Date: 6 Jun 96
Time: 0715
Site: S1DB

Collected W1-1 samples. MS/MSD site 2-CN, 3-TPH, 3-BNA, 5-VOA
Use peristolic pump to collect all samples but VOA's.
The depth was 10' from surface. VOA was collected using a teflon bailer. The hole had been left to recharge + let TSS settle overnight. Samples collected first thing onsite.
Sending samples to ARDL 6 Jun 96 included: S8DB-1 → 4, S1DB-1 → 8B, W1-1 samples (MS/MSD). Iced and packed in 2 trash bags + sealed in cooler. Finish S1

DATE: 7 Jun 96 Time: 0730
Site: S4DB GPS: N 29 57 58.83 W 90 01 37.75 ±40 up #38

Coordinated w/ Coast Guard about cutting concrete for boring + hand augers. The are 2 boring sites and 4 hand auger sites. They were helpful. Drill crew arrived ~0720. Started drilling @0755 at the S4DB site. This boring will be 20' deep.

Depth	HNU Reading (ppm)	Notes
2½'-5'	0	Collected S4DB-1 Clay/Stiff 2½' recov 0815
5'-7'	0	2' recov clay w/ midsection sand
7½-10'	0	2½' recov clay collected S4DB-2 845 PP=1.0
10'-12'	0	2' recov clay PP=.75
12½'-15'	0	full recov collected S4DB-3 0920 PP=.75 Clay/Silt
15'-17'	0	full recov PP=.75
17½-20'	0	full recov collected S4DB-4 A+B VOA 1000 4+4A BNA clay PP=.75
20'-22'	0	.5' recov " S4DB-4B BNA PP=.5 clay/wet

DCB

30/

Date: 7 Jun 96 Time: 1100

Site: S4DB

Completed sampling at 1000. HAVING THE PROPER HOISTING PLUG HAS MADE THIS OPERATION MUCH SMOOTHER. DID NOT HAVE TO RUN RODS DRILLING TIME TOOK ~ 2 hours w/1 hour cleanup.

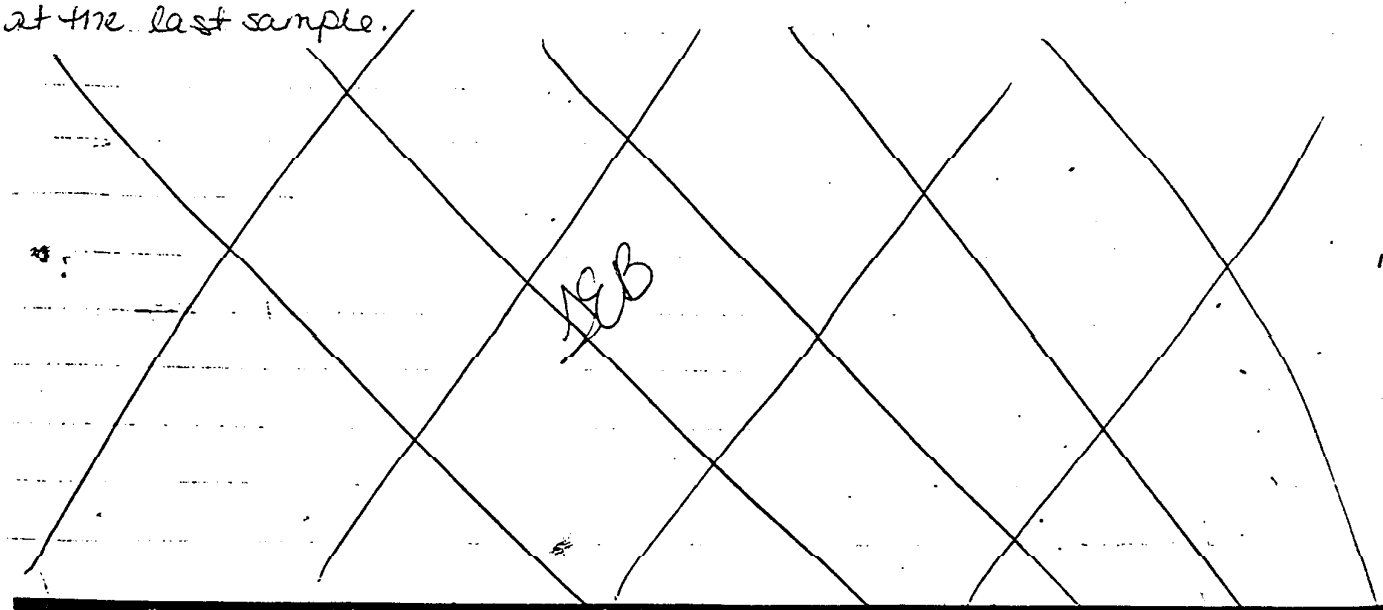
ONLY WENT TO DEPTH OF 20'.

SITE: S5DB Time: 1240

GPS: N 29° 58' 59.83 ±40 wp=# 46
W 90° 01' 39.46

Depth	HNU Reading (ppm	NOTES
2½ - 5	0	Clay collected S5DB-1 1300
5 - 7	0 → .2 recov	only .75' recove (~3'-5') running extra auger to push thru a railroad tie. skipping this sample to push thru rail tie.
7½ - 10	0	full recov pp=1.0 clay collected S5DB-2 1320
10 - 12	0	pp=.75 clay.
12 - 14½	0	collected S5DB-3 1340 pp=.75 clay
14½ - 16½	0	full recover pp=.75 1415 clay
16½ - 19	0	collected S5DB-4 1420 1½' recovery cinders at tip.

Ran into RAILROAD TIES at 3' then again around 10'. Also some cinders at the last sample.



DEB

DATE: 8 Jun 96 Time: 0700

Arrived on site @ 0700 waiting for NAD dull crew. NAD Arrived at 0715.

Site: S2DB Time: 0755 HNU Background = 1.0 ppm

GPS: N 29 58' 07.03" ±50 wp# 41
W 90 01' 35.84"

Depth	HNU (ppm 0-20)	Notes
2½ - 5	11	collected S2DB-1 PP = 1.0 Recov = 1½' 830 clay
5½ - 7½	14	PP = 1.0 Recov = 1½'
7½ - 10	6	PP = 1.0 845 " collected S2DB-2 Recov = 2½'
10 - 12	1	PP = 1.5 Recov = 2' "
12 - 14½	1	PP = 1.75 915 " collected S2DB-3 recov = 2½ PP = .75
15 - 17	1	recov = 2' wet clay
17 - 19½	2	PP = .75 945 " collected S2DB-4 recov =

Site: S3DB TIME: 1150

GPS: N 29 58' 01.78" ±50
W 90 01' 38.00" wp# 40

Depth ft	HNU	Notes
2½ - 5	.5 ppm	collected S3DB-1 1300 PP = 1.25 recov = 1' silt/clay
5½ - 7½	1.5 ppm	recov = .8' PP = 1.0 sandy/clay
7½ - 10	.6 ppm	recov = 2½ PP = .75 1315 sandy/clay collected S3DB-2
10 - 12	2 ppm	recov = 2' PP = 2.0 wet clay
12 - 14½	1 "	recov = 2½ PP = 1.75 " " 1345 collected S3DB-3
15 - 17	1	recov = 1.8' PP = .75 soft wet clay
17 - 19½	1	recov = 1.5' PP = .75 collected 1400 S3DB-4 wet clay w/ wood frags.

1300

201

324

Date: 8 Jun 96

Time: 1242

GPS Positions

S2 5/6 ⇒ wp #42 N 29 58' 06.70" ±40
W 90 01' 36.01"

S2 9/10 ⇒ wp #43 N 29 58' 06.20
W 90 01' 36.14 ±40

S3 5/6 ⇒ wp44 N 29 58' 02.49 ±40
W 90 01' 37.90

S3 9/10 = wp #45 N 29 58 01.06 ±40
W 90 01 38.02

DATE: 9 Jun 96

TIME: 0650

ARRIVE ON SITE, PREPARING TO MOVE DRILL RIG TO shallow sites.

SITE: S2-5/6 [shallow sampling site]

GPS = wp #42 [already recorded]

Depth	HNU		NOTES
½' - 3'	30 ppm	collected S2-5	clay w/some gravel and railroad
3' - 5'	70 ppm	collected S2-6	ties. Right in front of the hazardous waste storage and sludge storage.

0730

SITE: S2-9/10

GPS = wp # 43

Depth	HNU (ppm)	NOTES
½' - 3'	100	1' recov on both pp = 1.5 collected S2-9 0800
3' - 5'	90	" " " " " S2-10

JEB

DATE: 9 Jun 96

INNER HARBOR NAVIGATION CANAL

SITE: S3-5/6

HNU Background 0-20 = 2ppm

Time: 0815

0-200 = 8 ppm

Depth	HNU (ppm)	NOTES
½'-3'	11	ppp = 1.0
3-5'	40	stiff clay collected S3-5 and 6

GPS = wp #44

SITE: S3-9/10

Time: 0850

Depth	HNU ppm	NOTES
½'-3'	10	ppp = 1.0 [redacted] gravel + clay .8' recov
3'-7'	7	" " sand and clay

collected S3-10 combination of 3'-7'

1st sample only .5' recov 2nd full 2' recov

This site had a lot of rock in it. S3-10 VOA collected from 5'-7' depth All 4 shallow samples were collected by pushing the split spoon samplers to a depth of 5', instead of using a hand auger. All sites within the Coast Guard facility were filled in and topped with concrete. Only site S1E is left to drill. All shallows are done. Some QA/QC sites have been eliminated due to the reduction in samples by only going to 20' depth. S2-10 and were not done for this reason. Still have to clean up the Fort N.O. site on Monday. NOD did help in getting the hoist connection quickly and the drill crew has been very helpful. Rich Hagan talked with Allen Blake frequently and kept him appraised of the job. I kept Ted Postol informed of changing situations throughout job. This time had a much better response from NOD and less hassle on the job site. JEB

341

INNER HARBOR NAVIGATION CANAL

DATE : 9 Jun 96

SITE : S6DB

TIME : 1030

GPS : wp #4[illegible]7 N 29° 57' 54.77" ±40'

W 90° 01' 38.68"

DEPTH	HNU READING	NOTES
2½ - 5	1.5 ppm	pp=.5 recov=1' SAND 1100 S6DB-1 collected VOA ½% BNA, etc
5 - 7	[illegible]	pp= recov=2' collected S6DB-1 BNA, etc. Turned to clay/silt
7 - 9½	1 ppm	total recov 2½ pp=1.75 clay collected S6DB-2 1115
10 - 12	1	Recov = 2 pp=.75 clay
12 - 14½	1	Recov = 2½ pp=.75 clay collected S6DB-3 1130
14½ - 16½	2.0	" = 2' pp=1.0 clay
16½ - 19 (~~[illegible]~~ A & B)	1.0	" = 2½ pp=1.0 clay collected S6DB-4 A+B 1145

Changed at ~4½ from grey sandy to darker grey organic material.

Francis E Brown

HTW DRILLING LOG

COMPANY NAME: S-HCOE	DRILLING SUBCONTRACTOR	SHEET 1 OF SHEETS
PROJECT: INNER HARBOR NAVIGATION CANAL	LOCATION: S1 DB	
NAME OF ~~DRILLER~~ INSPECTOR: Beth Beaux / Richt Hagan	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" Hollow Stem Augers 2½' +2' split spoon samples.	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 5 June 96	DATE COMPLETED: 6 Jun 96
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	TOTAL NUMBER OF CORE BOXES			
SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR		

EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	Push Recov.	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0		No Sample					
	1							
-5	2							
	3	Sandy/Silt	HNU=0ppm	1	2.5'	S1DB-1 Composite of Push #1+2		
-10	4							
	5	Sandy/Silt	HNU=0ppm	2	2.0'			
-15	6							
	7		No Sample					
20	8	Clay/Silt	HNU=0	3	2.5'	S1DB-2		
	9							
-25	10							

PROJECT

HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT | INSPECTOR | SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO. Push	Recov	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	Clay / silt	HNU = 0	4	2.0'			
	12		No Sample					
	13		HNU = 0	5	2.5'	SIDB-3		
	14							
	15		HNU = 0	6	2.0'			
	16							
	17	Clay w/ middle section of decayed wood - soft	HNU = 0	7	2.5'	SIDB-4		
	18							
	19							
	20		HNU = 0	8	2.0'			
	21	Clay						
	22							
	23	No Recovery		9				
	24							
	25							
	26	Clay	HNU = 0	10	2.0'	SIDB-5		
	27							
	28	Silty / Clay	HNU = 0	11	2.5'	SIDB-6		

PROJECT | HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT | INSPECTOR | SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	29							
	30		No Sample					
	31	silty/clay	HNU=0	12	2.0'			
	32		No Sample					
	33				.5'			
	34	clay	HNU=0	13		SIDB-7 VOA only		
	35							
	36	clay	HNU=0	14	2.0'	SIDB-7 BNA,etc only		
	37							
	38	clay/stiff	HNU=0	15	2.5'	SIDB-8 8A 8B VOA taken		Push #15+16 Composite for 8, 8A, + 8B.
	39							
	40	clay/stiff	HNU=0	16	2.0'	SIDB-8 8A 8B		
	41							
	42							

PROJECT | HOLE NO.

HTW DRILLING LOG

COMPANY NAME: US Army Corps of Engineers - St. Louis	DRILLING SUBCONTRACTOR	SHEET 1 OF SHEETS
PROJECT: INNER HARBOR NAVIGATION CANAL	LOCATION: S2DB	
NAME OF ~~DRILLER~~ INSPECTORS: Rich Hagan / Beth Brown	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" Hollow Stem Augers 2½' + 2' split spoon samplers	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 8 June 96	DATE COMPLETED: 8 June 96
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	TOTAL NUMBER OF CORE BOXES			
SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR		

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	PUSH Recov.	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0			PUSH	Recov.			
	1			No Sample				
-5	2							
	3	Clay material P.P.=1.0	HNU=11ppm	1	1.5'	S2DB-1		
-10	4							
	5			No SAMPLE				
-15	6	Clay P.P. = 1.0	HNU=14ppm	2	1.25'	screen		
	7							
-20	8	Clay P.P. = 1.0	HNU=6ppm	3	2.5'	S2DB-2		
	9							
-25	10							

PROJECT | HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT | INSPECTOR | SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	P.P. = 1.5	HNU = 1	3	2.0'	screen		
	12							
	13	P.P. = 1.75	HNU = 1	4	2.5'	S2DB-3		
	14							
	15		No Sample					
	16	wet clay P.P. = .75	HNU = 1	5	2.0'	Screen		
	17							
	18	P.P. = .75	HNU = 2	6	2.5	S2DB-4		
	19							
	20							

PROJECT | HOLE NO.

HTW DRILLING LOG

COMPANY NAME: US Army Corps of Engineers - St Louis	DRILLING SUBCONTRACTOR	SHEET 1 OF SHEET
PROJECT: Inner Harbor Navigation Canal	LOCATION: S3DB	
NAME OF DRILLER: Richtigan/Betin	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" hollow stem auger; 2½" & 2" split spoon samplers	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 8 June 94	DATE COMPLETED: 8 June 94
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE: 20'	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	TOTAL NUMBER OF CORE BOXES			
SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR		

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	Push / Recov	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0				Push / Recov			
	1							
-5	2		No sample					
	3	Silt/clay			1.6			
	4	PP = 1.25	HNU = .5ppm	1		S3DB-1		
-10	5							
			No sample					
	6	Sandy clay, gray			0.8'			
-15	7	P.P. = 1.0.	HNU = 1.5ppm	2		screen		
-20	8	P.P. = .75	HNU = .5ppm	3	2.5'	S3DB-2		
	9							
-25	10							

PROJECT | HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT

INSPECTOR

SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	wet clay P.P. = 2.0	HNU = 2ppm	4	2.0'	Screen		
	12							
	13	P.P. = 1.75	HNU = 1.0ppm	5	2.5'	S3DB-3		
	14							
	15	wetclay P.P. = .75	No Sample					
	16		HNU = 1.0ppm	6	1.8'	Screen		
	17	WET CLAY WOOD FRAGMENTS P.P. = .75	HNU = 1.0ppm	7	1.5'	S3DB-4		
	18							
	19							
	20							

PROJECT

HOLE NO.

HTW DRILLING LOG

COMPANY NAME: US Army Corps of Engineers - St Louis	DRILLING SUBCONTRACTOR	SHEET 1 OF SHEET
PROJECT: INNER HARBOR NAVIGATION CANAL	LOCATION: S4 DB	
NAME OF ~~DRILLER~~ INSPECTORS: BETH BROWN/RICH HAGAN	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" Hollow Stem Augers; 2½' & 2' split spoon samplers	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 7 June 96	DATE COMPLETED: 7 June 96
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	TOTAL NUMBER OF CORE BOXES			
SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR		

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	PUSH	RECOV.	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0		HNU Reading						
	1		NO SAMPLE						
-5	2								
	3	Clay/stiff p.p. = 1.0	HNU = 0ppm	1	2.5'		S4DB-1		
-10	4								
	5	Clay w/mid-section of sand.							
-15	6	p.p. = 1.0	HNU = 0	2	2'				
	7		NO SAMPLE						
-20	8	Clay p.p. = 1.0	HNU = 0	3	2.5'		S4DB-2		
	9								
-25	10								

PROJECT

HOLE NO.

HTW DRILLING LOG

HOLE NO. S4 DB

PROJECT: IHNC

INSPECTOR: BETA BROWN / RICH Hagan

SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
			HNU Reading	PUSH	Recov			
	11	Clay P.P. = 0.75	HNU=0	4	2'			
	12		NO SAMPLE					
	13	Clay/silt P.P. = 0.75	HNU=0	5	2½'	S4DB-3		
	14							
	15	clay/silt P.P. = 0.75						
	16		HNU=0	6	2'			
	17		NO SAMPLE					
	18	clay/silt P.P. = 0.75						
	19		HNU=0	7	2½'	S4DB-4 4A 4B VOA only		
	20	WET CLAY P.P. = 0.5			0.5'			
	21		HNU=0	8		S4DB-4 4A 4B BNA, Metals only		
	22							

PROJECT

HOLE NO.

HTW DRILLING LOG

COMPANY NAME: US Army Corps of Engineers - St Louis	DRILLING SUBCONTRACTOR	SHEET 1 OF SHT
PROJECT: INNER HARBOR NAVIGATION CANAL	LOCATION: S5DB	
NAME OF ~~DRILLER~~ INSPECTOR: Rich Hagan / Beth Brown	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" Hollow Stem Auger 2½' + 2' split spoon sampler.	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 7 Jun 96 - 1230	DATE COMPLETED: 7 Jun 96 - 1430
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
GEOTECHNICAL SAMPLES: DISTURBED / UNDISTURBED	TOTAL NUMBER OF CORE BOXES	
SAMPLES FOR CHEMICAL ANALYSIS: VOC / METALS	OTHER (SPECIFY) / OTHER (SPECIFY) / OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE: BACKFILLED / MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	Push / Recov.	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0							
	1			NO SAMPLE				
-5	2							
	3	Clay material			.75'			
			HNU = 0	1		S5DB-1		
-10	4							
	5				.2'			
		Railroad ties Fragments	HNU=0	2		Screen		
-15	6							
	7			NO Sample				
-20	8	Clay material P.P. = 1.0						
			HNU=0	3	2.5'	S5DB-2		
	9							
-25	10							

PROJECT

HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT

INSPECTOR

SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	Clay P.P. = .75	HNU=0	4	2.0'	screen		
	12							
	13	Clay P.P. = .75	HNU = 0	5	2.5'	SSDB-3		
	14							
	15	Clay P.P. = .75	HNU=0	6	2.0'	Screen		
	16							
	17	Clay w/ cinder debris at top of sample. P.P. = .75	HNU=0	7	1.5'	SSDB-4		
	18							
	19							
	20							

PROJECT

HOLE NO.

HTW DRILLING LOG

COMPANY NAME: US ARMY CORPS OF ENGINEERS	DRILLING SUBCONTRACTOR	SHEET 1 OF 2 SHEETS
PROJECT: Inner Harbor Navigation Canal (IHNC)	LOCATION: SLeDB	
NAME OF DRILLER: Richard Hogan / BETH BROWN	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" hollow stem auger; 2½' & 2' split spoon sampler	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 9 June 96	DATE COMPLETED: 9 Jun 96
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
GEOTECHNICAL SAMPLES: DISTURBED / UNDISTURBED	TOTAL NUMBER OF CORE BOXES	
SAMPLES FOR CHEMICAL ANALYSIS: VOC / METALS	OTHER (SPECIFY) / OTHER (SPECIFY) / OTHER (SPECIFY) / TOTAL CORE RECOVERY	
DISPOSITION OF HOLE: BACKFILLED / MONITORING WELL	OTHER (SPECIFY) / SIGNATURE OF INSPECTOR	

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.		SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0	BASE MATERIAL FOR TOE OF LEVEE GRASS/SAND		PUSH	RECOV			
	1	SAND, BROWN				No Sample taken		
-5	2							
	3	SAND, BROWN/GRAY pp. = .5			1.0'			
-10	4		HNU=1.5 ppm	1		SLeDB-1		
	5	SAND, DARK GRAY ORGANIC MATERIAL TURNED TO CLAY/SILT MATERIAL pp = .5						
-15	6		HNU=1.5ppm	2	2.0'	SLeDB-1		
	7							
-20	8	CLAY / GRAY pp = 1.75	HNU=1.0ppm	3	2.5'	SLeDB-2		
	9							
-25	10					No Sample		

PROJECT | HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT: LHNC

INSPECTOR: Rich Hagan / Beth Brown

SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO. PUSH	GEOTECH SAMPLE OR CORE BOX NO. Recov.	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	Clay, gray, wet PP = .75	HNU = 1.0ppm	4	2.0'	Screen		
	12							
	13	Clay, gray PP = .75	HNU = 1.0ppm	5	2.5'	S6DB-3		
	14							
	15		No Sample					
	16	Clay, gray PP = 1.0	HNU = 2.0ppm	6	2.0'	SCREEN		
	17							
	18	Clay, gray PP = 1.0	HNU = 1.0ppm	7	2.5'	S6DB-4 -4A -4B		
	19							
	20							

PROJECT

HOLE NO.

HTW DRILLING LOG

COMPANY NAME: ACOE	DRILLING SUBCONTRACTOR	SHEET 1 OF SHEET
PROJECT: INNER Harbor Navigation Canal	LOCATION: S8DB	
NAME OF ~~DRILLER~~ INSPECTOR: BETH BROWN / RICH HAGAN	MANUFACTURER'S DESIGNATION OF DRILL	
SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 8" Hollow Stem Augers 2½' + 2' split spoon samplers	HOLE LOCATION	
	SURFACE ELEVATION	
	DATE STARTED: 4 June 96	DATE COMPLETED: 4 June 96
OVERBURDEN THICKNESS	DEPTH GROUNDWATER ENCOUNTERED	
DEPTH DRILLED INTO ROCK	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
TOTAL DEPTH OF HOLE	OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	

GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	TOTAL NUMBER OF CORE BOXES			
SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	TOTAL CORE RECOVERY
DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	SIGNATURE OF INSPECTOR		

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	Push / Recov	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	0			Push	Recov			
	1		No Sample					
-5	2	Clay/silt			.5'			
	3		HNU=0	1				
-10	4		No Sample					
	5	Clay/silt						
	6		HNU=0	2	2.5'	S8DB-1		
-15	7		No Sample					
-20	8	Clay/stiff						
	9		HNU=0	3	2.5'	S8DB-2		
-25	10							

PROJECT | HOLE NO.

HTW DRILLING LOG

HOLE NO.

PROJECT

INSPECTOR

SHEET 2 OF 2 SHEETS

ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO. Push	GEOTECH SAMPLE OR CORE BOX NO. Recov	SOIL ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	11	Clay/stiff	HNU=0	4	2.5'			
	12							
	13	Clay/stiff gray color	HNU=0	5	2.5'	SBDB-3		
	14							
	15	same material						
	16		HNU=0	6	2.5'			
	17							
	18	Clay w/ wood fragments	HNU=0	7	2.5'	SBDB-4		
	19							
	20							

PROJECT

HOLE NO.

HTRW DRILLING LOG 5-1 - 5-2-96

Hole Number IHNC - S-9- DB

Project Inner Harbor Navigation Canal
Phase II-B2 HTRW Investigation

Inspector Richard Hagan / BEN BROWN

Sheet 1 OF 4

Elev. (a)	Depth (b)	Description of Materials (c)	Field Screening Results (d)	Geotech Sample or CORE Box No. (e) PUSH	(e) RECOVERY	Analytical Sample No. (f)	Remarks (g)
	0	BASE MATERIAL FOR OLD R.R. TRACKS GRAVEL/SHELLS SOME TOPSOIL W/VEGETATION LARGE RIP RAP					3" O.D. SPLIT SPOON CONTINUOUS PUSH
	1	CLAY, BROWN LEAN W/ GRAVEL & SHELLS STIFF T.V = .8 P.P. = 1.9	HNU = 0ppm	1	1.7'		
	2						
	3	CLAY, GRAY MED STIFF, SLIGHTLY MOIST T.V = .42 P.P. 1.6	HNU = 0ppm	2	1.7'		3.7' ▽ WATER LEVEL IN HOLE OVERNIGHT
	4						
	5	DECAYED WOOD MIXED W/ CLAY T.V. = .41 P.P. = 1.5	HNU = 0ppm	3	1.8'	*S9-DB-1	
	6						
	7	T.V. = .38 P.P. .8	HNU = 0ppm	4	1.8'		
	8	MORE MOIST & LESS STIFF					
	9		HNU = 0ppm	5	1.7'	S9-DB-2	
	10	DECAYED WOOD & SHELLS MIXED W/ CLAY, GRAY					

Project: Inner Harbor Navigation Canal
Phase II-B2 HTRW Invest.

Hole No. IHNC - S-9- DB

FORMS087/n

HTRW DRILLING LOG 5-1 - 5-2-96

Hole Number IHNC - S-9- DB

Project Inner Harbor Navigation Canal
Phase II-B2 HTRW Investigation

Inspector Richard Hagan / Beth Brown

Sheet 2 OF 4

Elev. (a)	Depth (b)	Description of Materials (c)	Field Screening Results (d)	Geotech Sample or CORE Box No. (e) PUSH	(e) RECOVERY	Analytical Sample No. (f)	Remarks (g)
	10	CLAY, GRAY MOIST, SOFT - SLIGHTLY STIFF					3" O.D. SPLIT SPOON CONTINUOUS PUSH
	11	VERY MOIST TO WET T.V= .2 P.P. .5	HNU = 0ppm	6	1.8'		FREE WATER RISING IN HOLE
	12	VERY SOFT DECAYED WOOD CHIPS T.V=.05 P.P.=0.0	HNU = 0ppm	7	2.0'		
	13						
	14	SILT LENSES ORGANIC MATERIAL	HNU = 0ppm	8	1.9'	S9-DB-3	ATTEMPTED TO REEM HOLE, LARGE PIECE OF RIP RAP CAUSED BIT REFUSAL IN HALF OF HOLE - MOVED DRILL RIG TOWARD FLOOD WALL 3'. WATER ROTARY 6" WING BIT OPENED NEW, HOLE TO 16' 3" O.D SPLIT SPOON PUSH
	15	T.V= .18 P.P.= .2					
	16	STIFFER CLAY, GRAY T.V.=.35 P.P. = .5	HNU = 2ppm	9	2.0'		
	17	LESS MOIST T.V.=					
	18	CLAY, GRAY FAT/PLASTIC SLIGHTLY MOIST T.V.=.46 P.P. = .8	HNU = 9ppm	10	1.6'	S9-DB-4	
	19						
	20						

Project: Inner Harbor Navigation Canal
Phase II-B2 HTRW Invest.

Hole No. IHNC - S-9- DB

FORMS087/n

HTRW DRILLING LOG

Hole Number IHNC - S-9-DB

Project Inner Harbor Navigation Canal
Phase II-B2 HTRW Investigation

Inspector Richard Hagan / Beth Brown

Sheet 3 OF 4

Elev. (a)	Depth (b)	Description of Materials (c)	Field Screening Results (d)	Geotech Sample or CORE Box No. (e) PUSH	(e) RECOVERY	Analytical Sample No. (f)	Remarks (g)
	20	CLAY, GRAY SOFT MOIST			.4		WATER ROTARY 6" WING BIT 3" O.D SPLIT SPOON
	21	T.V. = .1 P.P. .25	HNU = .4ppm	11			
	22				1.5		
	23	CLAY, GRAY w/ SILT + WOOD CHIPS T.V. = .1 P.P. .2	HNU = .3ppm	12			
	24						OVER DRILL .5'
	25		HNU = .2ppm	13	1.5	DB59-5	
	26						
	27	CLAY, GRAY w/ DECAYED WOOD T.V. = .14 P.P. = .25	HNU = .1ppm	14	1.5		
	28						
	29	CLAY + DECOMPOSED WOOD BROWN - GRAY STIFF	HNU = .1ppm	15	1.5		
	30	T.V. = .37 P.P. = 1.0					

Project: Inner Harbor Navigation Canal
Phase II-B2 HTRW Invest.

Hole No. IHNC - S-9-DB

FORMS087/n

HTRW DRILLING LOG

Hole Number IHNC - S-9-DB

ect Inner Harbor Navigation Canal
Phase II-B2 HTRW Investigation

Inspector Richard Hagan/Beth Brown

Sheet 4 OF 4

Elev. (a)	Depth (b)	Description of Materials (c)	Field Screening Results (d)	Geotech Sample or CORE Box No. (e) Push	Recovery	Analytical Sample No. (f)	Remarks (g)
	30	CLAY, & DECOMPOSED WOOD STIFF BROWN-GRAY T.V.=.37 P.P.=1.0			.5		WATER ROTARY 6" WING BIT 3" O.D. SPLIT SPOON
	31	CLAY, GRAY SOFT w/ TRACE WOOD T.V.=.14 P.P.=.1	HNU=0	16	NO RECOVERY	S9DB-6	
	32	SAND, GRAY VERY FINE-FINE SILTY/CLAYEY			1.0		
	33	MORE CLAYEY	HNU=0	17			
	34	CLAY, GRAY SILTY w/FINE SAND LAYERS					
	35	T.V.=.17 P.P.=.2	HNU=0	18	1.8	S9DB-7	
	36	CLAY, GRAY SANDY T.V.=.12 P.P. .2			.5		
	37			19			
	38		HNU=0			S9DB-8 Composite	
	39	CLAY, GRAY SANDY .14 .2		20	1.6		
	40	BOTTOM OF HOLE					

Project: Inner Harbor Navigation Canal
Phase II-B2 HTRW Invest.

Hole No. IHNC - S-9-DB

FORMS087/n

On-Site 0700 4 June 1996 Tuesday
NOD Rig on site. Crew showed up ≈ 0800 hrs
Needed a sub to connect rods. Crew left to pick up sub
Alan Blake, Chief of Geology, NOD came by to discuss project.
Crew returned. Moved Rig to site 8 and set up. ≈ 1000 hrs.
Used two sets of rods because of mismatch with
sampler and plug bit connection.
Worked until 1600 Hrs. Drilled and sampled 20 ft.

On site 0700 5 June 1996 Wednesday
Buc, SLCOE noticed that high river could possibly cause problem.
Will check out ruling on drilling next to levee during
high water condition. Decision was made by NOD personnel
not to drill deeper at site 8 due to high water.

Pulled augers, cleaned, and moved to site 1 at noon
Decided to run one auger to 2.5' then sample
with 2½' sampler then 2' sampler. This allowed us
to cut down on picking up and laying down rods
for each 2½' section. Would only waste .5' inter.
Drilled and sampled to 27' at site 1 Deep boring.
Shut down for the day, Cleaned sample tools and
made ready for next day. Left site ≈ 1630.

On Site 0645 6 June 1996 Thursday
Finished drilling and sampling site 1 @ ≈ 1230 Hrs
Kelley hung on Rig. Rig crew worked to get unit
loose. Both & Buc cleared drilling locations for
tomorrow with COE & Coast Guard. Coast Guard
will cut holes in concrete. Can not
move to site 5 until first thing in the
Morning due to access problems. Will attempt
to do Site 5 and Site 4 tomorrow.
Total depth will be 20' unless HNO detects
a leading.

Continued on Page

Read and Understood By

Signed _____ Date 6/6/96

Signed _____ Date _____

PROJECT SLUDD INNER HARBOR

Continued From Page

6/7/96

On Site 0645. Waited on drill crew until 0715 Start setting Rig up at Site 4. Drilled & Sampled to 20'. Cleaned up Augers and moved Rig to Site 5. Broke for Lunch, Rain storm came during lunch. Drilled and sampled to 19.5'. Cleanup and shut down for the day ≈1545.

6/8/96 0700 on site Moved into Coast Guard Area. Set up on Site 2. Drilled & Sampled to 19.5'. Started Site 3 drilling at 1130 hrs. Broke for lunch after drilling concrete and a depth of 2½ feet. Drilled and sampled to 19.5' Decon equipment and prepared for next hole. Will drill last deep boring tomorrow AM.

6/9/96 0700 On site. Started on near surface sampling sites. Pushed sample tubes with the Rig through concrete cuts. 0-3' and 3'-5'. Concrete cuts were not large enough for hand Augers. Completed the four shallow sites and moved to the last deep boring at Site 6. Drilled and sampled to 20'. Completed and back filled hole. Decon equipment and Rig. Rig crew was finishing the cleanup of the rig when we left the site with samples at ≈ 1315 hr.

Continued on Page

Read and Understood By

[signature] 6/9/96

Signed Date Signed Date