



# MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 5

FILE NO. 6876

PROJECT CUTOFF WALL INVESTIGATION

BORING NO. MR-104

SURFACE ELEV. 7.5

PROJECT LOCATION ALLIED-SIGNAL INC., BALTIMORE WORKS

RES. ENGR.

M.J. LALLY (B & V)

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
6-2-88 Thursday, Partly Cloudy 60°					S-1	28.5		
	4D	30.0 32.0	13-15 26-28	Yellow-brown fine to medium sand, some silt (SM)	S-2	30	↓ DRILLING AHEAD	DPC-Y Lab-V Rec=1.2'
	5D	32.5 33.9	42-62 100/5"	Hard mottled red and white silty clay, trace fine sand, mica (CH)		32.5		DPC-Y Lab-V Rec=1.2'
	6D	35.0 37.0	32-60 77-56	Hard white clayey silt, trace fine sand, mica, iron stained (MH)		35		DPC-Y Lab-P Rec=1.5'
	7D	37.5 38.8	40-58 100/4"	Mottled white & red clayey silt, trace fine sand, mica (MH)				DPC-N Lab-P Rec=1.1'
	8D	40.0 41.4	32-55 100/5"	Mottled red & white clayey silt, trace fine sand, mica, iron stained (MH)	M	40		DPC-N Lab-P Rec=1.2'
	9D	42.5 44.0	31-52 100/6"	Hard white silty clay, trace fine sand, mica, red stained (CH)				DPC-N Lab-N Rec=1.2'
	10D	45.0 45.9	45-100/5"	Do 9D, trace gravel (CH)		45		DPC-N Lab-P Rec=0.9'
	11D	47.5 48.9	50-80 100/5"	Top 12": Yellow-brown to white gravelly fine to coarse sand, tr silt (SM) Bot 5": White fine to medium sand, some silt (SM)	S-4			DPC-N Lab-N Rec=1.4' *Casing lost in hole.
	12D	50.0 51.0	50-100/6"	White-gray sandy gravel, trace silt (GP-GM)		50*	↓	DPC-N Lab-N Rec=1.0'

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SHEET 3 OF 5

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PROJECT LOCATION ALLIED-SIGNAL INC, BALTIMORE WORKS RES. ENGR.

M.J. LALLY (B & V)

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS	
	NO.	DEPTH	BLOWS/6"						
Continued 6-2-88	13D	52.5	10-15°	White gravelly fine to coarse sand, trace silt (SP-SM)	(S-4)		DRILLED AHEAD	DPC-N Lab-N Rec=1.4' 3" Split-Spoon 340 lb. hammer.	
		53.9	75/5"						
6-3-88 Friday, Cloudy, Cool, 55°	14D	55.0	70-100/5"	White coarse to fine sand, trace silt, gravel (SP)	(S-4)	55 *		DPC-N Lab-N Rec=0.8' * 3" I.D. casing installed.	
		55.8				56.5			
	15D	57.5	100/6"	Hard yellow-brown clayey silt, trace fine sand (MH) (Decomposed rock)					DPC-N Lab-N Rec=0.5'
		58.5				60	OPEN HOLE		
16D	60.0 61.4	43-70	Hard yellow-brown silty clay, some sand (CL) (Decomposed rock)				DPC-N Lab-N Rec=1.4'		
		100/5"							
6-6-88 Monday, Sunny, 74°	17D	65.0	65-100/5"	Interlayered red-brown-white silty fine to medium sand (SM) (Decomposed rock)	(DR)	65		DPC-N Lab-P Rec=0.9'	
		65.9							
	18D	70.0 71.0	56-100/6"	Gray-green, white, yellow fine to medium sand, and silt (SM) (Decomposed rock)			70		DPC-Y Lab-V Rec=1.0'
					73				
19D	75.0 75.3	100/4"	Gray-green silty fine to medium sand, (Transition Zone) (SM)	(TZ)		75		DPC-N Lab-V Rec=0.4'	



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Sheet 5 of 5  
File No. 6876

PROJECT CUTOFF WALL INVESTIGATION BORING NO. MR-104  
LOCATION ALLIED-SIGNAL INC, BALTIMORE WORKS  
BORING LOCATION NORTH SIDE - AT BACK BASIN AND POINT STREET  
SURFACE ELEVATION 7.5 DATUM BALTIMORE COUNTY AND CITY METRO DATUM

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG:  TRUCK,  SKID,  TRIPOD,  OTHER MOBILE B-61  
TYPE OF FEED DURING CORING:  MECHANICAL,  HYDRAULIC,  OTHER \_\_\_\_\_  
 CASING UTILIZED: DIAMETER, INCHES 4, DEPTH FROM 0.0' TO 55.0'  
DIAMETER, INCHES 3, DEPTH FROM 0.0' TO 59.5'  
 DRILLING MUD UTILIZED: DIAMETER OF ROTARY BIT, INCHES \_\_\_\_\_  
TYPE OF DRILLING MUD \_\_\_\_\_  
 AUGER UTILIZED: TYPE AND DIAMETER, INCHES \_\_\_\_\_  
TYPE AND SIZE OF:  
DRILL RODS N . D-SAMPLER 2" O.D. & 3.0" SPLIT SPOON  
S-SAMPLER \_\_\_\_\_ . U-SAMPLER \_\_\_\_\_  
CORE BARREL DOUBLE . CORE BIT NX DIAMOND  
CASING HAMMER: WEIGHT, POUNDS 340, AVERAGE FALL, INCHES 24  
SAMPLER HAMMER: WEIGHT, POUNDS 140, AVERAGE FALL, INCHES 30  
340 24

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION*

\* Note reliability of observation, rainfall, elevation of nearby open water, tide gauge or other factors affecting water level recorded.

PIEZOMETER INSTALLED. SKETCH SHOWN ON \_\_\_\_\_  
STANDPIPE: TYPE \_\_\_\_\_, ID \_\_\_\_\_, LENGTH \_\_\_\_\_, TOP ELEV. \_\_\_\_\_  
INTAKE POINT: TYPE \_\_\_\_\_, OD \_\_\_\_\_, LENGTH \_\_\_\_\_, TIP ELEV. \_\_\_\_\_  
FILTER: MATERIAL \_\_\_\_\_, OD \_\_\_\_\_, LENGTH \_\_\_\_\_, BOT. ELEV. \_\_\_\_\_

PAY QUANTITIES SEPARATE SUBMITTAL

2 1/2" DIA. DRY SAMPLE BORING, LIN. FT. \_\_\_\_\_ . NO. OF 2" SHELBY TUBE SAMPLES \_\_\_\_\_  
   DIA. U-SAMPLE BORING, LIN. FT. \_\_\_\_\_ . NO. OF 3" UNDISTURBED SAMPLES \_\_\_\_\_  
CORE DRILLING IN ROCK, LIN. FT. \_\_\_\_\_ . OTHER \_\_\_\_\_

BORING CONTRACTOR WARREN GEORGE, INC.  
DRILLER REYNOLDS BRIDGPAL HELPERS CHARLIE DRUMMOND

REMARKS PERMEABILITY TESTS AND GROUTING PERFORMED

RESIDENT ENGINEER MICHAEL J. LALLY (B & V) DATE 6-6-88

NOTES:

1. Make a separate log of each boring and each unsuccessful attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Do not assign numbers to lost samples but record blows and reasons for lack of recovery.
4. Mark each U-sample with boring number, sample number, depth, recovery and job number.
5. Record blows on sampler per six inches of penetration. Note all blows and penetrations when taken at less than six inch intervals. Indicate method by which penetration of tube sampler was obtained.
6. Indicate changes of material in strata column and list generalized strata description.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount, the recovery of rock core in feet and inches and per cent of run, Rock Quality Designation (RQD) in per cent and any unusual occurrences.
8. Include sample description by Unified Soil Classification System.
9. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.