	4,5		15 14			BG=7.1	BG=4.1							Black	Coarse sand	SW	Slight	Cinders. Top 2 feet, 5 split spoons to split with PVC.
3	6	18	1 4	7		4.7	20.2	Dry-Moist						Black/gray	Coarse to medium sand	SM	Mod	Cinder/sand - odor
4			3 4			BG=4.0	BG=3.5	Moist						Gray	Silty clay	CL	Slight	Clay - odor with black stains
5	7	14	3 4	10		4.4	17.3	Moist						Gray with yellow tan	Silty clay	CL	Mod	Black stains and odor
6			6 6			BG=4.0	BG=3.7											
7	8	24	3 6	11		4.2	16.0	Moist						Gray to light brown, to yellow	Silty clay	CL	Well	
8			5 8			BG=3.9	BG=3.8							Brown blue				
9	9	24	3 7	14		3.7	16.0	Moist						10YR 6/1 to 3/1 to 5/6	Silty clay	CL	Well	
10			7 10			BG=3.6	BG=6.2							Gray-very dark gray yellow brwn				
11	10	18	9 10	21		3.4	16.6	Moist						10YR 6/1 to 3/1 to 5/6	Silty clay	CL	Well	
12			11 17			BG=3.3	BG=7.0							Gray-very dark gray yellow brwn				At 8:00 AM on 9/24/97, resume drilling.
13	12	24	10 15	35		11.0	13.4	Moist-Dry						10YR 6/1 to 2/1 to 5/6	Silty clay	CL	Mod	Post depositional oxidations along fracture planes
14			20 28			BG=11.0	BG=9.0							Gray-black-yellow brown				
15	13	24	12 14	29		8.1	10.4	Moist-Dry						7.5YR 5/8 to 4/6	Silty clay	CL	Mod	Till, post depositional oxidations along fracture planes
16			15 20			BG=8.1	BG=2.8							Strong brown				
17	14	24	8 10	24		3.6	10.3	Moist-Dry						7.5YR 5/8 to 4/6	Silty clay with rock fragments	CL	Poor	Till, post depositional oxidations along fracture planes
18			14 14			BG=3.6	BG=2.4							Strong brown				
19	15	24	3 7	17		3.7	15.4	Moist-Dry						7.5YR 5/8 to 4/6	Silty clay with rock fragments	CL	Poor	Till
20			10 11			BG=3.5	BG=3.3							Strong brown, less organics				
21	16	18	7 8	19		4.4	22.7	Moist						5Y 4/1 to gray	Silty clay with rock fragments	CL	Poor	Till
22			11 14			BG=4.1	BG=3.0							Dark gray to gray				
23	17	24	4 7	16		3.5	14.5	Moist						5Y 4/1 to gray	Silty clay with rock fragments	CL	Poor	Till
24			9 10			BG=3.8	BG=2.6							Dark gray to gray				

WELL/BORING NAME SW1-4 JOB NAME/LOCATION CLH Painesville, OH Area I WELL/BORING LOCATION Area 1 P.U.S.

PAGE 2 OF 2

SECOR # W0021-001-22 COMPLETED BY Stephen R. Zayko DATE 9/23-9/24/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 18:35
COMPLETED: 9/23
METHOD: 15:30
REMARKS: 9/24 4 1/4" HSA

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
25	18	20	4 8	27		3.5	9.7	Moist						5Y 4/1 to gray	Clay with rock fragments	CL	Poor	Till
26			19 22			BG=3.1	BG=3.3	Moist-Dry						Dark gray to gray				
27	19	22	7 11	30		3.3	5.6	Moist-Dry						5Y 4/1 to gray	Silty clay	CL	Mod	Till
28			19 17			BG=2.6	BG=2.2							Dark gray to gray				
29	20	24	7 12	27		3.0	10.4	Wet						5Y 4/1 to gray	Silty clay	CL	Mod-Poor	Till
30			15 13			BG=2.8	BG=2.6	Moist						Dark gray to gray	Silty clay with rock fragments			
31	21	22	7 12	28		3.1	3.3	Wet Moist						5Y 4/1 to gray	Silty clay with rock fragments	CL	Mod-Poor	Till
32			16 19			BG=2.9	BG=2.2	Moist-Dry						Dark gray to gray				
33	22	22	8 16	33		2.4	5.5	Wet to						5Y 4/1 to gray	Silty clay with rock fragments	CL	Mod-Poor	Till
34			17 17			BG=2.5	BG=2.3	Moist-Wet						Dark gray to gray				
35	23	20	8 17	37		2.2	3.3	Wet to						5Y 4/1 to gray	Silty clay with rock fragments	MH	Mod-Poor	Till
36			20 25			BG=2.2	BG=2.6	Moist-Wet						Dark gray to gray				
37	24	22	8 9	20		2.4	3.7	Moist						5Y 4/1 to gray	Clayey silt	ML	Mod	Till
38			11 14			BG=2.4	BG=2.6							Dark gray to gray				
39	25	20	47 78	100		2.3	3.1	Moist-Wet						5Y 4/1 to gray	Clayey silt	MH	Mod	Till
40			N R			BG=3.3	BG=2.6							Dark gray to gray				
41	26	24	3 4	11		2.6	3.2	Wet						5Y 4/1 to gray	Clay	CH	Mod	Till
42			7 8			BG=2.6	BG=2.6							Dark gray to gray				

Boring terminated at 42 feet and drilled out to 41 feet at 10:40 AM on 9/24/97

Boring Notes: BG=Background
NR=No Reading
NA=Not Applicable

WELL/BORING NAME SW1-5
PAGE 1 OF 2
SECOR # W0021-001-23

JOB NAME/LOCATION CLH Painesville, OH
Area 1
COMPLETED BY Stephen R. Zayko

WELL/BORING LOCATION Area 1
ASR near RR Tank&OAS
DATE 9/17/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 9:00
COMPLETED: 11:25
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1 2	1,2 3	17	4 9 8 6	17		2.7 BG=2.7	10.5 BG=2.7	Dry						Black w/white lime	Silty medium sand	SM	Slight	Fill
3 4	4	18	8 9 10 14	19		2.9 BG=2.7	5.2 BG=2.7	Dry						10 YR 5/6 Yellowish brown	Fine medium sandy-silt	ML	Slight	
5 6	5	18	8 8 13 5	21		2.8 BG=2.7	4.2 BG=2.7	Dry						10 YR 6/1, 5/6 Gray,yellow-brn	Fine medium sandy-silt	ML	Slight	
7 8	6	23	5 5 6 6	11		2.8 BG=2.8	5.6 BG=2.7	Dry						10 YR 6/1 Gray	Fine medium sandy-silt	ML	Slight	
9 10	7	24	6 8 8 12	16		2.9 BG=2.7	3.6 BG=2.6	Dry-Moist						10 YR 6/1 Gray	Fine med-coars sandy-silt	ML	Poor	
11 12	8	24	5 3 16 19	19		2.7 BG=2.6	3.7 BG=2.6	Dry-Moist						10 YR 5/4, 5/1 Gray,yellow-brn	Silty clay with coarse sand	ML CL	Poor	Till
13 14	9	24	8 12 13 5	25		2.7 BG=2.6	3.6 BG=2.5	Dry						4/N4, 5Y 4/1 Dark gray	Till, Clay with	CC	Poor	Till
15 16	10	24	5 10 13 17	23		2.6 BG=2.6	3.5 BG=2.6	Dry						4/N4, 5Y 4/1 Dark gray	Till, Clay with rock fragments	CC	Poor	Till
17 18	11	24	5 11 14 19	25		2.6 BG=2.6	3.5 BG=2.4	Dry-Moist						4/N4, 5Y 4/1 Dark gray	Till, Clay with rock fragments	CC	Poor	Till
19 20	12	24	3 7 7 7	14		2.5 BG=2.5	4.2 BG=2.7	Dry						4/N4, 5Y 4/1 Dark gray	Till, Clay with rock fragments	CL	Poor	Till
21 22	13	0	20 20 22 25	42		NR NR	NR NR			NO RECOVERY								Rock on bottom of drive shoe
23 24	14		10 11 11 13	22		2.6 BG=2.6	3.3 BG=2.6	Moist						4/N4, 5Y 4/1 Dark gray	Till, Clay with rock fragments	CL	Poor	Till

WELL/BORING NAME SW1-5 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1 ASR near RR Tank&OAS

PAGE 2 OF 2

SECOR # W0021-001-23 COMPLETED BY Stephen R. Zayko DATE 9/17/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 9:00
COMPLETED: 11:25
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25 26	15	24	8 20 20 20	40		2.5 BG=2.4	10.5 BG=2.7	Dry						4/N4 Dark gray	Clay w/ rock fragments	CL	Poor	Till
27 28	16	24	8 8 11 13	19		2.5 BG=2.5	5.2 BG=2.7	Dry						5/ 5 to 5Y 5/1 Gray	Clay w/ rock fragments	CL	Poor	Till
29 30	17	0	12 13 14 17	27		NR NR	NR NR			NO RECOVERY								
31 32	18	0	19 37 21 25	58		NR NR	NR NR			NO RECOVERY								Will overdrill this zone by 6-12 inches to knock aside whatever is blocking spoon
33 34	19	23	9 10 11 15	21		2.5 BG=2.5	3.2 BG=2.6	Moist VeryMoist						5Y 4/1 Dark gray	Silty clay	CL/CH	Mod.-Slight	No rock fragments, more silty
35 36	20	24	10 10 11 11	21		2.6 BG=2.6	3.3 BG=2.7	Moist-Wet						5Y 4/1 Dark gray	Silty clay	CH	Mod.-Slight	
37 38	21	24	11 8 8 8	16		2.6 BG=2.6	3.3 BG=3.0	Moist-Wet						5Y 4/1 Dark gray	Silty clay	CH	Mod.	Less moist than previous 4 feet
39 40	22	24	4 7 7 7	14		2.7 BG=2.7	4.1 BG=3.4	Moist						5Y 4/1 Dark gray	Silty clay	CH	Slight Poor	Some staining to 2.5 YR 3/4 (dark reddish brown) from same color rock fragments
																		End of boring at 40 feet below ground surface

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME SW1-6 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1-Dartron Cloudy, Windy, 60°F

PAGE 1 OF 1

SECOR # W0021-001-24 COMPLETED BY Reuben J. Kent DATE 9/30/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 8:25
COMPLETED: 10:15
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	19	32 19	33		0.3	2.5	Dry						10YR 3/2 to 4/4 to 5/1	Cobbles, cinders	SM	Poor	Cobbles and cinders 0-1 ft, augered to .5 ft below ground surface
2	3,4		14 15			BG=4.0	BG=4.0							Dk. gray brown-yellow brown-gray	Sand, clayey silt	ML		1-1.5 ft, mixed medium to coarse sand. 1.5-2 ft, clayey silt, trace coarse sand
3	5	18	7 7	12		0.1	2.4	Dry						Mottled 10YR 5/4 t 5/12	Clayey silt	ML	Mod	
4			5 6			BG=4.1	BG=3.9							Yellowish brown to gray				
5	6	23	4 3	8		0.0	2.2	Dry-Moist						Mottled 10YR 5/4 t 5/1 with 2.5Y 4/3	Clayey silt	ML	Mod	Clayey silt with trace of coarse sand to 5.6 feet below ground surface
6			5 5			BG=4.1	BG=3.8							Yellowish brown to gray w/ olive brown	Silty clay	CL		Trace of fine sub-gravel, .02' layer of coal/cinders at 5.6 feet
7	7	17	3 3	6		0.8	2.3	Dry-Moist						2.5Y 4/3	Silty clay	CL	Mod	Trace of fine sub-gravel
8			3 4			BG=4.0	BG=3.7							Olive brown				
9	8	22	2 2	4		0.0	3.1	Moist						2.5Y 4/3 with trace of 5/1	Silty clay	CL	Mod	Trace of fine sub-gravel
10			2 3			BG=4.0	BG=3.8							Olive brown with trace of gray				
11	9	16	2 2	5		0.1	3.2	Moist						2.5Y 4/3 w/ trace of 5/1 to 10.4', 5Y 4/3	Silty clay	CL	Mod	Little fine sub-gravel, trace of organic fragments
12			3 3			BG=3.9	BG=3.6							Olive brown w/ trace of gray, olive			Poor	
13	10	17	3 4	6		0.0	2.5	Wet						5Y 4/3 to 12.4', 2.5Y 4/2	Silty clay to 12.4	CL	Poor	Little fine sub-gravel
14			2 2			BG=4.0	BG=3.8							Olive, dark grayish brown		SP		Little fine sub-gravel, medium sand. Rock stuck in end of spoon
15	11	19	3 4	24		0.0	2.2	Moist-Dry						10YR 5/1	Clayey silt	ML	Mod	Gravel layer 0.03 feet thick at 15.0 feet, slight plasticity
16			20 15			BG=3.8	BG=3.6							Gray				
17	12	22	5 12	33		0.2	1.9	Dry						10YR 5/1	Silt with rock fragments	ML	Well	0.9 feet of sluff in spoon, slight plasticity
18			21 20			BG=3.7	BG=3.7							Gray				
19	13	20	7 12	24		0.0	1.5	Dry						10YR 5/1	Silt	ML	Well	0.4 feet of sluff in spoon
20			12 13			BG=3.8	BG=3.8							Gray				
																		Boring terminated at 20 feet below ground surface, well set at 20 feet with a 10 foot screen according to Roger Anderson.
																		Driller attempted to clean out hole to 20 feet below ground surface, made it to 19 feet 8 inches.
																		Boring Notes: BG=Background

WELL/BORING NAME SW1-7 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1

PAGE 1 OF 2

SECOR # W0021-001-34 COMPLETED BY Reuben J. Kent DATE 10/1/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:30
COMPLETED: 15:30
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	17	5 13	25		0.0	2.0	Dry						10YR 3/1 to 4/3	Silty organic rich clay	OL	Poor	Little gravel (fine sub-gravel), topsoil
2	3		12 7			BG=0.0	BG=0.0							Very dark gray to brown				
3	4	20	9 14	26		0.0	5.9	Dry						Mottled 10YR 5/6 w/ 5/1	Mottled clayey silt	ML	Poor	Trace of fine sub-gravel
4			12 12			BG=0.0	BG=0.0							Yellowish brown w/ gray				Trace of fine sand, very stiff
5	5	17	52 19	38		0.0	8.3	Dry						Mottled 10YR 5/6 w/ 5/1	Mottled clayey silt	ML	Mod, rocky	Trace of fine sand, hard
6			19 21			BG=0.0	BG=0.0							Yellowish brown w/ gray				
7	6	14	32 13	23		0.0	3.4	Dry						Mottled 10YR 5/6 w/ 5/2	Silty clay	CL	Mod	Very stiff, trace of weathered shale at 7.5 feet below ground surface
8			10 12			BG=0.0	BG=0.0							Yellowish brown w/ grayish brown				Trace of fine sand
9	7	19	7 7	19		0.0	1.8	Dry						Mottled 10YR 5/6 w/ 5/2	Silty clay	CL	Mod	Trace of weathered shale and sub-gravel
10			12 13			BG=0.0	BG=0.0							Yellowish brown w/ grayish brown				
11	8	20	7 12	23		0.0	0.7	Dry						Mottled 10YR 5/6 w/ 5/2 to 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, very stiff
12			11 13			BG=0.0	BG=0.0							Yellow brn w/ gray-brown to dark gray				
13	9	10	31 40	52		0.0	3.2	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of coarse sand and fine sub-gravle, hard
14			12 15			BG=0.0	BG=0.0							Dark gray				
15	10	16	26 9	18		0.0	4.1	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of coarse sand and fine sub-gravle, hard
16			9 13			BG=0.0	BG=0.0							Dark gray				
17	11	19	5 6	13		0.0	7.1	Dry-Moist						10YR 4/1	Silty clay	CL	Mod	Trace of weathered shale and fine sub gravel, stiff
18			7 9			BG=0.0	BG=0.0							Dark gray				
19	12	22	7 7	14		0.0	3.7	Dry-Moist						10YR 4/1	Silty clay	CL	Mod	Trace of weathered shale and fine sub gravel, stiff
20			7 6			BG=0.0	BG=0.0							Dark gray				
21	13	22	5 9	16		0.0	3.4	Dry-Moist						10YR 4/1	Silty clay	CL	Mod	Trace of weathered shale and fine sub gravel, stiff
22			7 8			BG=0.0	BG=0.0							Dark gray				
23	14	22	4 4	10		0.0	7.3	Moist						10YR 4/1	Silty clay	CL	Mod	Medium stiff, moderately low plasticity
24			6 8			BG=0.0	BG=0.0							Dark gray				
25	15	20	4 5	12		0.0	6.7	Dry-Moist						10YR 4/1	Silty clay	CL	Mod	Increasing silt content in lower .5 feet of sample
26			7 8			BG=0.0	BG=0.0							Dark gray				

WELL/BORING NAME SW1-7 JOB NAME/LOCATION CLH Painesville, OH Area 1 WELL/BORING LOCATION Area 1

PAGE 2 OF 2

SECOR # W0021-001-34 COMPLETED BY Reuben J. Kent DATE 10/1/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:30
COMPLETED: 15:30
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
27	17	14	9 10	25		0.0	1.8	Dry-Moist						10YR 4/1	Clayey silt	MH	Well	
28			15 15			BG=0.0	BG=0.0							Dark gray				
29	18	16	2 4	12		0.0	3.7	Moist Wet						10YR 4/1	Clayey silt	MH	Well	Wet at 29.5 to 29.9 feet, free water in spoon
30			8 8			BG=0.0	BG=0.0	Moist-Wet						Dark gray				
31	19	22	4 5	12		0.0	1.2	Moist-Wet						10YR 4/1	Silty clay	CH	Well	Medium stiff, moderately plastic. Soil cuttings sticking togethor
32			7 8			BG=0.0	BG=0.0							Dark gray				
33	20	20	3 5	12		0.0	3.2	Moist						10YR 4/1	Silty clay	CH	Well	
34			7 9			BG=0.0	BG=0.0							Dark gray				
35	21	23	3 4	10		0.0	1.3	Moist						10YR 4/1	Silty clay	CH	Well	Medium stiff
36			6 8			BG=0.0	BG=0.0							Dark gray				

Boring terminated at 36 feet below ground surface, well set at 36 feet

Boring Notes: BG=Background

Trace is <4%, little is 10-20%, some is 20-35%

WELL/BORING NAME SS2-1 JOB NAME/LOCATION CLH Painesville, OH Area 2 WELL/BORING LOCATION Area 2

PAGE 1 OF 1

SECOR # W0021-001-26 COMPLETED BY Teresa Szuper DATE 9/3/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
6"	1	6	NA	NA		42.8	0.0	Moist						Black	Fill		Well	Some moderate trace of humic/peaty topsoil with clasts up to .5 inches, foundry material
12"	2	6	NA	NA		34.9	0.0	Moist						Light to medium brown/gray	Fill	Stiff	Poor	
18"	3	6	NA	NA		38.0	0.0	Moist						Light gray to light brown		Stiff	Mod	Some moderate trace of humic/peaty topsoil with clasts up to .5 inches, foundry material
24"	4	6	NA	NA		29.2	0.0	Moist						Light gray to light brown		Stiff		
																		End of boring at 2 feet below ground surface.

STARTED: 7:40
COMPLETED: 8:30
METHOD: 3" Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME SS2-2 JOB NAME/LOCATION CLH Painesville, OH Area 2 WELL/BORING LOCATION Area 2

PAGE 1 OF 1

SECOR # W0021-001-26 COMPLETED BY Teresa Szuper DATE 9/4/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 4:00
COMPLETED: 4:40
METHOD: 3" Hand Auger
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
6"	1	6	NA	NA	1 10 100	193.0	193.0	Moist						Dark brown	Fill - silty sand	SC	Mod	
12"	2	6	NA	NA		133.0	133.0	Moist						Olive gray	Silty clay	CH	Mod	
18"	3	6	NA	NA		26.2	26.2	Moist						Light gray to brown	Silty clay	CH	Well	
24"	4	6	NA	NA		17.4	17.4	Moist						Light brown to gray	Silty clay	CH	Well	
																		End of boring at 2 feet below ground surface.
																		Boring Notes: BG=Background NR=No Reading

WELL/BORING NAME SW2-1 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 2

PAGE 1 OF 2 Area 2 Sunny, mild west wind, 80°F

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/7/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:15
COMPLETED: 16:15
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	19	4 21	31		0.0	4.3	Dry						10YR 2/1 (black) Mottled 10YR 4/6, 5/1 and 6/1 (dark yellow brwn-gray)	Medium sand	SP	Poor	Little gravel, little cinders, trace fine sand
2	3		10 8			BG=0.0	BG=0.0	Dry-Moist							Silty clay	OL		Lower 0.3 feet, mottled silty clay with trace of hairline roots and wood fragments
3	4	17	2 2	5		0.0	0.0	Dry-Moist						Mottled 10YR 4/6 and 5/1 Dark yellowish brown and gray	Silty clay	CL	Mod	
4			3 5			BG=0.0	BG=0.0											0.4 feet of sluff, medium stiff with trace of coarse sand
5	5	14	2 3	7		0.0	0.0	Dry-Moist						Mottled 10YR 4/6 and 5/1 Dark yellowish brown and gray	Silty clay	CL	Mod	Trace of fine sub-gravel
6			4 5			BG=0.0	BG=0.0											
7	6	16	3 5	10		0.0	0.0	Dry-Moist						Mottled 10YR 4/6 and 5/1 Dark yellowish brown and gray	Silty clay	CL	Mod	Trace of fine sub-gravel, medium stiff
8			5 8			BG=0.0	BG=0.0											
9	7	19	3 5	13		0.0	0.0	Dry-Moist						Mottled 10YR 4/6 and 5/1 Dark yellowish brown and gray	Silty clay	CL	Mod	0.4 feet of sluff, stiff
10			8 9			BG=0.0	BG=0.0											
11	8	23	5 5	13		0.0	0.0	Dry						Mottled 10YR 4/3 and 2.5Y 4/3 Brown and olive brown	Silty clay	CL	Mod	Trace of coarse sand and fine sub-gravel
12			8 15			BG=0.0	BG=0.0											
13	9	0	5 6	17		NR	NR	Dry (in spoon)		No Recovery								No recovery
14			11 11			NR	NR											
15	10	24	11 11	23		0.0	0.0	Dry						10YR 4/3 to 4/1 Brown to dark gray	Silty clay	CL	Mod	Stiff, trace of fine sand, fine sub-gravel, coarse sand
16			12 13			BG=0.0	BG=0.0											
17	11	24	11 11	22		0.0	0.0	Dry						10YR 4/1 Gray	Silty clay	CL	Mod	Stiff, trace of fine sand, fine sub-gravel, coarse sand
18			11 13			BG=0.0	BG=0.0											
19	12	23	9 9	19		0.0	0.0	Dry						10YR 4/1 Gray	Silty clay	CL	Mod	0.2 feet of sluff, trace of fine sand, fine sub-gravel, coarse sand
20			10 12			BG=0.0	BG=0.0											Very stiff
21	13	23	8 8	18		0.0	0.0	Dry						10YR 4/1 Gray	Silty clay	CL	Mod	Very stiff, trace of fine sub-gravel, coarse sand.
22			10 9			BG=0.0	BG=0.0											
23	14	20	4 6	15		0.0	0.0	Dry-Moist						10YR 4/1 Gray	Silty clay	CL	Mod	Trace of fine sub-gravel and coarse sand
24			9 9			BG=0.0	BG=0.0											
25	15	23	4 5	12		0.0	0.0	Moist						10YR 4/1 Gray	Silty clay	CL	Mod	Low to medium plasticity, stiff
26			7 8			BG=0.0	BG=0.0											

WELL/BORING NAME SW2-1
PAGE 2 OF 2
SECOR # W0021-001-19

JOB NAME/LOCATION CLH Painesville, OH
Area 2
COMPLETED BY Reuben J. Kent

WELL/BORING LOCATION Area 2
Sunny, mild west wind, 80°F
DATE 10/7/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:15
COMPLETED: 16:15
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
27	16	10	3 4	9		0.0	0.0	Moist						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, medium stiff
28			5 8			BG=0.0	BG=0.0							Dark gray				
29	17	23	3 4	9		0.0	0.0	Moist-Dry						10YR 4/1	Silty clay	CL	Mod	0.7 feet of sluff, trace of fine sub-gravel, medium stiff
30			5 7			BG=0.0	BG=0.0							Dark gray				
31	18	22	3 4	9		0.0	0.0	Moist						10YR 4/1	Silty clay	CL	Mod	0.2 feet of sluff, trace of fine sub-gravel, medium stiff
32			5 9			BG=0.0	BG=0.0							Dark gray				
33	19	23	5 7	18		0.0	0.0	Moist-Dry						10YR 4/1	Silty clay	CL	Mod	Increasing silt content in lower 0.2 feet
34			11 7			BG=0.0	BG=0.0							Dark gray				
35	20	24	7 9	20		0.0	0.0	Moist-Dry						10YR 4/1	Clayey silt	ML	Mod	Trace of fine sand, cohesive, stiff
36			11 9			BG=0.0	BG=0.0							Dark gray				
37	21	19	8 11	28		0.0	0.0	Moist-Wet to Wet						10YR 4/1	Clayey silt to silt	MH	Mod to Well	0.5 feet sluff, 0.5 feet of clayey silt, 0.6 feet silt. Wet to saturated, dense, non-cohesive, little free water in spoon
38			17 16			BG=0.0	BG=0.0							Dark gray				
39	22	23	2 4	12		0.0	0.0	Wet						10YR 4/1	Silt to clayey silt	MH to CL	Mod	Cuttings are sticking togethor in chunks from augers, non-cohesive. Cohesive in lower 0.5 feet, medium stiff.
40			8 6			BG=0.0	BG=0.0							Dark gray				
41	23	23	3 4	9		0.0	0.0	Moist						10YR 4/1	Silty clay	CL	Mod	Medium plasticity, medium stiff, cohesive
42			5 7			BG=0.0	BG=0.0							Dark gray				

Boring terminated at 42 feet below ground surface, well set at 42 feet

Boring Notes: BG=Background
Trace <10%,little 10-20%,some 20-30%

WELL/BORING NAME SW2-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 2

PAGE 1 OF 2 Area 2 Sunny, mild west wind, 80°F

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/7/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 7:50
COMPLETED: 10:00
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	14	2 3	9		0.0	32.4	Dry						Black to mottled 10YR 4/4,4/6 and	Medium sand	SP	Poor	Little cinder fragments, trace of gravel
2	3		6 3			BG=2.0	BG=0.0							Black to dark yellow brown and	Silty clay	CL	Mod	Lower 0.2 feet, mottled 10YR 4/4 & 5/1, silty clay
3	4	10	5 5	11		0.0	20.1	Dry-Moist						Mottled 10YR 4/6 and 5/1	Silty clay	CL	Mod	Trace of fine sand, stiff, medium plasticity
4			6 7			BG=1.7	BG=0.0							Dark yellowish brown and gray				
5	5	22	5 7	17		0.0	0.0	Dry-Moist						2.5Y 4/3	Silty clay	CL	Mod	Trace of coarse sand
6			10 13			BG=2.2	BG=0.0							Olive brown				
7	6	24	8 10	23		0.0	0.0	Dry						2.5Y 4/3 w/ trace of 10YR 4/4	Silty clay	CL	Mod	0.5 feet of sluff, trace of coarse sand and fine sub-gravel, stiff
8			13 16			BG=0.7	BG=0.0							Olive brown w/trace-dark yellow				
9	7	24	9 13	35		0.0	0.0	Dry						Mottled 2.5Y 4/3 & 10YR 4/4 w/4/1	Silty clay	CL	Mod	0.4 feet of sluff, trace of coarse sand and fine sub-gravel, stiff
10			22 29			BG=0.0	BG=0.0							Olive & dark yellow brown w/				Lower 0.2 feet, 10YR 4/1
11	8	24	4 8	25		0.0	2.2	Dry						Mottled 2.5Y 4/3,10YR 4/1 &	Silty clay	CL	Mod	Trace of reddish brown (5YR 4/3) staining, trace of coarse sand and fine sub-gravel, stiff
12			17 28			BG=0.0	BG=0.0							Olive brown,dark gray & dark				
13	9	24	4 9	22		0.0	0.0	Dry						10YR 4/1	Silty clay	CL	Mod	0.2 feet of sluff, trace of fine sub-gravel, very stiff
14			13 15			BG=0.0	BG=0.0							Dark gray				
15	10	24	10 14	30		0.0	0.0	Dry						10YR 4/1	Silty clay	CL	Mod	0.2 feet of sluff, trace of fine sub-gravel, very stiff
16			16 26			BG=0.0	BG=0.0							Dark gray				
17	11	18	4 6	13		0.0	0.0	Dry						10YR 4/1	Silty clay	CL	Mod	0.2 feet of sluff, trace of fine sub-gravel, very stiff
18			7 13			BG=0.0	BG=0.0							Dark gray				
19	12	24	5 8	20		0.0	0.0	Dry						10YR 4/1	Silty clay	CL	Mod	0.3 feet of sluff, trace of fine sand, fine sub-gravel, coarse sand
20			12 13			BG=0.0	BG=0.0							Dark gray	Clayey silt	ML		Lower 0.4 feet, clayey silt, cohesive, stiff
21	13	24	8 11	28		0.0	0.0	Dry						10YR 4/1	Clayey silt	ML	Mod	Very stiff, trace of coarse sand
22			17 20			BG=0.0	BG=0.0							Dark gray				
23	14	24	10 9	23		0.0	0.0	Dry						10YR 4/1	Clayey silt	ML	Mod	0.2 feet of sluff, very stiff
24			14 17			BG=0.0	BG=0.0							Dark gray				
25	15	24	2 5	13		0.0	0.0	Moist-Dry						10YR 4/1	Clayey silt	ML	Mod	Lense of interbedded clay at 25.5 feet (0.3 feet thick), stiff
26			8 13			BG=0.0	BG=0.0							Dark gray				

WELL/BORING NAME SW2-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 2

PAGE 2 OF 2 Area 2 Sunny, mild west wind, 80°F

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/7/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 7:50
COMPLETED: 10:00
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
27	16	18	12 17	37		0.0	0.0	Moist-Wet						10YR 4/1	Silt	ML	Well	Stiff, lower 0.1 feet clayey silt, moist
28			20 20			BG=0.0	BG=0.0							Dark gray	Clayey silt			
29	17	19	12 16	33		0.0	0.0	Wet						10YR 4/1	Silt	ML	Well	Little free water in spoon, non-cohesive, cuttings sticking together
30			17 19			BG=0.0	BG=0.0							Dark gray				
31	18	18	3 10	27		0.0	0.0	Wet						10YR 4/1	Silt	ML	Well	0.7 feet of sluff, non-cohesive, dense
32			17 21			BG=0.0	BG=0.0							Dark gray				
33	19	19	8 10	23		0.0	0.0	Wet						10YR 4/1	Silt	ML	Well	Slightly cohesive
34			13 19			BG=0.0	BG=0.0							Dark gray				
																		Boring terminated at 34 ft below ground surface, well set at 34 ft
																		Boring Notes: BG=Background

WELL/BORING NAME SB3-1 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 3

PAGE 1 OF 2 Partly cloudy, windy, 60°F

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/1/97

SECOR INTERNATIO[illegible], INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 8:30
COMPLETED: 11:00
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	17	5 7	20		0.0	0.0	Dry						10YR 4/1 to 4/3	Clayey silt	ML	Poor	1 foot gray (10YR 4/1) clayey silt, trace of cinders
2	3		13 16			BG=0.0	BG=0.0							Dark gray to brown				0.4 feet mottled, trace of fine subrounded and sub-gravel
3	4	16	10 18	36		0.0	0.0	Dry						Mottled 10YR 4/1 and 4/6	Clayey silt	ML	Poor	Trace of fine sub-gravel
4			18 21			BG=0.0	BG=0.0							Dark gray and dark yellowish brown				
5	5	19	6 6	12		0.0	0.0	Dry						Mottled 10YR 4/1 and 4/6	Clayey silt	ML	Mod	Trace of fine sub-gravel
6			6 6			BG=0.0	BG=0.0							Dark gray and dark yellowish brown				
7	6	22	5 7	17		0.0	3.2	Dry						Mottled 10YR 4/1 and 4/6	Silty clay	CL	Mod	Trace of fine sub-gravel
8			10 13			BG=0.0	BG=0.0							Dark gray and dark yellowish brown				
9	7	20	6 7	16		0.0	2.4	Dry						Mottled 10YR 4/1, 4/6 to 4/2	Silty clay	CL	Mod	Trace of fine sub-gravel
10			9 13			BG=0.0	BG=0.0							Dark gray,yellow brown-gray brown				
11	8	20	7 13	30		0.0	7.6	Dry						10YR 4/2 w/ trace of 4/4 mottling	Silty clay	CL	Mod	Trace of fine sub-gravel
12			17 20			BG=0.0	BG=0.0							Dark grayish brown w/ dark yel-brown				
13	9	22	7 9	20		0.0	14.6	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, stiff
14			11 15			BG=0.0	BG=0.0							Dark gray				
15	10	23	9 11	25		0.0	9.7	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, stiff
16			14 20			BG=0.0	BG=0.0							Dark gray				
17	11	22	7 11	27		0.0	6.9	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, stiff
18			16 21			BG=0.0	BG=0.0							Dark gray				
19	12	22	7 12	27		0.0	3.9	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, stiff
20			15 20			BG=0.0	BG=0.0							Dark gray				
21	13	22	7 11	23		0.0	3.8	Moist						10YR 4/1	Clayey silt	MH	Mod	Little fine sand at 20-21 feet below ground surface, moist at 20.5-20.7 feet, increasing silt content, very stiff
22			12 12			BG=0.0	BG=0.0	Dry						Dark gray				
23	14	23	6 7	18		0.0	9.4	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, very stiff, clay content
24			11 12			BG=0.0	BG=0.0							Dark gray				
25	15	20	4 8	17		0.0	6.1	Dry						10YR 4/1	Silty clay	CL	Mod	Trace of fine sub-gravel, very stiff, clay content
26			9 11			BG=0.0	BG=0.0							Dark gray				

WELL/BORING NAME SB3-1 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 3

PAGE 2 OF 2 Partly cloudy, windy, 60°F

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/1/97

SECOR INTERNATIO[illegible], INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 8:30
COMPLETED: 11:00
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
27 28	16	20	4 6 9 8	15		0.0 BG=0.0	4.5 BG=0.0	Dry						10YR 4/1 Dark gray	Silty clay	CL	Well	
29 30	17	22	6 9 15 12	24		0.0 BG=0.0	4.7 BG=0.0	Dry-Moist						10YR 4/1 Dark gray	Clayey silt	MH	Mod	Trace of dark gray weathered shale at 29.5 feet, increasing silt content
31 32	18	20	6 9 11 12	20		0.0 BG=0.0	4.5 BG=0.0	Moist Dry						10YR 4/1 Dark gray	Clayey silt	MH	Well	Moist in upper 1.0 foot of sample
33 34	19	23	8 11 16 19	27		0.0 BG=0.0	6.0 BG=0.0	Moist-Wet Wet						10YR 4/1 Dark gray	Clayey silt	MH	Well	Free water in spoon at 33.0 feet

Boring terminated at 34 feet below ground surface, backfilled with bentonite grout

Boring Notes: BG=Background

Trace <10%, little 10-20%, some 20-35%

PID used - Photovac Mocrotip MP 1000

WELL/BORING NAME SB3-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 3 By lake shoreline

PAGE 1 OF 2

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 9/26 & 9/29/97

SECOR INTERNATIO[illegible], INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:05 9/26
COMPLETED: 16:02 9/29
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2,3	22	5 5	14		0.2	2.3	Dry-Moist		organic				Black 10YR 6/8 and 6/1	Topsoil to silty clay/clayey silt	ML		4 inches of topsoil
2	4,5		9 9			BG=0.1	BG=0.7							Brownish yellow and gray	Clayey silt		Mod	Did not auger on 9/26, just split spoon for sample
3	6	23	5 7	15		0.0	0.0	Dry						10YR 5/3	Silty clay	ML	Mod	
4			8 11			BG=0.0	BG=0.0							Brown				
5	7	20	5 5	15		0.0	0.0	Dry						Mottled 10YR 4/4 and 5/1	Silty clay	CL	Mod	Trace of coarse sand
6			10 13			BG=0.0	BG=0.0							Dark yellowish brown and gray				
7	8	23	5 8	21		0.0	0.0	Dry-Moist						10YR 4/4 and 5/1	Silty clay	CL	Mod	Trace of coarse sand, moist at 7 feet, moderate plasticity
8			13 13			BG=0.0	BG=0.0							Dark yellowish brown and gray				
9	9	23	10 11	28		0.0	0.0	Dry-Moist						10YR 4/4 and 5/1	Silty clay	CH	Mod	Trace of fine sub-gravel
10			17 19			BG=0.0	BG=0.0	Dry						Dark yellowish brown and gray				
11	10	22	10 17	39		0.0	0.5	Dry						10YR 4/4 and 5/1, to 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
12			22 17			BG=0.0	BG=0.0							Dark yellow- brown & gray to dark gray				
13	11	22	9 10	22		0.0	0.1	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
14			12 13			BG=0.0	BG=0.0							Dark gray				
15	12	22	9 10	21		0.0	0.0	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
16			11 12			BG=0.0	BG=0.0							Dark gray				
17	13	23	7 9	22		0.0	0.0	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
18			13 14			BG=0.0	BG=0.0							Dark gray				
19	14	20	7 10	24		0.0	0.1	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
20			14 13			BG=0.0	BG=0.0							Dark gray				
21	15	19	7 10	23		0.0	0.0	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated (field blank by RJK at 23 feet)
22			13 12			BG=0.0	BG=0.0							Dark gray				
23	16	22	5 9	18		0.0	0.0	Dry						10YR 4/1	Silty clay	CH	Mod	Trace of fine sub-gravel (shale and limestone), moderate plasticity when hydrated
24			9 11			BG=0.0	BG=0.0							Dark gray				
25	17	20	5 10	20		0.0	0.0	Dry						10YR 4/1	Silty clay	CH	Mod	.02 feet thick lense of weathered shale at 25 feet below ground surface (dark gray), trace of fine sub-gravel
26			10 12			BG=0.0	BG=0.0							Dark gray				

WELL/BORING NAME SB3-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 3

PAGE 2 OF 2 (9/29-sunny, windy SW,65°F) By lake shoreline

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 9/26 & 9/29/97

SECOR INTERNATIO[illegible], INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:05 9/26
COMPLETED: 16:02 9/29
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
27 28	18	22	7 10 13 14	23		0.0 BG=0.0	0.0 BG=0.0	Dry-Moist						10YR 4/1 Dark gray	Silty clay	CH	Mod	Trace of fine sub-gravel
29 30	19	23	7 10 13 14	23		0.0 BG=0.0	0.0 BG=0.0	Dry-Moist						10YR 4/1 Dark gray	Silty clay	CH	Mod	Trace of fine sub-gravel
31 32	20	24	4 6 7 13	13		0.0 BG=0.0	0.1 BG=0.0	Dry-Moist						10YR 4/1 Dark gray	Silty clay	CH	Mod	Trace of fine sub-gravel
33 34	21	20	8 13 14 17	27		0.0 BG=0.0	0.0 BG=0.0	Moist Dry-Moist						10YR 4/1 Dark gray	Silt	ML	Well	Low plasticity, slightly cohesive when hydrated in upper .5 feet
25 36	22		8 9 11 10	20		0.0 BG=0.0	0.0 BG=0.0	Moist						10YR 4/1 Dark gray	Silt	M L	Well	
37 38	23		5 7 9 8	16		0.0 BG=0.0	0.0 BG=0.0	Wet-Moist						10YR 4/1 Dark gray	Silt	ML	Well	Wet to moist, not saturated, slightly cohesive in lower .5 feet
39 40	24		3 5 6 8	11		0.0 BG=0.0	0.0 BG=0.0	Moist						10YR 4/1 Dark gray	Clayey silt	ML	Mod	Cohesive
																		Boring terminated at 40 feet below ground surface
																		Composite sample for lab analysis
																		Boring Notes: BG=Background
																		NA=Not Applicable
																		NR=Not Recorded

WELL/BORING NAME SS3-1 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 3

PAGE 1 OF 1

SECOR # W0021-001-19 COMPLETED BY Teresa Szuper DATE 8/27/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
1	Composite		- -	NR	1 — 10	NR	4.1 to 17.7	NR						Brown gray	Clay	CL	NA	Brownish gray clay, no staining or odor, roots in top 6 inches, less than .08 millimeters - stiff.
2			- -			NR	BG=3.6											

STARTED: 2:30
COMPLETED: 3:00
METHOD: Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

End of boring at 2 feet below ground surface

Boring Notes: BG=Background
NA=Not Applicable
NR=Not Recorded

WELL/BORING NAME SS3-2 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATI0N Area 3

PAGE 1 OF 1

SECOR # W0021-001-19 COMPLETED BY Teresa Szuper DATE 8/27/97

SECOR INTERNATIO[illegible], INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	
1	Composite		- -	NR	1 ◆ 10	NR	1.8 to 7.4	NR						Yellowish orange/gray	Coarse sand	SW	NA	No staining or odor
2			- -			NR	BG=NR							Brown/gray	Clay	CL		
																		End of boring at 2 feet below ground surface
																		Boring Notes: BG=Background
																		NA=Not Applicable
																		NR=Not Recorded

STARTED:
COMPLETED:
METHOD: Hand Auger
REMARKS:

PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

WELL/BORING NAME: SW4-1
PAGE 1 OF 2
SECOR # W0021-001-19

JOB NAME/LOCATION: CLH Painesville, OH
Area 4
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 4
Behind Ball Fields
DATE: 9/10-9/11/97

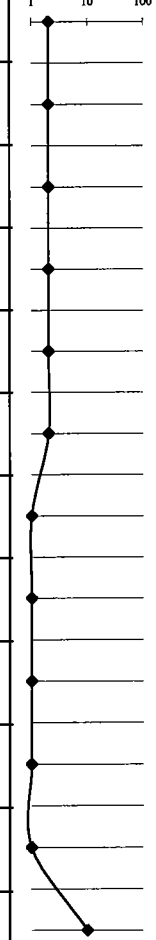
SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 18:35 9/10
COMPLETED: 10:00 9/11
METHOD: 4 1/4" HSA
REMARKS:

PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1	8	1 1	2	NR	11.8	Moist						Light gray to greenish gray	Silty clay with lime?	OL	Well to Mod	
2			1 0		NR	BG=3.5							White		CH		
3	2	6	2 1	2	3.4	14.0	Moist						White	Silty clay with lime?	CH	Well to Mod	
4			1 2		BG=3.4	BG=3.5											
5	3	6	1 1	2	3.4	12.3	Moist						White	Silty clay with lime?	CH	Well to Mod	
6			1 1		BG=3.4	BG=3.5											
7	4	24	1 1	2	4.0	5.8	Moist						Light gray	Fine sandy clayey silt	ML	Mod	At 18:45 on 9/10 (6 feet), end day. Resume drilling at 7:30 on 9/11
8			1 1		BG=3.8	BG=4.0							Light gray to white	Limey clay	CH	Well	White limey clay
9	5	24	1 1	2	4.1	4.8	Moist						White	Limey clay	CH	Well	
10			1 1		BG=4.0	BG=3.9											
11	6	24	1 1	2	7.0	4.6	Moist						Dirty white	Limey clay	CH	Well	
12			1 1		BG=6.9	BG=3.9											
13	7	24	1 0	1	3.9	5.3	Moist						Dirty white	Limey clay	CH	Well	
14			1 0		BG=4.0	BG=4.0											
15	8	24	1 1	1	3.9	9.5	Moist						Dirty white	Limey clay	CH	Well	
16			0 1		BG=4.0	BG=7.7											
17	9	24	1 1	1	3.8	7.6	Moist						Dirty white	Limey clay	CH	Well	
18			0 1		BG=3.7	BG=7.0											
19	10	24	1 1	1	NR	5.4	Moist						Dirty white	Limey clay	CH	Mod-Slight	Slight bit of fine sand felt in some
20			0 1		NR	BG=3.9	slightly less										
21	11	24	1 1	1	7.7	9.5	Moist						Dirty white	Limey clay	CH	Mod-Slight	Clay stuck in end of PID
22			0 2		BG=7.7	BG=3.8											
23	12	24	2 4	10	7.0	9.7	Moist						Dirty white to moderately gray	Limey clay to fine sandy silt	CH to ML	Mod-Slight	Natural material?
24			6 6		BG=7.0	BG=3.7										Well	

N VARIANCE WITH DEPTH



WELL/BORING NAME SW4-1 JOB NAME/LOCATION CLH Painesville, OH Area 4 WELL/BORING LOCATION Area 4 Behind Ball Fields

PAGE 2 OF 2 COMPLETED BY Stephen R. Zayko DATE 9/10-9/11/97

SECOR # W0021-001-19

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 18:35 9/10
COMPLETED: 10:00 9/11
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN: SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1–10)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25	13	24	1 1	2		NR	11.8	Moist						Light gray to greenish gray	Silty clay with lime?	OL	Well to Mod	
26			1 0			NR	BG=3.5							White		CH		
27	14	24	2 1	2		3.4	14.0	Moist						White	Silty clay with lime?	CH	Well to Mod	
28			1 2			BG=3.4	BG=3.5											
29	15	24	1 1	2		3.4	12.3	Moist						White	Silty clay with lime?	CH	Well to Mod	
30			1 1			BG=3.4	BG=3.5											
31	16	24	1 1	2		4.0	5.8	Moist						Light gray	Fine sandy clayey silt	ML	Mod	At 18:45 on 9/10 (6 feet), end day. Resume drilling at 7:30 on 9/11
32			1 1			BG=3.8	BG=4.0							Light gray to white	Limey clay	CH	Well	White limey clay
33	17	24	1 1	2		4.1	4.8	Moist						White	Limey clay	CH	Well	
34			1 1			BG=4.0	BG=3.9											
35	18	24	1 1	2		7.0	4.6	Moist						Dirty white	Limey clay	CH	Well	
36			1 1			BG=6.9	BG=3.9											

Boring Notes: BG=Background
NR=No Reading

WELL/BORING NAME SW4-2 | JOB NAME/LOCATION CLH Painesville, OH, Area 4 | WELL/BORING LOCATION Area 4

PAGE 1 OF 3 | COMPLETED BY Reuben J. Kent | DATE 10/2/97

SECOR # W0021-001-19

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED:
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1			1 1	2		0.0	0.0	Dry						.3' Black	Topsoil	OL	Poor	Organic rich, hairline roots
2			1 3			BG=0.0	NR							.4' Gray	Clayey sand	SC	Poor	Trace of coarse sand
3			2 6	10		0.0	0.0	Dry/Moist						10YR 5/1 & 4/2	Clayey sand	SC	Poor	Little black cinders in upper 1.0'(fill)
4			4 4			NR	NR							Multicolored gray-d.gray/bwn	Silty med. sand		Poor	.1' layer of med. sand at base of sample, loose, limey
5			3 1	7		0.0	0.0	Moist						10YR 4/2 Dark gray brown	Med. sand	SC	Poor	
6			6 3			NR	NR	Wet						1 Gley 8/ White	Limey silty clay	CL	Mod	White limey appearance
7			3 4	10		0.0	74.1	Moist/Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	.05-.01' thick interbedded fine to med. sand (thinly bedded)
8			6 10			BG=0.0	BG=0.0							1 Gley 8/ & 6/1 White to lt. gray	Limey			Little silt
9			2 7	67		0.0	82.0	Moist/Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard
10			60 60/5"			BG=0.0	BG=0.0							1 Gley 8/ & 6/1 White to lt. gray	Limey			
11			9 79	94		0.0	494.0	Moist						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard
12			15 15			BG=0.0	BG=0.0							1 Gley 8/ & 6/1 White to lt. gray	Limey			
13			5 3	6		0.0	773.0	Moist						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard
14			3 7			BG=0.0	BG=0.0							1 Gley 8/ & 6/1 White to lt. gray	Limey			
15			6 20	38		4.1	>2500	Moist						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard, odor similar to insecticide
16			18 17			BG=0.0	BG=0.0							1 Gley 8/ & 6/1 White to lt. gray	Limey			
17			8 7	10		0.0	1457.0	Moist/Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard, odor similar to insecticide
18			3 2			BG=0.0	NR							1 Gley 8/ & 6/1 White to lt. gray	Limey			
19			3 8	11		0.0	>2500	Moist/Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC		Dense/Hard, odor similar to insecticide
20			3 7			BG=0.0	NR							1 Gley 8/ & 6/1 White to lt. gray	Limey			
21			2 3	6		1.2	2233.0	Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard, odor similar to insecticide
22			3 3			BG=0.0	NR							1 Gley 8/ & 6/1 White to lt. gray	Limey			
23			4 5	12		0.0	1117.0	Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard, odor similar to insecticide
24			7 9			NR	NR							1 Gley 8/ & 6/1 White to lt. gray	Limey			
25			3 3	10		4.4	2500.0	Wet						1 Gley 8/ & 6/1 White to lt. gray	Fine sandy clay	SC	Poor	Dense/Hard, odor similar to insecticide
26			7 15			BG=0.0	NR	Wet/Moist						1 Gley 8/ & 6/1 White to lt. gray	Limey			Lower .8' of sample v. thinly bedded fine sand, gray/white
																		.02' layer of black ash/cinders at 25.2'

WELL/BORING NAME SW4-2 JOB NAME/LOCATION CLH Painesville, OH Area 4 WELL/BORING LOCATION Area 4

PAGE 2 OF 3

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/2/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED:
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
27 28	16	24	10 15 6 12	21		24.0 BG=0.0	>2500 BG=0.0	Wet						1 Gley N2.5 Black 1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn	Clayey silty sand interbed. w/clayey sand, limey	SC	Poor	Very thin bedded color layering of silty sand, clayey sand
29 30	17	19.2	3 4 6 16	10		7.9-27 NR	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Clayey silty sand interbed. w/clayey sand, limey	SC	Poor	Very thin bedded color layering of silty sand, clayey sand
31 32	18	24	7 6 9 12	15		240.0 BG=0.0	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Clayey silty sand interbed. w/clayey sand, limey	SC	Poor	Dense in lower .7'
33 34	19	24	17 10 12 12	22		288.0 BG=0.0	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive bwn and olive string	Clayey silty sand interbed. w/clayey sand, limey	SC	Poor	
35 36	20	24	3 15 26 57	41		>7500 BG=0.0	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Clayey silty sand interbed. w/clay & sand, lower .7' silty clay	SC	Poor	Dense/hard , multicolored, laminated Plastic in lower .7' (tar like)
37 38	21	18	26 40 36 38	76		184.0 BG=0.0	>2500 BG=0.0	Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	1.0' sluff Little med. sand; thickly laminated to thinnly bedded
39 40	22	24	10 12 7 15	19		370.0 BG=0.0	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	.9' sluff Black tarlike substances in lower .1'
41 42	23	24	2 3 8 16	11		228.0 BG=0.0	>2500 BG=0.0	Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	.9' sluff Black tarlike substances in lower .1'
43 44	24	24	5 5 2 2	7		188.0 BG=0.0	>2500 BG=0.0	Moist/Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	4oz jar collected, separate Black/brown tarlike substance, interbedded .05' thick
45 46	25	24	5 5 9 11	14		238.0 BG=0.0	>2500 BG=0.0	Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	.8' slulff Little fine subgravel in lower .2'
47 48	26	21.6	13 13 12 10	25		687.0 BG=0.0	>2500 BG=0.0	Wet						1 Gley 6/ - 10YR 4/2 Gray-d. gray bwn w/olive brown	Limey clayey sandy silt Interbedded fine sand	SC	Poor	Little fine subgravel
49 50	27	24	3 7 10 13	17		71.0 BG=0.0	>2500 BG=0.0	Saturated						10YR 3/1 Very dark gray	Silty gravel w/trace of interbedded clay	GM	V. poor	Gravel is angular, med. dense 1.1' sluff in spoon
51 52	28	13.2	10 12 17 17	29		278.0 BG=0.0	2333.0 BG=0.0	Saturated						10YR 3/1 Very dark gray	Silty gravel	GM	V. poor	Gravel is fine subangular and subrounded Decide to drive add./spoon for sufficient sample volume

WELL/BORING NAME SW4-2 JOB NAME/LOCATION CLH Painesville, OH Area 4 WELL/BORING LOCATION Area 4

PAGE 3 OF 3

SECOR # W0021-001-19 COMPLETED BY Reuben J. Kent DATE 10/2/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED:
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: No

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
53	29	24	13 18	18	1 10 100	1163.0	>2500	Saturated						10YR 3/1 Very dark gray	Silty sandy gravel	GM	Poor	1.2' sluff
54			65/0"			BG=0.0	NR								Shale			Black/brown, shale in end of spoon
																		Refusal at 53 ft. below ground surface
																		Terminate boring at 53 ft. below ground surface
																		Boring Notes: BG=Background
																		NR=No Reading

WELL/BORING NAME SW4-3 | JOB NAME/LOCATION CLH Painesville, OH | WELL/BORING LOCATION Area 4 By 2 Ball Fields

PAGE 1 OF 2

SECOR # W0021-001-30 | COMPLETED BY Stephen R. Zayko | DATE 9/16/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:50
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1	20	5 8	18		2.6	5.0	Dry						10YR 6/4 - 6/8 Lt. yellow bwn	Topsoil, Fine sand & silt	ML	Slight	2" topsoil, light brown silt
2			10 17			BG=2.5	BG=3.3							10YR 3/1 Very dark gray	Slightly silty fine med. sand	SM	Slight	Silty sand - possibly flyash?
3	2	20	12 21	38		2.9	4.9	Dry						Black	Silt	ML	Mod.	Flyash
4			17 12			BG=2.9	BG=3.3									ML		
5	3	20	4 6	12		3.1	5.4	Dry						Black		ML	Mod.	
6			6 8			BG=3.2	BG=3.6	Dry/Moist						10YR 5/6 - 6/1 Ylw. bwn. - gray	Clayey fine sandy silt	ML	Slt.-Poor	
7	4	20	4 5	10		3.1	4.8	Moist						10YR 5/3 - 5/6 Bwn. - ylw. bwn.	Clayey silt	ML	Slight	
8			5 12			BG=3.1	BG=3.4											
9	5	24	4 7	21		3.3	4.2	Moist						10YR 5/3 - 5/6 Bwn. - ylw. bwn.	Clayey silt	ML	Slight	
10			14 11			BG=3.3	BG=3.4											
11	6	24	5 6	13		3.3	4.3	Moist						10YR 5/3 - 5/6 Bwn. - ylw. bwn.	Clayey silt	ML	Slight	More bluish gray near bottom
12			7 8			BG=3.3	BG=3.4											
13	7	24	3 3	7		3.3	5.3	Moist						5Y 4/1 to N4/ Dark gray	Silty clay	CL/CH	Mod.	Bluish gray clay
14			4 4			BG=3.3	BG=3.3											
15	8	22	6 8	19		3.4	4.2	Moist						5Y 4/1 to N4/ Dark gray	Clay w/rock fragments	CL	Poor	Till
16			11 13			BG=3.4	BG=3.3											
17	9	22	7 9	20		3.4	4.1	Moist/Dry						5Y 4/1 Dark gray	Clay w/rock fragments	CL	Poor	Till
18			11 17			BG=3.0	BG=3.3											
19	10	22	4 6	14		3.5	3.8	Moist/Dry						5Y 4/1 Dark gray	Clay w/rock fragments	CL	Poor	
20			8 10			BG=3.5	BG=3.4											
21	11	22	6 8	23		3.3	4.5	Dry/Moist						5Y 4/1 Dark gray	Clay w/rock fragments	CL	Poor	
22			15 21			BG=3.3	BG=3.3											15:30 restart drilling
23	12	24	6 9	18		3.3	4.1	Dry/Moist						5Y 4/1 Dark gray	Clay w/rock fragments	CL	Poor	
24			9 14			BG=3.3	BG=3.3											More coarse stuff

WELL/BORING NAME: SW4-3
PAGE 2 OF 2
SECOR # W0021-001-30

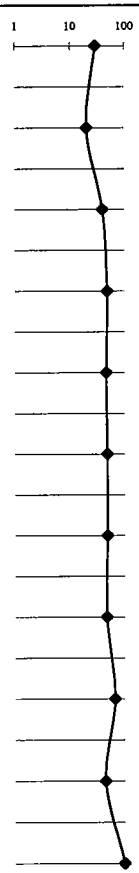
JOB NAME/LOCATION: CLH Painesville, OH
COMPLETED BY: Stephen R. Zayko

WELL/BORING LOCATION: Area 4, Ball Fields
DATE: 9/16/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 13:50
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
25	13	24	11 14	29		3.3	4.4	Dry						Gray 5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
26			15 18			BG=3.3	BG=4.4											
27	14	24	5 9	20		3.2	4.7	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
28			11 15			BG=3.2	BG=3.1							5Y 4/1 Dark gray				
29	15	24	8 12	39		3.3	11.3	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
30			27 33			BG=3.3	BG=3.1											
31	16	24	15 17	48		3.5	12.0	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
32			31 36			BG=3.5	BG=3.3											
33	17	24	15 19	46		3.1	12.5	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
34			27 37			BG=3.1	BG=3.3											
35	18	24	15 19	48		2.9	10.7	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
36			29 36			BG=2.9	BG=3.3											
37	19	24	15 19	48		3.4	9.8	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
38			29 33			BG=3.3	BG=4.2											
39	20	24	16 22	47		3.4	10.2	Dry						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
40			25 35			BG=3.3	BG=3.3											
41	21	18	11 27	66		3.3	15.9	Dry/ Crumbly						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	Till
42			39 50/3"			BG=3.3	BG=3.3											Looks like weathered rock but still just till
43	22	16	32 44	44		3.5	19.0	Dry/ Crumbly						5Y 4/1 Dark gray	Clay w/ rock fragments	CL	Poor	
44			50/3"			BG=3.4	BG=3.8											45 min. down time/repair time, weld adapter
45	23		100/5	100		4.0	NR	Dry/ Crumbly		Rock				5Y 4/1 Dark gray	Weathered rock	CL	Poor	Weathered rock, shalley, rock at bottom
																		Refusal at 45 ft.
																		Boring terminated at 45 ft.
																		Boring Notes: BG=Background
																		NR=No Reading



WELL/BORING NAME SW4-4 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 4 Grantham Property

PAGE 1 OF 1

SECOR # W0021-001-31 COMPLETED BY Stephen R. Zayko DATE 9/15/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:00
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N: Yes

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 10 100)	PID VALUE SAMPLE	PID VALUE HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE CLAY	GRAIN SIZE SILT	GRAIN SIZE SAND (F M C)	GRAIN SIZE GRAVEL (F C)	LITHOLOGY SAMPLE COLOR	LITHOLOGY TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1	20	3 6	25		2.6	4.9	Dry/Moist						Black to Brown	Fine sandy silt	OL	Mod.	2 inch topsoil
2			19 19			BG=2.0	BG=3.1							Black/Gray		ML/SM	Slight	Possible fly ash
3	2	20	27 36	60		3.0	9.8	Dry						Black/Gray	Silty fine to med. sand	SM	Mod.	Possible fly ash
4			24 28			BG=2.9	BG=2.9											
5	3	20	16 22	46		3.0	7.4	Dry						Black/Gray	Silty fine to med. sand	SM	Mod.	Possible fly ash
6			24 14			BG=3.0	BG=3.1											
7	4	20	2 3	6		2.9	12.2	Moist/Dry						Black/Gray	Silty fine to med. sand	SM	Mod.	Possible fly ash
8			3 17			BG=2.9	BG=3.2											
9	5	20	8 14	36		3.0	10.9	Moist						Black/Gray	Silty fine to med. sand	SM	Mod.	Possible fly ash
10			22 18			BG=3.0	BG=3.3											
11	6	20	5 5	11		3.1	12.3	Wet/Moist						Black/Gray	Fine sandy silt	MH	Mod.	Possible fly ash
12			6 5			BG=3.0	BG=6.8											
13	7	24	10 29	62		3.1	18.0	Wet/Moist						Dark gray to brown	Fine sandy silt	MH	Mod.	Aluvial?
14			33 30			BG=3.0	BG=6.8											
15	8	24	7 19	33		3.1	16.8	Moist						Dark gray to brown	Silty fine sand	SM	Mod.	Aluvial?
16			14 18			BG=3.1	BG=6.8											
17	9	24	4 3	5		3.0	17.3	Moist/Wet						Dark gray to brown	Silty fine sand	SM/MH	Mod.	Aluvial?
18			2 1			BG=3.0	BG=8.3											
19	10	24	1 0	0		3.7	18.6	Wet						Dark gray to brown	Silty fine sand	SM/MH	Mod.	Aluvial?
20			0 0			BG=3.7	BG=10.2											
21	11	24	1 0	0		7.3	15.6	Wet						Dark gray to brown	Silty fine sand	SM/MH	Mod.	Aluvial?
22			0 0			BG=7.2	BG=8.6											Boring terminated at 22 ft. Well set at 15:25

Boring Notes: BG=Background

NR=No Reading

WELL/BORING NAME SW4-5 JOB NAME/LOCATION CLH Painesville, OH WELL/BORING LOCATION Area 4

PAGE 1 OF 1

SECOR # W0021-001-01 COMPLETED BY Rueben J. Kent DATE 10/6/97

SECOR INTERNATIONAL, INC.
ENVIRONMENTAL ENGINEERING
2205 JOLLY ROAD
OKEMOS, MI 48864-3983

STARTED: 14:00
COMPLETED:
METHOD: 4 1/4" HSA
REMARKS:
PID SPAN:
SAMPLING INTERVAL: Continuous
WELL INSTALLED Y/N:

DEPTH BELOW SURFACE	SAMPLE #	INCHES RETAINED	BLOW COUNTS	N VALUE	N VARIANCE WITH DEPTH (1 – 10 – 100)	PID VALUE: SAMPLE	PID VALUE: HEADSPACE	MOISTURE CONTENT	GRAPHIC LITHOLOGY	GRAIN SIZE: CLAY	GRAIN SIZE: SILT	GRAIN SIZE: SAND (F M C)	GRAIN SIZE: GRAVEL (F C)	LITHOLOGY: SAMPLE COLOR	LITHOLOGY: TYPE OF SOIL OR SEDIMENT	UNIFIED SOIL CLASSIFICATION SYSTEM	SORTING	REMARKS
1	1,2	12	7 16	38		1.1	50.0	Dry						10YR 4/4	Silty fine sand	ML		.4' black topsoil
2	3,4		22 14			BG=0.0	BG=0.0							Dark yellowish brown				.6' little med. sand, med. dense, trace of subgravel in lower .2'
3	5	10.8	8 12	26		0.6	2.9	Dry						10YR 4/1	Gravelly fine sand	GP		Little med. sand, gravel is fine subangular, med. dense, noncohesive
4			14 16			BG=0.0	BG=0.0							Dark gray				Encountered little cobble size gravel in hole
5	6	15.6	2 5	8		0.0	0.0	Dry						10YR 3/1	Silt	MH		Loose
6			3 3			BG=0.0	BG=0.0							Very dark gray				
7	7	0.0	1 1	2		NR	NR			No Recovery								No recovery
8			1 0			NR	NR											
9	8	2.4	1 2	3		0.0	0.0	Moist						Gley N8 White	Clayey silt	SC		Limey, thinly laminated w/gray; soft, trace of fine sand, varved
10			1 2			BG=0.0	BG=0.0							10YR 5/1 Gray	Limey appearance			
11	9	24	1 1	3		0.0	0.0	Moist/Wet						Gley N8 & N2.5	Clayey silt	SC		Limey, thick laminations of blk color; soft, trace of fine sand, varved
12			2 2			BG=0.0	BG=0.0							White & black	Limey appearance			
13	10	24	1 0	1		0.0	0.0	Moist/Wet						Gley N8 & N2.5	Clayey silt	SC		Limey, thick laminations of blk color; soft, trace of fine sand, varved
14			1 0			BG=0.0	BG=0.0							White & black	Limey appearance			
15	11	24	1 0	1		0.0	1.2	Moist/Wet						Gley N8 & N2.5	Clayey silt	SC		Limey, thick laminations; soft, trace of fine sand, varved
16			1 1			BG=0.0	BG=0.0							White & black	Limey appearance			
17	12	13.2	1 1	2		0.0	0.0	Wet						Gley N8 & N2.5	Clayey silt	SC		Limey, thick laminations; soft, trace of fine sand, varved
18			1 1			BG=0.0	BG=0.0							White & black	Limey appearance			
19	13	24	1 1	2		0.0	1.5	Wet						Gley N8 & N2.5	Clayey silt	SC		Limey, thick laminations; soft, trace of fine sand, varved
20			1 0			BG=0.0	BG=0.0							White & black	Limey appearance			
21	14	24	2 1	2		0.0	0.0	Moist/Wet						Gley N8 & N2.5	Clayey silt	SC		1.2' sluff
22			1 1			BG=0.0	BG=0.0							White & black	Limey appearance			1.2' sluff
23	15	24	2 8	17		0.0	7.2	Moist						Gley N8 & N2.5 White & black	Clayey silt	SC		1.4' sluff
24			9 12			BG=0.0	BG=0.0	Moist/Dry						10YR 4/1 Dark gray	Silty clay	CL		Trace of hairline roots, mod. plasticity when hydrated, stiff
25	16	22.8	8 8	18		0.0	9.7	Moist/Dry						10YR 4/1 Dark gray	Silty clay	CL		Lower .8' clayey silt
26	17		10 12			BG=0.0	BG=0.0							10YR 4/1 Dark gray	Clayey silt	MH		
																		Boring terminated at 26 ft. below ground surface