Mahoningside Power Plant Site - Drill Logs for PCB core sampling

US EPA RECORDS CENTER REGION 5
584490

Date: 11-29-00

Time: 900

Drill Location: 6

Driller: Summit Drilling

Log/Sampling Personnel: R. Ring / EGM

Depth	% Recovery	Graphic Log	Description	Remarks
2"			2" Concrete	
	16 - 18"	Some shear / rotation	Dark / Gritty soil - fill material potentially	
4'			Grey shale-like	
			Hit Shale	
			5' started Boring	
			6 - 8½' 45° Fracture	
			End of Bore @ 13'	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-29-00

Time: 1030

Drill Location: 7

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	3 None →	Sample Taken w/out Spoon		No concrete to go through
	1'-2'		DARK GRAY w/ Shale Present	
		1½ Some Granite		
		5' bottom of Spoon @ Rock		
	12-16" Retention			
	→	STOP	OF BORING 13' w/ water standing @ 10'	
		* No FRACTURE PRESENT		

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-29-00

Time: 1400

Drill Location: 8

Driller: Summit Drilling

Log/Sampling Personnel: B. Rung / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	1-3'	DARK GREY	* No Concrete @ surface some Brooms present	4 oz
	3-5'	Lighter but still DARK GREY - shale fragment		8 oz
	6'	WIT SHALE - Bottom of Spoon		
	18-20" Retention		3rd sample taken @ shale layer	labeled 8Z - 4 oz
	Bottom of Boring 14' 7' Recovery			

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-29-00

Time: 1520

Drill Location: 9

Driller: Summit Drilling

Log/Sampling Personnel: B. RING / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	0-6"	AGGREGATE	Overburden	
	6" - 3'		DARK w/ shale present	9A
	3'-5'		More GLEYING & Iron Deposits noticed shale still apparent	9B
	12" Rejection		-Hit shale @ 4½-5'	
	13.5	Depth of Boring	2' 7" Recovery	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-30-00

Time: 1000

Drill Location: 10

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
			6" Concrete	
	1-3'	10A →	Light Gray, Iron Deposits present w/ soil / Clay & some shale	
	Hit shale	10 B → 3-5½'	Shale definitely present w/ very high presence of H_2O - Dark Gray w/out Iron	
	14.5' Bottom of Boring			
			8' 1" Recovery	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-30-00

Time: 1610 - 1630

Drill Location: 11

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	17' - 4" recovery		Small sand seen then Brown Native Clay	
	19-22'		1st Spoon - 11 A - H_2O Present w/ Dark/Black color Gritty w/ some rock present (cobbles)	
	22-24' 8" Recovery		- not as wet w/ lighter color - bottom has definate shale presence	
	-26' 18" recovery		H_2O present & stray presence of shale @ bottom (clay @ top)	
	26.5' - Refusal		Dark in color (Brown - Black).	
			↳ Shale - Day w/ light Grey color	- some H_2O & clay present near top of spoon

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-1-00

Time: 1210

Drill Location: 12

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	0-3'	Debris /	concrete surface	
	17-18'	Clay (brown & moist) layer		
	20'→12A 22'	Clay @ top	w/ sand & shale mix to bottom Light grey shale	-no H_2O
	18" recovery			
	23'→ Drove 12B	1' — 12" recovery	w/ shale 6" thick, some brown wet clay & sand	-shale is light grey
	24'6" 12C	→ shale evident Refusal	only drove 4-6" Dry light grey shale	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-1-00

Time: 1520

Drill Location: 13

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
		Debris Backfill		
	→ Granite Rock - 2" thick			
	19-20' —	13A+	- Thin clay layer on top of shale	
	20-22'	- 1st Spoon 13A	- cobbles and shale present light gray shale	-/ thin clay layer on top
	2-3" Recovery			
	22' Auger Refusal		- Spoon Refusal	
		2" Recovery	- shale light Grey	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-4-00

Time: 0850 - 0920

Drill Location: 14

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EGM

Depth	% Recovery	Graphic Log	Description	Remarks
			OVERBURDEN DEBRIS → walls present whole way down - explaining the lack of cuttings @ surface.	
	0-19' No cuttings @ surface			
	19' Hit Rock Layer — STANDING RIG UP 1st Spoon 14A — CONCRETE w/ 4" recovery 20-21" shale & H_2O present w/ gritty clay/soil 4" Recovery & REFUSAL (Bit Auger & Spoon).			
	Upon retrieval of Augers, Hole is found to be w/in bldg. structure connecting actual basement & sampling House			

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-4-00

Time: 1050

Drill Location: 15

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
			1' of concrete	
			1' of void space	
			clay/soil & debris	
	9' 1hr	Concrete	Layer - out @ 10½-11'	
	20-22' 15A	Dry, Light Gray	Shale	
		7" Recovery		
	22-23' 15B	- Refusal -	Shale w/ some H_2O present light grey in color	
		6" Recovery		

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-4-00

Time: 1310

Drill Location: 16

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
			1-2' Brick overburden layer	
			3-5' Dark silty/sandy clay/soil	
			5-6' cobbles & soil	
			CLAY	
	20-21'		shale Definitely Present - light Grey in Color	
	21-22' 16A		-6" Recovery some Clay w/ little H_2O	
	16B		10" Recovery - shale, light Grey in color	
			Refusal little H_2O	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-4-00

Time: 1425

Drill Location: 17

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
		General Debris		
		Soil: Gritty, Sand/silt - Dark (Black) w/ Tree or Wood Mixed in & pebbles Throughout		
	20-22' 17A	4" Recovery	→ H_2O Present w/ Dark Shale; some Clay	
	23'-24' 17B	12" Recovery	→ Some H_2O Present but mostly all Dry shale light grey in Color	
	24'9" - 17C	Refusal	w/ 9" Recovery - More H_2O present w/ Dark Grey colored Shale Throughout.	
			* smell of petroleum in spoons and cuttings brought to surface during auger extraction	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 11-27-00

Time: 1100 am

Drill Location:

Driller: Summit Drilling

Log/Sampling Personnel: Kimble

Depth	% Recovery	Graphic Log	Description	Remarks
8"			8" concrete	
12"	START of spoon		12" START spoon - some soils	soils removed prior to spoon
	2 ft retention		12-48" grey soils/soft shale to hard shale	-2-3-10 10
48	16" rock		grey shale - end of SS,	RU Sam Exploration
START core				
			grey, highly fractured shale 5 ft to 22 ft	
			dark grey/black quartzose sandstone fine grained	

9 5ft

48

52

BORING LOG

SITE ID: MW440

CLIENT: BWXTO/Mound
SITE NAME: PRS66
PROJECT NO.: 01011.032.045
DRILLING CO.: Boart Longyear
LOGGED BY: L. Funk

ELEV. (GRND): (TOC):
NORTHING:
EASTING:
DEPTH TO WATER (bgs):
TOTAL BORING DEPTH (bgs): 75"

DRILL METHOD: Rotosonic
SITE TYPE: Well (x) Boring ( ) Piezo. ( ) Other:

DATE: 8/7/00

SAMPLE INTERVAL (ft) FROM	TO	RECOVERY (ft)	DEPTH (ft)	GRAPHIC COLUMN	PID	COLOR	LITHOLOGIC DESCRIPTION
						gray; at 32'-5y5/2	medium plasticity;
						olive gray with 2.5Y5/2	
						light olive brown	
						5Y4/1 dark gray	34.5' to 35'-silty clay with organics (wood bark, rootlets); soft; moist; medium
	35	5'	35				plasticity; topsoil-like horizon;
35							35' to 37.8'-silty clay loam with 15% fine to medium subrounded gravel; soft to firm;
							moist; low plasticity; metal shavings;
							37.8' to 38'-increase to 20% medium to coarse subrounded gravel; trace limestone
							cobbles;
						5Y4/1 dark gray with	38' to 40'-till, clayey silt with 10% fine to medium subangular to subrounded gravel;
	40	4.5'	40			2.5Y5/4 light olive	mottled; hard; slightly moist; low plasticity;
						brown	
40						5Y4/2 olive gray with	40' to 45'-silty clay loam with 15% fine to medium subangular to subrounded gravel;
	45	3'	45			5Y4/1 dark gray	mottled; hard; slightly moist; very dense; low plasticity;
45						5Y4/2 olive gray	45' to 50'-silty clay loam with 10% fine and 5% medium to coarse subangular
	50	5'	50				to subrounded gravel; hard to very hard; slightly moist; low plasticity
50							50' to 55'-as above; indication of fractures at 52' bgs (brownish-pink coloration
	55	5'	55				along fracture traces);
55						2.5Y5/4 light olive	55' to 56.4'-clayey sand with 10% fine to medium subangular to subrounded gravel
						brown	and 10% coarse subrounded gravel; soft; loose; moist; iron oxidation; no
							plasticity;
							56.4' to 58.8'-sand with 15% medium to coarse subangular to subrounded
							gravel; loose; slightly moist; iron oxidation;
	60	4.5'	60				58.8' to 64.5'- as above with some clay (15%); moist; iron oxidation (60'-64.5');
60						5Y5/6 olive	64.5' to 65'-gravel, 50% fine to medium and 30% coarse (cobbles); subangular
	65	4.5'	65				to subrounded; little clay; loose; very moist;
65							65' to 67'-sand with 10% subangular to subrounded medium gravel; saturated;
							gravel downgrades to cobbles (40%);
							67' to 68'- clayey sand with 15% medium gravel; soft; wet;

Diagonal Stripe Area

LEGEND

Graphic	Soil Type

WESTON
MANAGERS DESIGNERS CONSULTANTS

Feb-12-01 11:58 From-ROY F. WESTON-MOH 9373844201 T-397 P.03/04 F-980

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-4-00

Time: 1630

Drill Location: 18

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring

Depth	% Recovery	Graphic Log	Description	Remarks
	1-3'		General Debris	
	4'-5'	SANDY & Black	Black sand like soil	
	13'-15	18A	15" Recovery same Black gritty soil & pebbles But mostly clay w/ some glaying	pipe in Basement @ This height, so started taking spoons.
	15-17'	18B	2' of Recovery w/ it all clay and major glaying	
	17-19'	18C	18" of clay w/ 6" of shale Dark location - soft & broken shale 2' of Recovery	
	19-21'	18D	All Grey Shale - not as brittle as before	
	21'-22½'		6" Recovery	
	Refusal	18E	7" Recovery - shale w/ H_2O present giving Dark Color	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-5-00

Time: 0920

Drill Location: 19

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	OVERBURDEN		- Dark/black soil - sandy in texture	
	7'	Clay	Layer Begins	
	19-20' - 19A	1st Spoon → 8" Recovery	Shale (Dark in color) w/ H_2O present	
	20-20½' - 19B	- 4" Recovery	Shale lighter Grey in Color & H_2O not as prominent - Refusal	
			↑ hole approx. in line w/ #5 & #6; West of west side pit in Basement	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-5-00

Time: 1045

Drill Location: 20

Driller: Summit Drilling

Log/Sampling Personnel: B. RING / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	1-4'		overburden Debris, rock, etc.	
	5'		clay layer begins	
	15-17' 20A 7" Recovery		- SANDY w/ Pebbles & some clay	DARK Grey in Color
	17-19' 20B 7" Recovery		- shale Present (dark in color)	w/ H_2O Present
	20' Refusal 20C 10" Recovery		- Light Grey shale w/ little	H_2O
			* hole approx. in line w/ #8 to West @ approx	15' above basement level

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-5-00

Time: 1310

Drill Location: 21

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	1'		OVERBURDEN DEBRIS - Bricks, etc	
	2' - 12		Black, sandy mix of soil & pebbles	
	12½'	clay layer	Begins	
	19' 21A			
	10" Recovery	- shale	Prount - light grey in color	
	19½' 21B			
	6" Recovery	- shale	- hard & wet - Black in color	
	Refusal			
			Hole is just South of roadway entrance to basement area	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-5-00

Time: 1500

Drill Location: 22

Driller: Summit Drilling

Log/Sampling Personnel: B. RING

Depth	% Recovery	Graphic Log	Description	Remarks
		Tree & other Decomposing Debris		
		Black sandy soil		
		pebbles & sandy soil		
	15-17'	22A	- DARK SANDY Soil	
		1' Recovery		
	17-19'	22B	DARK SANDY Soil w/ some Clay apparent	H_2O present
		18" Recovery		
	21'	Refusal 22C	- shale light gray in color	H_2O present somewhat
			* hole N.E. of #14 & N.W. of Screen House	

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-6-00

Time: 900 - 915

Drill Location: 23

Driller: Summit Drilling

Log/Sampling Personnel: B. RING / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	2 1-3'	RED / BRICK		
	3 1/2	DARK BROWN SOIL BEGINS - SANDY TEXTURE		
	6'	Black soil - SANDY in texture w/ scrap metal		
	10'	Pebbles / Pea Gravel w/ Black SANDY soil still present		
	15-17' 23A	- Some Clay But Mostly Black/DARK Grey SANDY Soil 12" Recovery		
	17-19' 23B	Mostly Dark Grey SANDY Material * some small H_2O present 18" Recovery		
	20' 23C Refusal	12" Recovery → 4" of shale - light grey in color		
			* hole is S.E. of #17	

Title: MONITORING WELL INSTALLATION

Category: GEOTECH 5.8A

Revised: APRIL 1994

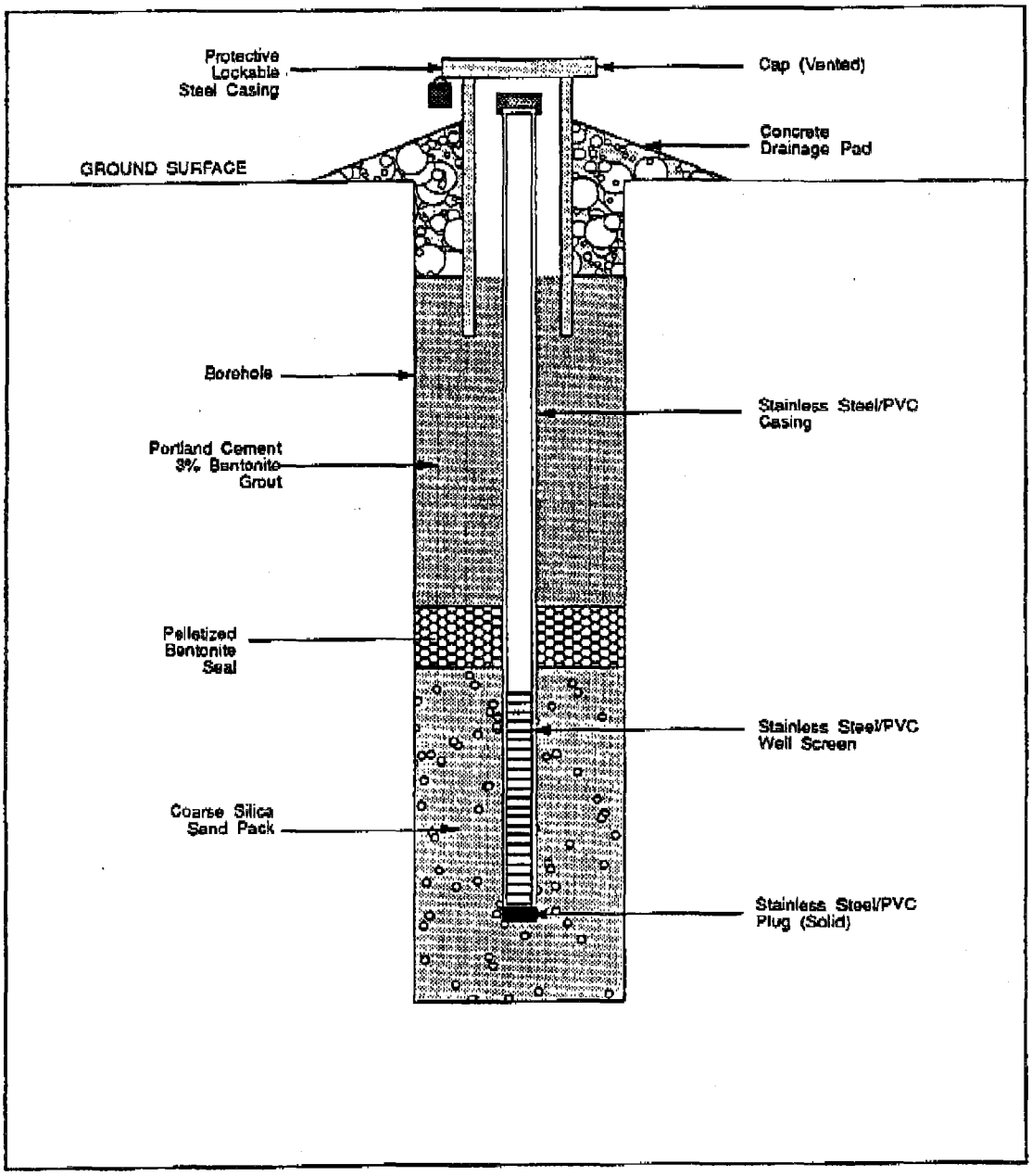

Figure 1

TYPICAL SCREENED MONITORING WELL CONSTRUCTION

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date: 12-6-00

Time: 1015

Drill Location: 24

Driller: Summit Drilling

Log/Sampling Personnel: B. Ring / EQM

Depth	% Recovery	Graphic Log	Description	Remarks
	1-2'	Dark Brown	Soil (sandy) w/ Brick & pebbles	
	2½'	Black Sandy	Material / soil	
	8'	Clay Begins		
	12'-14' 24A 18" Recovery	- Brown Sandy Soil		
	14-16' 24B 18" Recovery	- Orange/Brown	Clay & some shale near bottom w/ Dark & Brittle	- little Black stuff @ top
	16-18' 24C 8" Recovery	- Dark Grey (Almost Black)	shale w/ H_2O Present	
	18-20' 24D 12" Recovery	- Lighter Grey	shale w/ H_2O Present & clay stuff @ top	
	21' - 24E Refusal w/ 5" Recovery	- Light Grey	shale - no H_2O	
				* Hole Located S. of Basement on Acco Road b/w Fence & basement

TITle: MONITORING WELL INSTALLATION	
Category: GEOTECH 5.8A	Revised: APRIL 1994

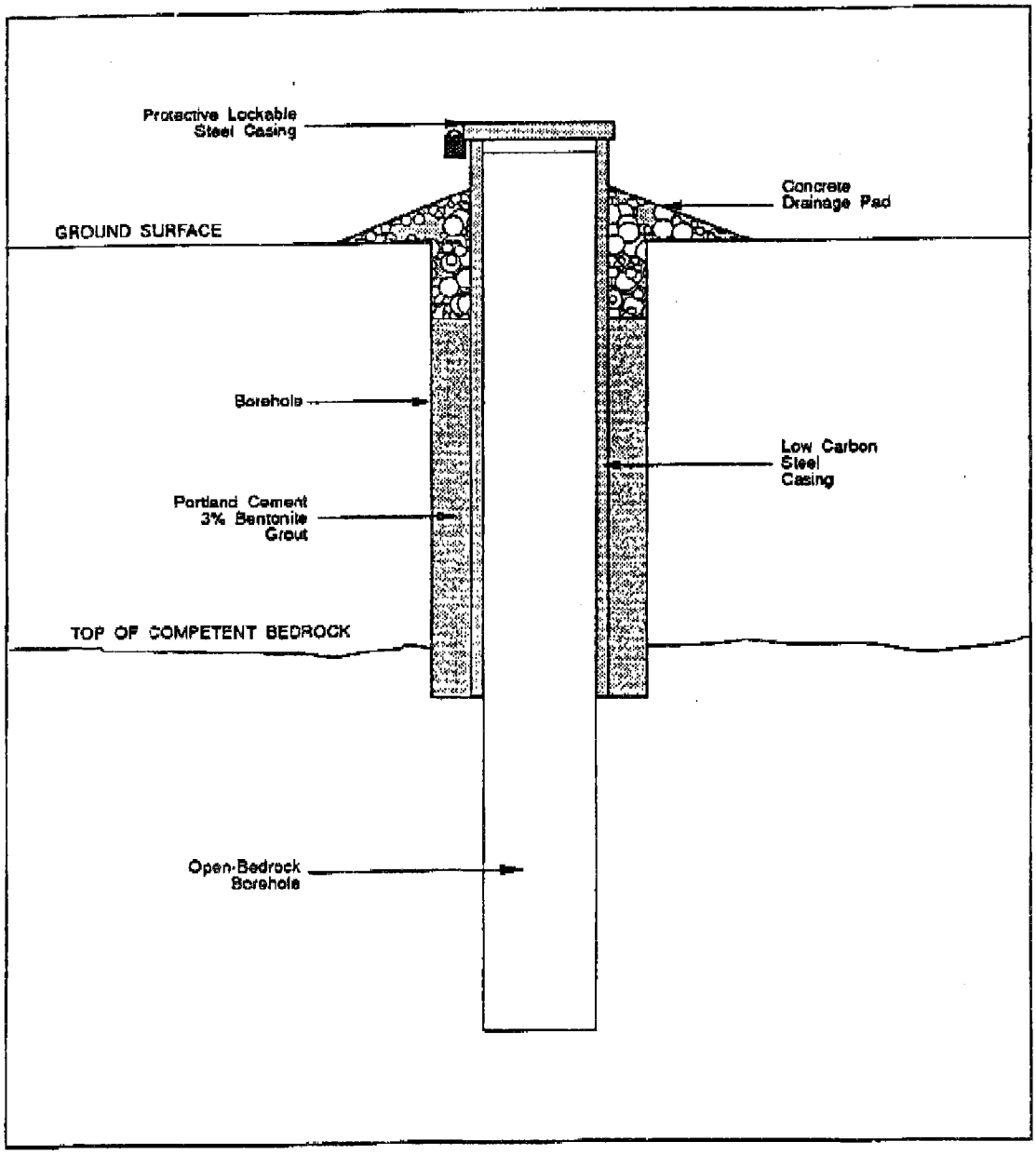

Figure 2

TYPICAL OPEN-HOLE MONITORING WELL CONSTRUCTION

recycled paper

ecology and environment

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date:_____

Time:_____

Drill Location:_____

Driller: Summit Drilling

Log/Sampling Personnel:_____ / _____

Depth	% Recovery	Graphic Log	Description	Remarks

Mahoningside Power Plant Site - Drill Logs for PCB core sampling

Date:_____

Time:_____

Drill Location:_____

Driller: Summit Drilling

Log/Sampling Personnel:_____ / _____

Depth	% Recovery	Graphic Log	Description	Remarks

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-03	11-16-00 1030	NO	Reading Power Lines	✓		Brown coarse to fine sand some silts	By ~~east~~ west RR bridge support
MR-02	11-16-00 1040	NO	✓	DUP ✓	✓	Fine grain sands, silts Brown	Heavy sheen petroleum odor By Power lines
MR-01	11-16-00 1050						Across from concrete wall

Joe Fredle:

216-219-0768

Mentor: Dan Snyder Insurance

440-946-4557

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-08	11-15-08 1125	41 14 36.341	80 49 38.770	V		Fine to coarse silty sand	by sluiceway island.
MR							

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-13	11-15-00 1530	↓	↓	✓		Brown sand	↓ MR-14
By Field MR-12	11-15-00 15-40	↓ 41°14' 34.976	↓ 80°49 38.193	✓		grey clay Native ?	No odor

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
by island MR-19	11-15-00 1445	41 14 27.345	80 49 40.745	✓		Clay silt Black no sands	pungent odor
ISL 3 W MR-18	11-15-00 1505	41 14 28.303	80 49 40.524	✓		Coarse sand, some silt brown	tr. sheen
ISL 3 E MR-17	11-15-00 1510	↓	↓	✓		coarse sand Brown	⊥ to MR-18
Isl 2 point MR-16	11-15-00 1515	41 14 30.150	80 49 39.339	✓		Black clayey silts	odor, sheen see cont MR-22
Isl 2 opposite MR-15	11 15-00 1518	↓	↓	✓		↓	⊥ to MR 16
MR-14	11-15-00 1530	41 14 32.988	80. 49 39.241			Clayey silt, Black some	strong odor

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-25	11-15-00 1345	41 14 16.319	80 49 43.733	✓	✓ no grain	Sandy silt Black	Slt. odor Heavy sheen 8-10" deep
MR-24	11-15-00 1355	41 14 16.217	80 49 43.673	✓		Silty sands Brown	
MR-23	11-15-00 1402	41 14 20.654	80 49 44.555	✓		Sandy Silt Black	sheen strong odor 0-6"
Northeast trail MR-22	11-15-00 1410	41 14 24.539	80 49 44.625	✓+	✓	dark grey / Black Sandy silt	Heavy sheen "Bull shit should be cleaned up" B.K. strong odor core tube 0-18"
MR-21	11-15-00 1430	41' 14 25.112	80 49 43.024	✓		Brown Sandy silt	Light sheen Top 2", recent
MR-20	11-15-00 1435	41'14 26.620	80 49 42.369	✓		Brown to gray silty sand	sheen

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-33	11-15-00 1200	41°14' 7.180	80°49' 32.130	✓		very course sand some pebbles tt grey tt brown	
MR-32	11-15-00 1209	41°14' 8.214	80°49' 33.694	✓		some organics silty sand dark brown	very slight sheen
MR-30	11-15-00 1214	41°14' 8.624	80°49' 35.164	✓		Brown to Black Sandy silt * by access point	
MR-28	11-15-00 1220	41°14' 10.228	80°49' 39.432	✓+	✓	Black ~~silt~~ sandy silt	Strong odor severe sheen 8 to 10" sample
MR-27	11-15-00 1245	41°14' 11.358	80°49' 41.401	✓		grey/brown sandy silts	sheen Recent Deposit Top 3 inches
MR-26	11-15-00 1258	41°14' 12.521	80°49' 42.175	✓		Sandy silts dark gray	Heavy sheen

* GPS 14 ft downstream ~~south of~~ point

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
MR-40	11-15-00 10:50	41°14"12.059	80°49'23.278	✓	✓	Silty sandy heavy sheen, strong hydrocarbon odor, dark grey/black, some organic debris	sheen noted
MR-39	11-15-00 1114	41°14'10.927	80°49'25.433	✓		silty sand, lt. odor dark grey	
MR-37	11-15-00 1121	41°14'9.017	80°49'27.195	✓	Grain size	~~very sandy~~ coarse sand Brown	slight sheen
MR-38	11-15-00 1132	on the spot 41°14'9.942	80°49'26.900	✓		sandy silt, lt grey	very light sheen
MR-36	11-15-00 1140	41°14'8.598	80°49'28.626	✓		silty sand lt grey to brown	Slight Sheen
MR-35	11-15-00 1150	41°14'7.883	80°49'30.128	✓		Brown sand some silt	Light Sheen

MR-35 NS
MR 29, 31, ~~33~~ — ~~NS~~

9249
6282
440

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-04-00

Client: *EQM* **Bor. #:** **Driller:** R. Tosatto

Client Rep: [illegible] **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
SERVICE RIG - CHECK FLUIDS & GREASE RIG BEFORE DRILLING	hr.	1/4	ON, Site 7:30 to 7:45 Safety meeting, 7:45 to 12:00 Drilling 12:00 to 12:30 Lunch 12:30 to 5:30 Drilling
TOTALS HRS SHOWN ON TIMESHEET	hr.		
Mobilization and Demobilization of Drill Rig	ea.	/	
Hand Augering	hr	/	
8 oz. Sample Jars w/lid (24 per case)	case	/	
Augering, 3-3/4" H.S.A.	ft.	109.5	
Split Spoon Samples (2")	ea.	14	
Coring, NXWL	ft.	/	
Filter for Dust Control Device	ea.	/	
Coring Setup Charge	ea.	/	
Use of Air Rotary Rig (Air Compressor)	days	/	
Wooden Boxes, NX or NXWL	ea.	/	

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-04-00

Client: *EQM* **Bor. #:** **Driller:** R. Tosatto

Client Rep: **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
Steam Cleaning	hr.	1.5	
Use of Decon Trailer	day	1	
Boring Backfill w/ Cement & Bentonite	ft.	89.0	
17H 55 Gallon Drums	ea.	/	
Drum Moving Time	hr.	/	
~~Modified~~ Level D	days	1	
Level C	days	/	
Standby Time	hr.	/	

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-01-00

Client: *EQM* **Bor. #:** **Driller:** R. Tosatto

Client Rep: B-T8 **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
SERVICE RIG - CHECK FLUIDS & GREASE RIG BEFORE DRILLING	hr.	1/4	7:30 to 7:45 Safty meeting 7:45 to 8:00 Getting Rig Ready To Go Back in Basement
TOTALS HRS SHOWN ON TIMESHEET	hr.		
Mobilization and Demobilization of Drill Rig	ea.	/	8:00 to 8:45 Getting water 8:45 to 9:30 Try To Started Hole Try 5 times
Hand Augering	hr	/	9:30 to 10:00 waited ~~one~~ ~~three~~ Till They ~~[illegible]~~ fine out what The wanted to do
8 oz. Sample Jars w/lid (24 per case)	case	/	
Augering, 3-3/4" H.S.A.	ft.	56.0	10:00 to 10:45 Decon. 10:45 to 11:00
Split Spoon Samples (2")	ea.	5	11:00 to 1:00 Moving to next Hole. → Drilling Hole
Coring, NXWL	ft.	/	1:00 to 1:30 Lunch. 1:30 to 3:45 Drilling.
Filter for Dust Control Device	ea.	/	3:45 to 4:30 Decon
Coring Setup Charge	ea.	/	
Use of Air Rotary Rig (Air Compressor)	days		
Wooden Boxes, NX or NXWL	ea.	/	

Level. ~~B~~ C From. 8:30 to 10:30

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-01-00

Client: *EQM* **Bor. #:** **Driller:** R. Tosatto

Client Rep: **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
Steam Cleaning	hr.		
Use of Decon Trailer	day		
Boring Backfill w/ Cement & Bentonite	ft.		
17H 55 Gallon Drums	ea.		
Drum Moving Time	hr.		
Modified Level C	days		
Level C	days		
Standby Time	hr.		

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-05-00

Client: *EQM* **Bor. #:** 19 - 20 21-22 **Driller:** R. Tosatto

Client Rep: BTB **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
SERVICE RIG - CHECK FLUIDS & GREASE RIG BEFORE DRILLING	hr.	1/4	ON Site at 8:00 8:00 to 8:30 Decon
TOTALS HRS SHOWN ON TIMESHEET	hr.		8:30 to 10:00 Drilling 10:00 to 10:30 Decon
Mobilization and Demobilization of Drill Rig	ea.	/	10:30 to 11:15 Drilling. 11:15 to 11:30 Decon.
Hand Augering	hr	/	11:30 to 12:00 Lunch 12:00 to 1:30 setting up and Drilling
8 oz. Sample Jars w/lid (24 per case)	case	/	1:30 to 2:00 Decon 2:00 to 3:30 Drilling
Augering, 3-3/4" H.S.A.	ft.	77.0	3:30 to 3:45 moved to Next Hole
Split Spoon Samples (2")	ea.	11	3:45 to 4:00 Try To Drill Hole Hit Something at 3.5
Coring, NXWL	ft.	/	4:00 to 4:30 Decon
Filter for Dust Control Device	ea.	/	
Coring Setup Charge	ea.	/	
Use of Air Rotary Rig (Air Compressor)	days	/	
Wooden Boxes, NX or NXWL	ea.	/	

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-05-00

Client: *EQM* **Bor. #:** **Driller:** R. Tosatto

Client Rep: **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
Steam Cleaning	hr.	2.¼	
Use of Decon Trailer	day	1	
Boring Backfill w/ Cement & Bentonite	ft.	77.0	
17H 55 Gallon Drums	ea.	/	
Drum Moving Time	hr.	/	
[redacted] Level D	days	1	
Level C	days	/	
Standby Time	hr.	/	

DAILY PRODUCTION RECORDS

Project: *Mahoning Power Plant* **Proj. #** 324 **Date:** 12-06-00

Client: *EQM* **Bor. #:** 22-23 **Driller:** R. Tosatto

Client Rep: BR **Loc.:** *Warren, Ohio* **Rig:** 75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
SERVICE RIG - CHECK FLUIDS & GREASE RIG BEFORE DRILLING	hr.		On. Site at 7:30 to 7:45 Safty meeting
TOTALS HRS SHOWN ON TIMESHEET	hr.		7:45 to 8:00 Getting set up
Mobilization and Demobilization of Drill Rig	ea.		
Hand Augering	hr		8:00 to 8:15 Trying to Get Hole Started.
8 oz. Sample Jars w/lid (24 per case)	case		8:15 to 8:30 waited to find out were To move Hole.
Augering, 3-3/4" H.S.A.	ft.	39.0	8:30 to 10:00 Drilling.
Split Spoon Samples (2")	ea.	8	10:00 to 10:15 moved to next Hole
Coring, NXWL	ft.		10:15 to 11:30 Drilling
Filter for Dust Control Device	ea.		11:30 to Decon
Coring Setup Charge	ea.		
Use of Air Rotary Rig (Air Compressor)	days		
Wooden Boxes, NX or NXWL	ea.		

DAILY PRODUCTION RECORDS

Project:	*Mahoning Power Plant*	**Proj. #**	324	**Date:**	12-06-00
Client:	*EQM*	**Bor. #:**	22-23	**Driller:**	R. Tosatto
Client Rep:		**Loc.:**	*Warren, Ohio*	**Rig:**	75B

DESCRIPTION	UNITS	AMT	COMMENTS & TIME LOG
Steam Cleaning	hr.		
Use of Decon Trailer	day	1	
Boring Backfill w/ Cement & Bentonite	ft.	39.0	
17H 55 Gallon Drums	ea.	/	
Drum Moving Time	hr.	/	
~~Modified~~ Level D	days	1	
Level C	days	/	
Standby Time	hr.	/	

SAMPLE LOG
FOR
MAHONINGSIDE POWER PLANT SITE
WARREN, OHIO

SAMPLE ID	DATE/TIME	LATITUDE	LONGITUDE	PCB	FULL SCAN	SEDIMENRT DESCRIPTION	GENERAL COMMENTS
under Bridge MR-10	11-15-00 1645	N/A	N/A	✓		Brown sand/gravel	under summit street
MR-07	11-15-00 1650	~~N/A~~		✓		Mud, rocks, shells, leaves, silt	Middle pool
MR-04	11-15-00 1655	N	A	✓		Black gravel, coarse sands	Near dam
MR-05	11-15-00 1700	N	A	✓		gravel/sand	By concrete pier
MR-06	11-15-00 1710	N	A	✓		gravel/sand	by E wall 30 ft from Dam
MR-09	11 15-00 1720	N	A	✓		Clay/sand	30 foot from summit, 20 ft from east wall

Drilling/Sampling Plan for Subsurface Potential PCB Contamination
Mahoningside Power Plant Site
Warren, Trumbull County, Ohio

Drill Locations/Accessibility:

U.S. EPA has tentatively identified up to 20 locations which will be selected as drilling points. Determining factors utilized to select locations include, but are not limited to; ability to maneuver the drill rig into position, known locations of contamination, suspected areas of contamination, safety of drill rig placement, and physical observations of the site. Of the proposed sample locations, 6 to 7 have been selected from the surface area surrounding the existing facility structure. Two of these will be to the west, two to the south, two to the east of the facility structure, and one to the north (if possible). The remaining proposed locations will be augured/cored through the cement pad in the former facility's basement.

Drilling Procedures:

The drill rig will be set up and checked for safety by the operator. It is anticipated that the drilling operations will be two-phased. The first several feet of material under the concrete will be augured until refusal. Once refusal has occurred, then the remaining section of material to be extracted will be cored. This will occur to the sandstone underlaying the shale or to a maximum depth below the concrete surface of twenty feet. The core will then be removed for sampling preparation.

Sampling of Cuttings/Cores:

The auguring of the first layer in each drilling location is expected to be conducted for the first three to five feet of each hole. The cuttings from auguring activities will be collected from both the top ½ and bottom ½ of the auguring core. These cuttings will each be prepared separately as samples and sent to an independent laboratory for PCB analysis. The core retained will also be processed and split into definitive sections for sample collection. There will be four samples removed from each core. The first sample section will be the top two feet of the core. The second section will be the next three feet of the core. The two final sections, continuing down the core profile, will each be five feet in length. Each section of rock from the core (as listed above) will be pulverized by START and composited. A four-ounce sample will be collected of this material, for each core section, and sent to an independent laboratory for PCB analysis. START will log the physical appearance, rock type, odors, and any other core information deemed necessary. The soil samples for the 6 to 7 drill locations outside of the basement area will be utilized primarily for field screening for the presence of PCBs. At the discretion of the U.S. EPA, samples from these areas may be sent for laboratory analysis of PCB content.