

AMENDMENT OF SOLICITATION

1. AMENDMENT/MODIFICATION NO. <p style="text-align: center;">0001</p>		2. EFFECTIVE DATE <p style="text-align: center;">MAR 16, 2004</p>	
3. ISSUED BY DEPARTMENT OF THE ARMY, BALTIMORE DISTRICT CORPS OF ENGINEERS P.O. BOX 1715 BALTIMORE, MARYLAND 21203-1715 CODE: _____			
4. NAME AND ADDRESS OF CONTRACTOR (Name, street, county, State and ZIP Code)		4A. AMENDMENT OF SOLICITATION NO. <p style="text-align: center;">W912DR-04-B-0008</p>	
		4B. DATED (SEE ITEM 5) <p style="text-align: center;">FEB 25, 2004</p>	
5. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers __ is extended, X is not extended. BID OPENING DATE - 11:00 AM, Local Time MAR 25, 2004 Others must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 4 and 8, and returning <u>1</u> copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of the amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.			
6. ACCOUNTING AND APPROPRIATION DATA (If required) MAINTENANCE DREDGING, WICOMICO RIVER, WICOMICO AND SOMERSET COUNTIES, MARYLAND			
7. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) <u>SOLICITATION:</u> (1) <u>Section 00010, Unit Price Schedule:</u> Delete the Unit Price Schedule, as originally issued, and substitute therefor the attached revised Unit Price Schedule, dated MAR 15, 2004. <u>SPECIFICATIONS:</u> (2) <u>Index of Special Clauses and Technical Provisions, Page TOC-2, Attachments:</u> At the end of item 4, add: "04-WQ-003". (3) <u>Index of Special Clauses and Technical Provisions, Page TOC-2, Attachments:</u> Add the following to the list of attachments: "7. Mt. Vernon Placement Site - Pipeline Right Of Way Map" (4) <u>Section 1, Page 1, Paragraph 1, Lines 8 and 9:</u> Change "February 15" to read "February 14". Except as provided herein, all terms and conditions of the document referenced in Item 4A, as heretofore changed, remains unchanged and in full force.			
8. NAME AND TITLE OF SIGNER (Type or print)		9. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	10. DATE SIGNED

(5) Section 1, Page 1, Paragraph 1, Lines 14 and 15: Change "February 16" to read "February 15".

(6) Section 2, Page 3, Paragraph 3, Line 5: Immediately following "...at all times." Insert the following sentence: The dredge shall be the appropriate size so as to maximize the dredging efficiency while not exceeding the settling capacities of the upland placement sites."

(7) Section 2, Page 5, Paragraph 6.1: At the end of this paragraph, add the following: "The dredged material from the Sharp's Point portion of the project, contained in the Base Bid, shall be placed in Cell 3A and Cell 3B of the placement site. The dredged material from the Sharp's Point portion of the project, contained in Option 1, shall be placed in Cell 4 of the placement site."

(8) Section 2, Page 5, Paragraph 7.1.1, 5th sentence: Delete the fifth sentence in this paragraph and substitute therefor the following: "In addition, a portion of the existing containment area at the west end of the site will not be utilized. Therefore, as shown on the contract drawings, the dike shall be realignment to exclude this area."

(9) Section 2, Page 9, Paragraph 7.5.4 (b): Delete this paragraph, as originally issued, and substitute therefor the following new paragraph:

"(b) Dike Realignment: A portion of the existing dike along the west side shall be realigned at the location shown on the contract drawings. The Contractor shall build this section of the dike embankment on top of the existing dredged material and shall be constructed of material excavated from within the interior of the dike confining area. The new dike shall be constructed to elevation 15.0 feet. The interior and exterior side slopes of the raised embankment shall be no steeper than 3 horizontal on 1 vertical, and these slopes shall be maintained at all times during the construction of the dikes. Placement and compaction requirements shall be the same as those specified in paragraph 7.5.4(a)."

(10) Section 2, Page 11, Paragraph 8: Delete this paragraph, as originally issued, and substitute therefor the following new paragraph:

"8. Pipeline Right of Ways: The Sharp's Point placement site pipeline right-of-way where shown on the placement site drawings is Government furnished. The Mt. Vernon placement site pipeline right-of-way where shown on the "MT. VERNON PLACEMENT SITE - PIPELINE RIGHT OF WAY MAP", located at the end of these specifications, is Government furnished. The pipeline must be weighted down and submerged at all times in and around the area of the docks, to prevent interference with boats. However, the Contractor is not restricted to the right-of-ways shown on the contract drawing(s). In those cases where the Contractor routes a pipeline outside of the Government furnished right-of-way or disposal area property, he shall obtain all easements, permits, and right-of-ways at his own expense."

ATTACHMENTS SECTION OF THE SPECIFICATIONS:

(11) Attachment #3 "Subsurface Exploration Data": Immediately at the end of this section insert the attached additional subsurface exploration data.

(12) Attachment 4: Delete the page that states "WATER QUALITY CERTIFICATION WILL BE ISSUED BY AMENDMENT" and insert the attached Water Quality Certification # 04-WQ-003.

(13) Attachment 6, Plant Hardiness Zone Map: Immediately after this map insert the attached Mt. Vernon Placement Site Pipeline Right of Way Map.

DRAWINGS :

(14) Sheet 2: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(15) Sheet 3: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(16) Sheet 4: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(17) Sheet 5: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(18) Sheet 6: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(19) Sheet 7: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(20) Sheet 8: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(21) Sheet 9: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(22) Sheet 10: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(23) Sheet 11: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(24) Sheet 12: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(25) Sheet 13: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(26) Sheet 14: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(27) Sheet 15: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(28) Sheet 16: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(29) Sheet 17: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(30) Sheet 18: Delete this sheet, as originally issued, and substitute therefor the attached revised like-numbered sheet with change #1, dated 3/15/04.

(31) Sheets 1, 19 and 20: During the printing process of these sheets a slight problem arose that "cut-off" part of the drawing title blocks. These three sheets are being reissued with this set of drawings to correct this slight printing problem. These sheets have had no technical changes within the border of the drawing.

ATTACHMENTS:

Revised Unit Price Schedule, dated MAR 15, 2004.
Additional Subsurface Exploration Data
Water Quality Certification #04-WQ-003
Mt. Vernon Pipeline Placement Site - Right-Of-Way Map
Sheets 1, 19, 20 with no technical changes
Revised Sheets, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18, dated 3/15/04.

SECTION 00010 - SUPPLIES OR SERVICES AND PRICES

UNIT PRICE SCHEDULE
REVISED: MAR 15, 2004

Item No.	Description	Estimated Quantity	Unit	Price	Amount
BASE BID					
0001	Mobilization and Demobilization	---	JOB	L.S.	\$_____
0002	Dike Construction				
0002A	Mt Vernon	---	JOB	L.S.	\$_____
0002B	Sharps Point	---	JOB	L.S.	\$_____
0003	Maintenance Dredging				
0003A	Mt. Vernon	35,465	C.Y.	\$_____	\$_____
0003B	Sharps Point	92,146	C.Y.	\$_____	\$_____
TOTAL ESTIMATED BASE BID AMOUNT				\$_____	

OPTIONAL ITEM					
0004	Dike Construction - New Cell at Sharps Point	54,900	C.Y.	\$_____	\$_____
0005	Weir Box/Effluent Pipeline	---	JOB	L.S.	\$_____
0006	Maintenance Dredging - Sharps Point	39,564	C.Y.	\$_____	\$_____
TOTAL ESTIMATED BID AMOUNT				\$_____	

NOTES TO BIDDERS

Offerors must quote on all items including Optional Items. Failure to quote on all items may be cause for rejection of the proposal.

Optional Items may be exercised at any time within 90 calendar days after contract award. The Contracting Officer may exercise the Optional Items by written notice to the Contractor, postmarked within the period specified above.

W912DR-04-B-0008

SECTION 00010 - SUPPLIES OR SERVICES AND PRICES

The Government may exercise any, all or none of the listed Optional Items in any order.

No additional time for contract completion will be allowed when an Optional Item is exercised with the exception of an additional 20 calendar days for contract completion will be allowed if Optional Item No. 0006 is exercised.

EVALUATION OF OPTIONS: Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interest, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirements. Evaluation of options will not obligate the Government to exercise the option(s). (FAR 52.217-5 JUL 1990)

W912DR-04-B-0008

00010-4

Mt. Vernon Disposal Site (formally Webster Cove)
Subsurface Exploration Data

LABORATORY TEST RESULTS

PROJECT: Wicomico River Disposal Dikes
Mt. Vernon Disposal Site
AREA: Somerset County, MD

DATE: Feb 2004

TEST: Natural Moisture Contents (ASTM D2216)

<u>Hole No.</u>	<u>Sample No.</u>	<u>Depth (ft.)</u>	<u>Moisture Content, %</u>
S-9WC	Jar-1	0.0-0.5	60.6
S-9WC	Jar-2	0.5-1.0	105.6
S-9WC	Jar-3	1.0-1.5	107.5
S-9WC	Jar-4	1.5-2.0	128.2
S-10WC	Jar-1	0.0-0.5	65.9
S-10WC	Jar-2	0.5-1.0	128.6
S-10WC	Jar-3	1.0-1.5	110.2
S-10WC	Jar-4	1.5-2.0	119.1
S-11WC	Jar-1	0.0-0.5	78.9
S-11WC	Jar-2	0.5-1.0	95.2
S-11WC	Jar-3	1.0-1.5	115.4
S-12WC	Jar-1	0.0-1.0	64.7
S-12WC	Jar-2	1.0-2.0	89.3

Note: The Atterberg Limits test is only performed on minus No. 40 material portion of a sample and does not represent the entire sample. Refer to the Visual Classification or the Gradation Analysis for the complete classification.

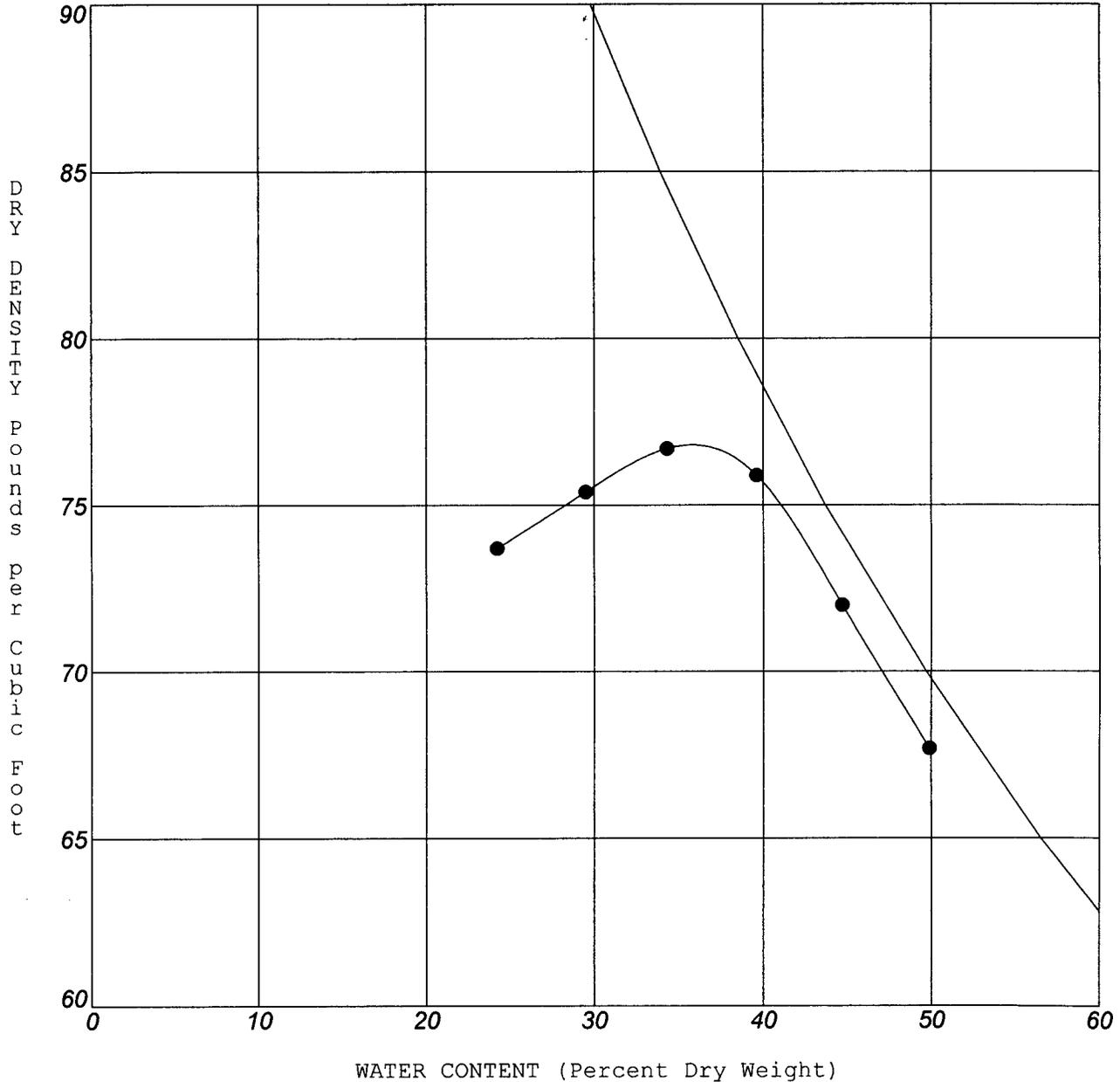
PROJECT: **Dredge Material Composite Sample
Mount Vernon Disposal Site**

DATE: Mar 04

AREA: **Somerset County, MD**

TEST PIT NO. W-2 SAMPLE NO. Bucket 1-2 DEPTH (FT): 0.0

TEST METHOD: ASTM D698 Procedure A



MAXIMUM DRY DENSITY: 76.6 pcf
OPTIMUM WATER CONTENT: 35.7 %
SPECIFIC GRAVITY (ASTM D854): 2.53
CLASSIFICATION: ELASTIC SILT MH

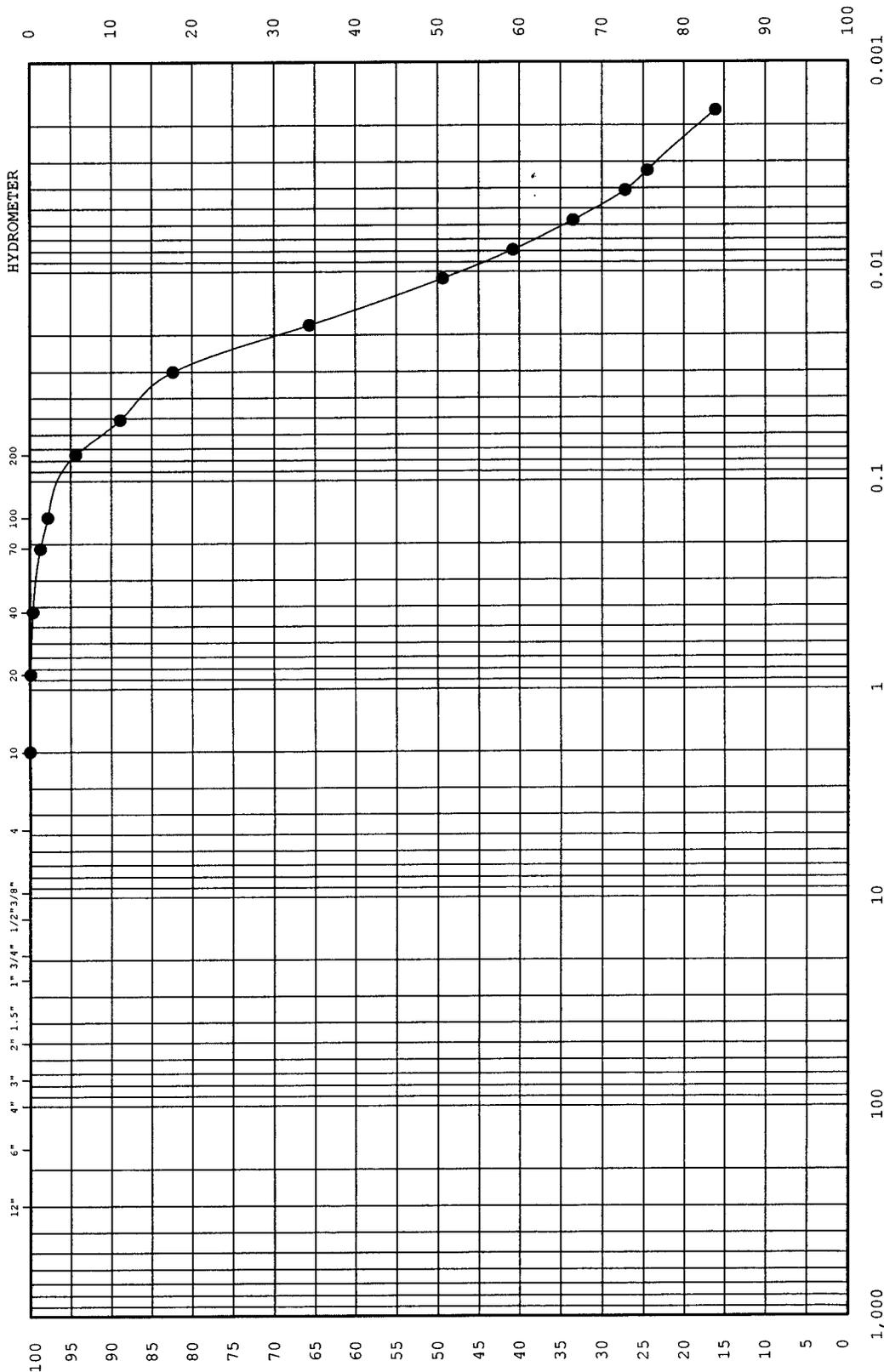
Remarks:

LEGEND	
<input type="checkbox"/>	CORRECTED + No.4
<input type="checkbox"/>	CORRECTED + 3/8"
<input type="checkbox"/>	CORRECTED + 3/4"
<input checked="" type="checkbox"/>	NO CORRECTION NEEDED

MOISTURE-DENSITY RELATIONSHIP

U. S. Army Corps of Engineers
Baltimore, MD

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS



PERCENT COARSER BY WEIGHT

PERCENT FINER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND			SILT or CLAY		
	COARSE	FINE	COARSE	MEDIUM	FINE			

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)	Nat wc%	LL	PL	PI
●	Bucket 1-2	0.0	ELASTIC SILT	MH 110.6	71	35	36
—							
—							
—							

PROJECT: Dredge Material Composite Sample
 AREA: Mount Vernon Disposal Site
 Somerset County, MD

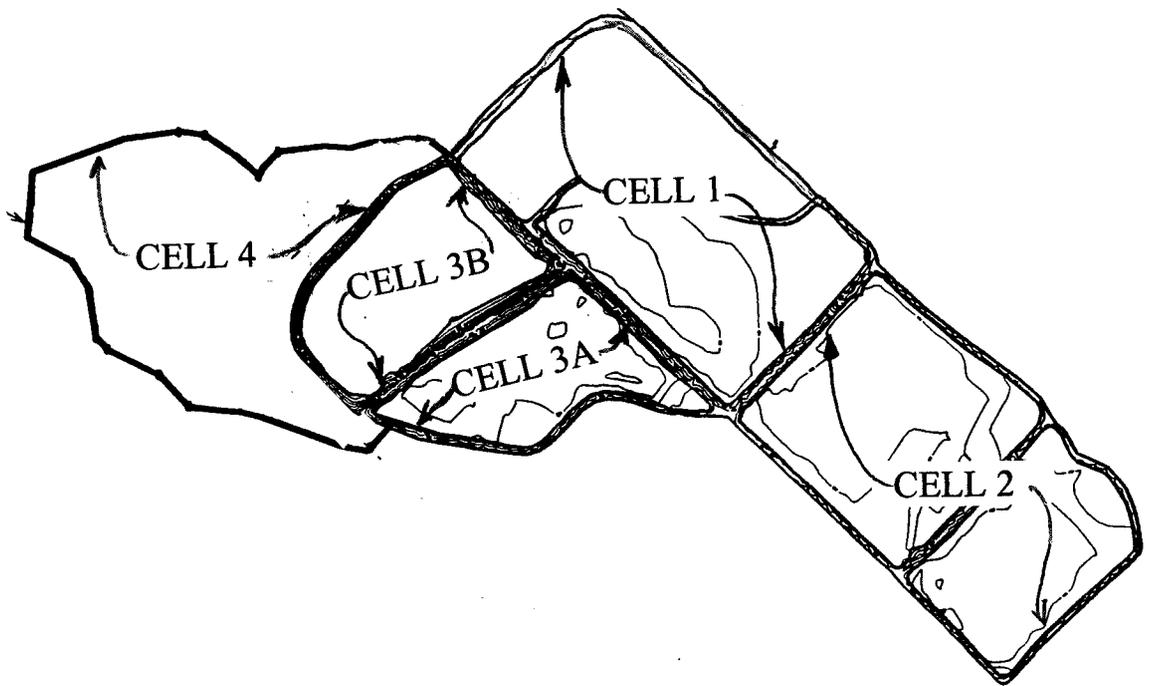
BORING NO.: W-2

DATE: Mar 04

Remarks:

ENG FORM ENG2087/SOMERSET CO MATERIAL COMPOSITE.GPJ GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

Sharps Point Disposal Site
Subsurface Exploration Data

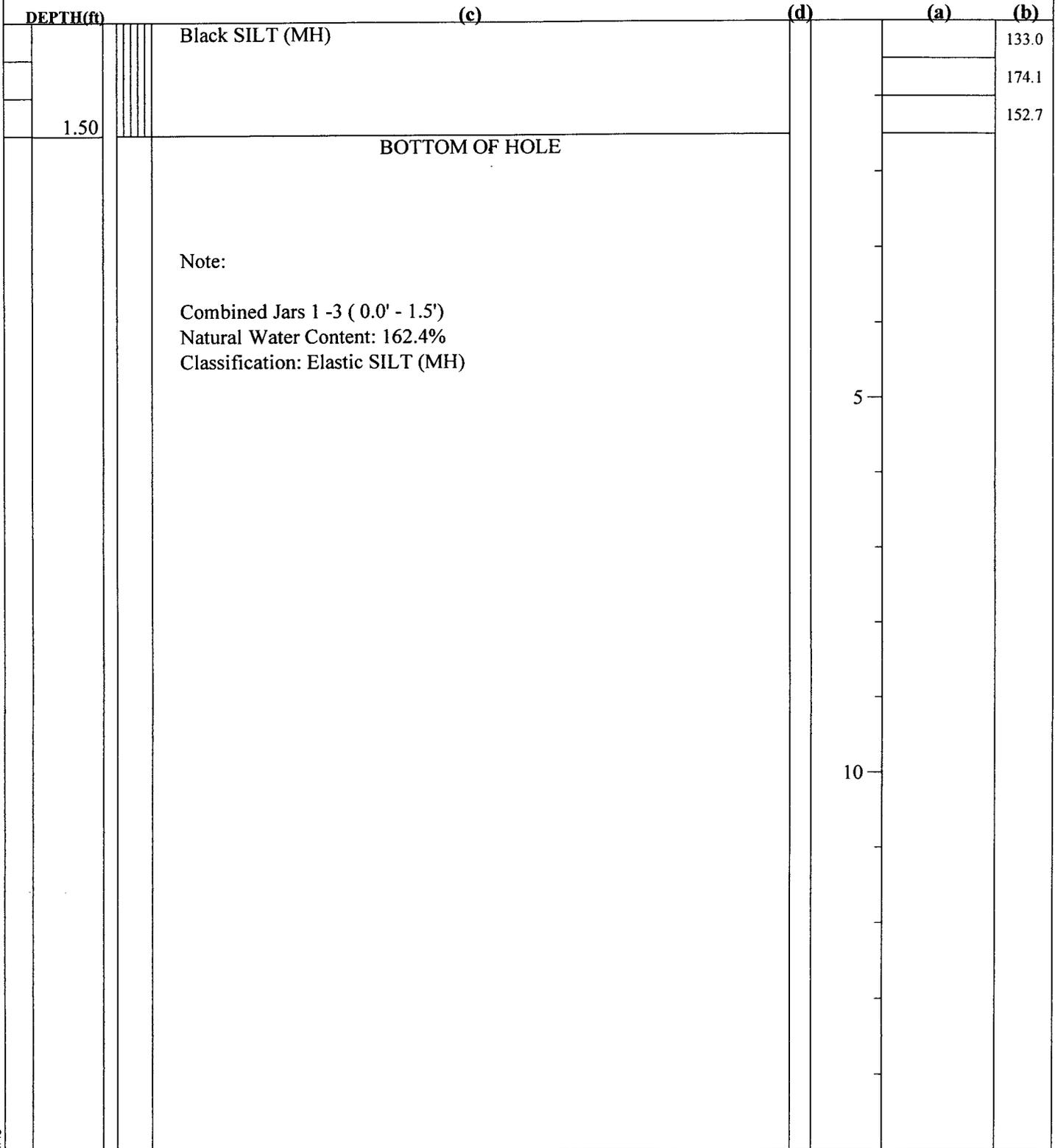


Sharps Point Disposal Site
General Cell Locations

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
Cell-3A
 1 of 1



GEO-2 SHARPS PT.GPJ 3/9/04 14:45

Cell-3A
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ON COMPLETION: NT
 24 Hr. READING: NT

- | | | | |
|-----------|------------|-----------|------|
| Fill | Auger | SPT | RB |
| Cored | 300 lb | Tubex | Hand |
| Fish Tail | Vibra Core | Water Jet | _ |

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004

Cell-3B

1 of 1

DEPTH(ft) (c) (d) (a) (b)

1.00

Wet, gray, elastic SILT (MH)

BOTTOM OF HOLE

NOTE:

A compaction test using ASTM D698-91 Procedure A, was run on combined bucket samples 1 & 2 (0.0' to 1.0')

Maximum Dry Density: 51.4 pcf

Natural Water Content: 235.4%

Optimum Water Content: 67.5%

Specific Gravity: 2.41

Classification: Elastic SILT (MH)

5

10

Cell-3B

GROUNDWATER DATA

WHILE DRILLING: NT

ON COMPLETION: NT

24 Hr. READING: NT



Fill



Auger



SPT



RB



Cored



300 lb



Tubex



Hand



Fish Tail



Vibra Core



Water Jet



-

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-1
 1 of 1

DEPTH(ft)	(c)	(d)	(a)	(b)
1.00	Moist, dk. brown, poorly graded SAND w/silt (SP-SM)			11.0
3.00	Moist, brown, silty SAND (SM)	∇		17.3
5.00	Wet, pale brown, poorly graded SAND w/ silt (SP-SM)			17.4
6.00	Wet, v. pale brown, poorly graded SAND (SP)		5	17.5
7.50	Wet, dk. yellowish brown, silty SAND (SM)			20.6
	BOTTOM OF TEST PIT			
			10	
			15	

GEO-2 SHARPS PT.GPJ 3/9/04 14:45

TP-1
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ∇ ON COMPLETION: 2.5
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-2
 1 of 1

DEPTH(ft)	(c)	(d)	(a)	(b)
0.50	Moist, dk. brown, poorly graded SAND w/ silt (SP-SM)	▼		
	Moist, brown, silty SAND (SM)			
2.00				
	Moist, yellowish brown, poorly graded SAND w/ silt (SP-SM)			
4.50				
	Wet, lt. gray, poorly graded SAND (SP-SM)		5	
6.00				
	Wet, v. pale brown, poorly graded SAND (SP)			
7.00				
	BOTTOM OF TEST PIT			
			10	
			15	

GEO-2 SHARPS PT.GPJ 3/9/04 14:45

TP-2
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ▼ ON COMPLETION: 3.5
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004

TP-3
 1 of 1

DEPTH(ft)	(c)	(d)	(a)	(b)
1.00	V. moist, black, silty SAND (SM)			45.2
3.00	Moist, gray, silty SAND (SM)			21.4
4.50	Wet, brown poorly graded SAND w/ silt (SP-SM)			
6.00	Wet, lt. browish gray, poorly graded SAND w/ silt (SP-SM)		5	
7.00	Wet, lt. gray, poorly graded SAND (SP)			
	BOTTOM OF TEST PIT			
			10	
			15	

GEO-2 SHARPS PT GPJ 3/9/04 14:45

TP-3
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ON COMPLETION: 2.7
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-4
 1 of 1

DEPTH(ft)	(c)	(d)	(a)	(b)
1.00	Moist, dk. gray, silty SAND (SM)			16.9
2.00	Moist, gray, clayey SAND (SC)			9.4
3.00	V. moist, dk. gray, clayey SAND (SC)	▼		20.2
4.00	Wet, dk. brown, poorly graded SAND w/ silt (SP-SM)			
6.00	Wet, lt. brownish gray, poorly graded SAND w/ silt (SP-SM)		5	
BOTTOM OF TEST PIT				
<p>NOTE: A compaction test using ASTM D698-91 Procedure A, was run on combined bucket samples 1 & 2 (0.0' to 4.0') Maximum Dry Density: 109.0 pcf Natural Water Content: 17.8% Optimum Water Content: 13.0% Specific Gravity: 2.62 Classification: Wet, brownish gray, poorly graded SAND w/ silt & trace of organics (SP-SM)</p>				
			10	
			15	

TP-4
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ▼ ON COMPLETION: 2.5
 24 Hr. READING: NT

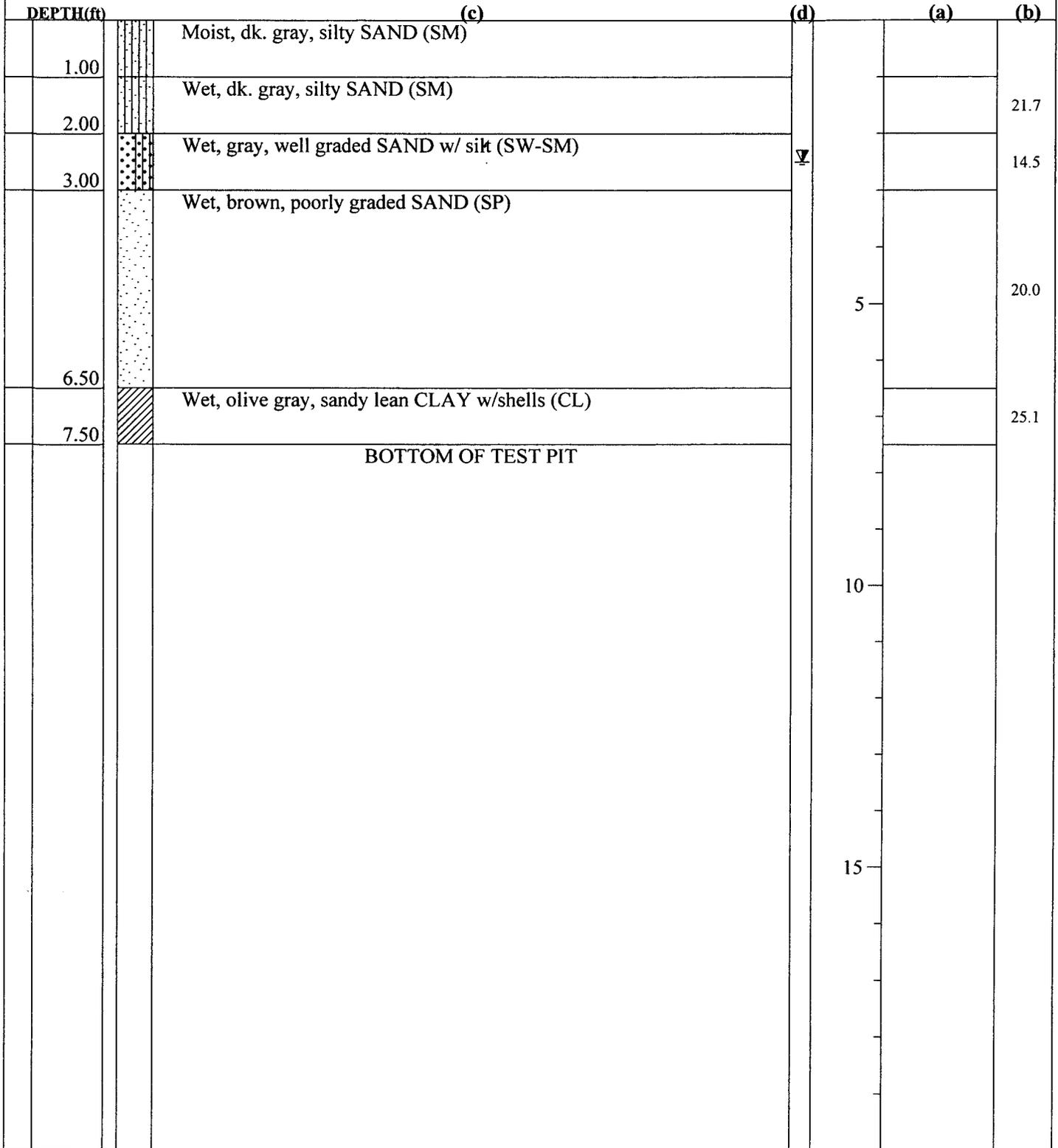
-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

GEO-2, SHARPS PT.GPJ 3/9/04 14:45

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-5
1 of 1



GEO-2, SHARPS PT.GPJ 3/9/04 14:45

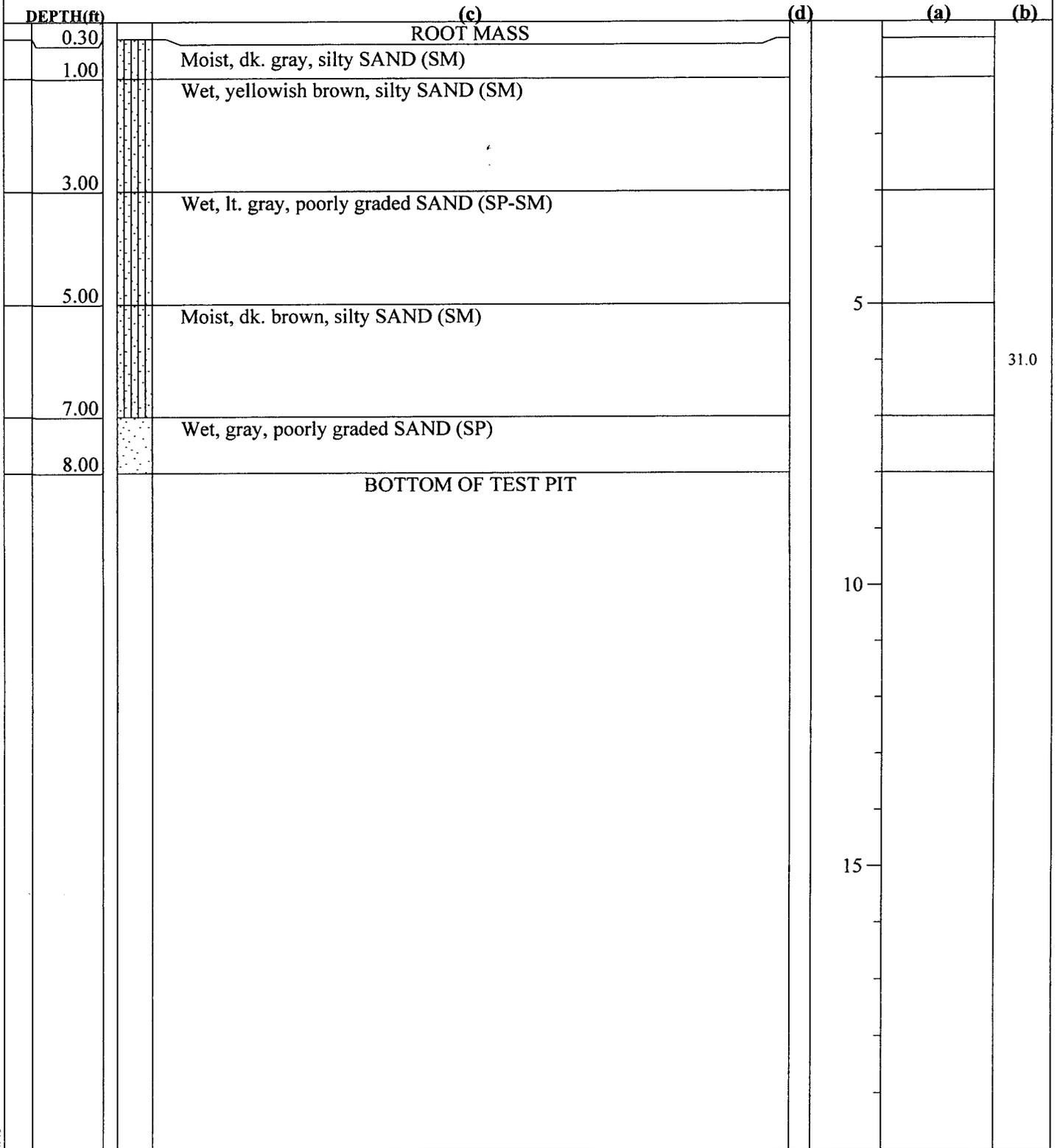
TP-5
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ∇ ON COMPLETION: 2.5
 24 Hr. READING: NT

- | | | | |
|-----------|------------|-----------|------|
| Fill | Auger | SPT | RB |
| Cored | 300 lb | Tubex | Hand |
| Fish Tail | Vibra Core | Water Jet | - |

STA.
 OFFSET:
 TOP ELEV.:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-6
 1 of 1



GEO-2 SHARPS PT.GPJ 3/9/04 14.45

TP-6
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ON COMPLETION: NT
 24 Hr. READING: NT

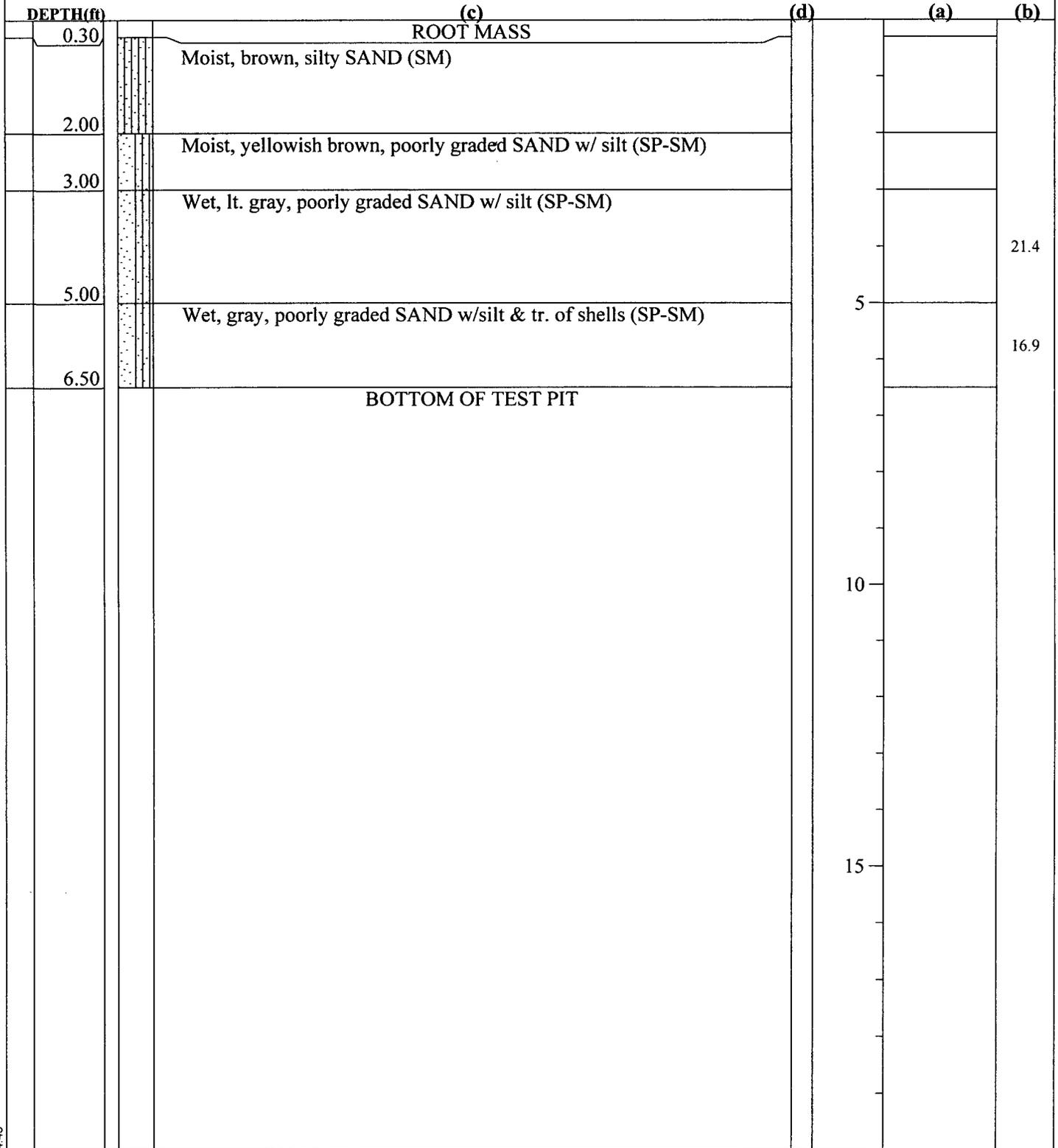
- Fill
- Auger
- SPT
- RB
- Cored
- 300 lb
- Tubex
- Hand
- Fish Tail
- Vibra Core
- Water Jet
- _

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004

TP-7
 1 of 1



GEO-2 SHARPS PT.GPJ 3/9/04 14:45

TP-7
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ON COMPLETION: NT
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

STA.
 OFFSET:
 TOP ELEV:

SHARPS POINT
 WICOMICO COUNTY, MD.

N
 E
 COMPLETED: February 9, 2004
TP-8
 1 of 1

DEPTH(ft)	(c)	(d)	(a)	(b)
4.00	Moist, yellowish brown, silty SAND (SM) w/ tr. of roots			20.9
8.00	Wet, light gray, poorly graded med. to fine SAND (SP-SM)		5	20.9
	BOTTOM OF TEST PIT		10	
	NOTE: A compaction test using ASTM D698-91 Procedure A, was run on combined bucket samples 1 & 2 (0.0' to 8.0') Maximum Dry Density: 111.7 pcf Natural Water Content: 20.9% Optimum Water Content: 12.0% Specific Gravity: 2.66 Classification: Poorly graded SAND (SP-SM)		15	

GEO-2 SHARPS PT.GPJ 3/9/04 14:45

TP-8
 GROUNDWATER DATA
 WHILE DRILLING: NT
 ON COMPLETION: NT
 24 Hr. READING: NT

-  Fill
-  Auger
-  SPT
-  RB
-  Cored
-  300 lb
-  Tubex
-  Hand
-  Fish Tail
-  Vibra Core
-  Water Jet
-  _

LABORATORY TEST RESULTS

PROJECT: Wicomico River Disposal Dikes
 Sharps Point Disposal Site -- Cell 4 and Cell 3
AREA: Wicomico County, MD

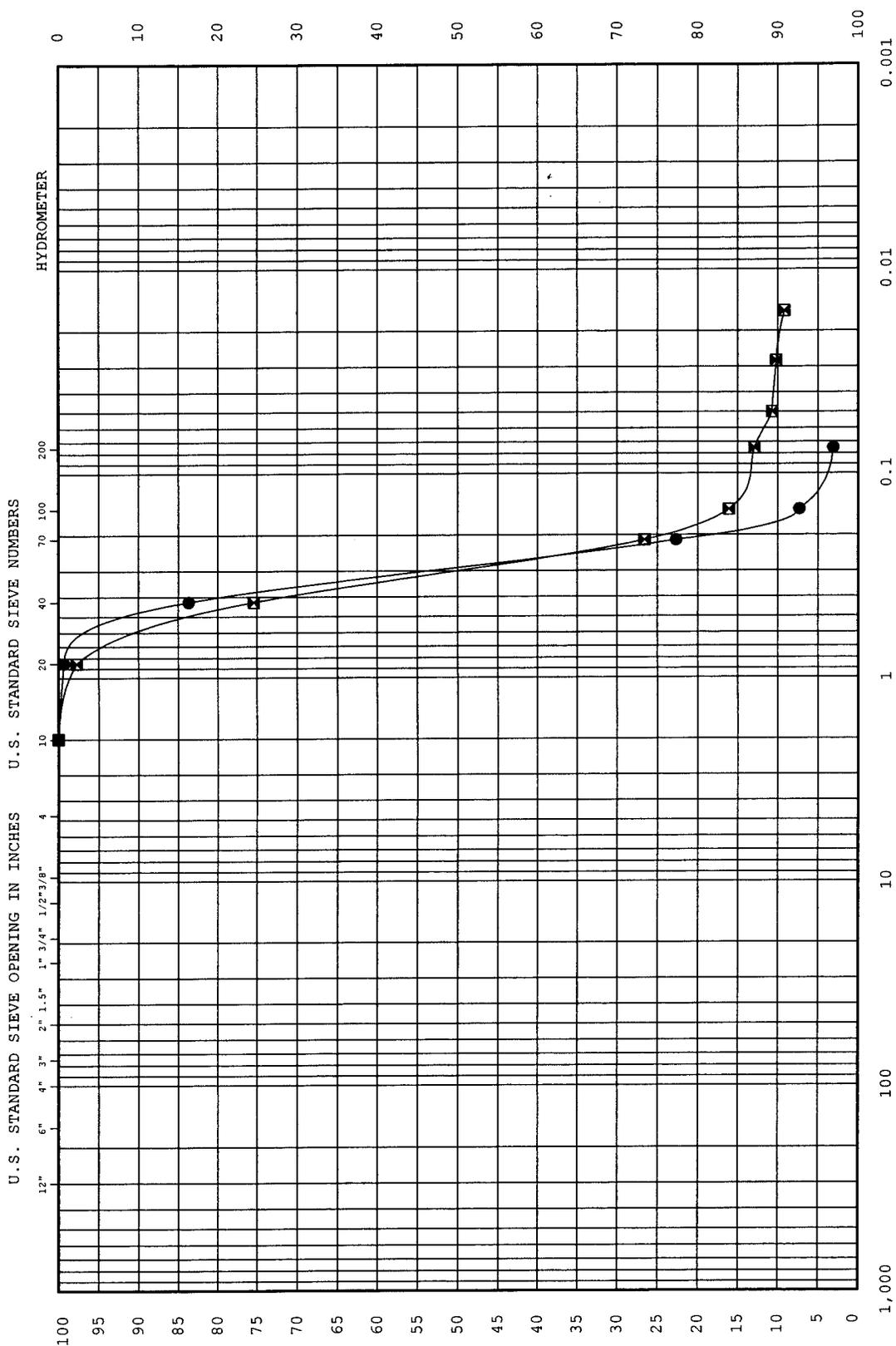
DATE: Feb 2004

TEST: Natural Moisture Contents (ASTM D2216)

<u>Hole No.</u>	<u>Sample No.</u>	<u>Depth (ft.)</u>	<u>Moisture Content, %</u>
TP-1	Jar-1	0.0-1.0	11.0
TP-1	Jar-2	1.0-3.0	17.3
TP-1	Jar-3	3.0-5.0	17.4
TP-1	Jar-4	5.0-6.0	17.5
TP-1	Jar-5	6.0-7.5	20.6
TP-3	Jar-1	0.0-1.0	45.2
TP-3	Jar-2	1.0-3.0	21.4
TP-4	Jar-1	0.0-1.0	16.9
TP-4	Jar-2	1.0-2.0	9.4
TP-4	Jar-3	2.0-3.0	20.2
TP-5	Jar-2	1.0-2.0	21.7
TP-5	Jar-3	2.0-3.0	14.5
TP-5	Jar-4	3.0-6.5	20.0
TP-5	Jar-5	6.5-7.5	25.1
TP-6	Jar-4	5.0-7.0	31.0
TP-7	Jar-3	3.0-5.0	21.4
TP-7	Jar-4	5.0-6.5	16.9
Cell 3A	Jar-1	0.0-0.5	133.0
Cell 3A	Jar-2	0.5-1.0	174.1
Cell 3A	Jar-3	1.0-1.5	152.7

Note: The Atterberg Limits test is only performed on minus No. 40 material portion of a sample and does not represent the entire sample. Refer to the Visual Classification or the Gradation Analysis for the complete classification.

PERCENT COARSER BY WEIGHT



PERCENT FINER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND			SILT or CLAY		
	COARSE	FINE	COARSE	MEDIUM	FINE			

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)	Nat wc%	LL	PL	PI
●	Jar-4	5.0-6.0	POORLY GRADED SAND	SP 17.5	NP	NP	NP
■	Jar-5	6.0-7.5	SILTY SAND	SM 20.6			

PROJECT: **Wicomico River Disposal Dike**
 AREA: **Sharps Point Disposal Site - Cell 4**
Wicomico County, MD

BORING NO.: **TP-1**

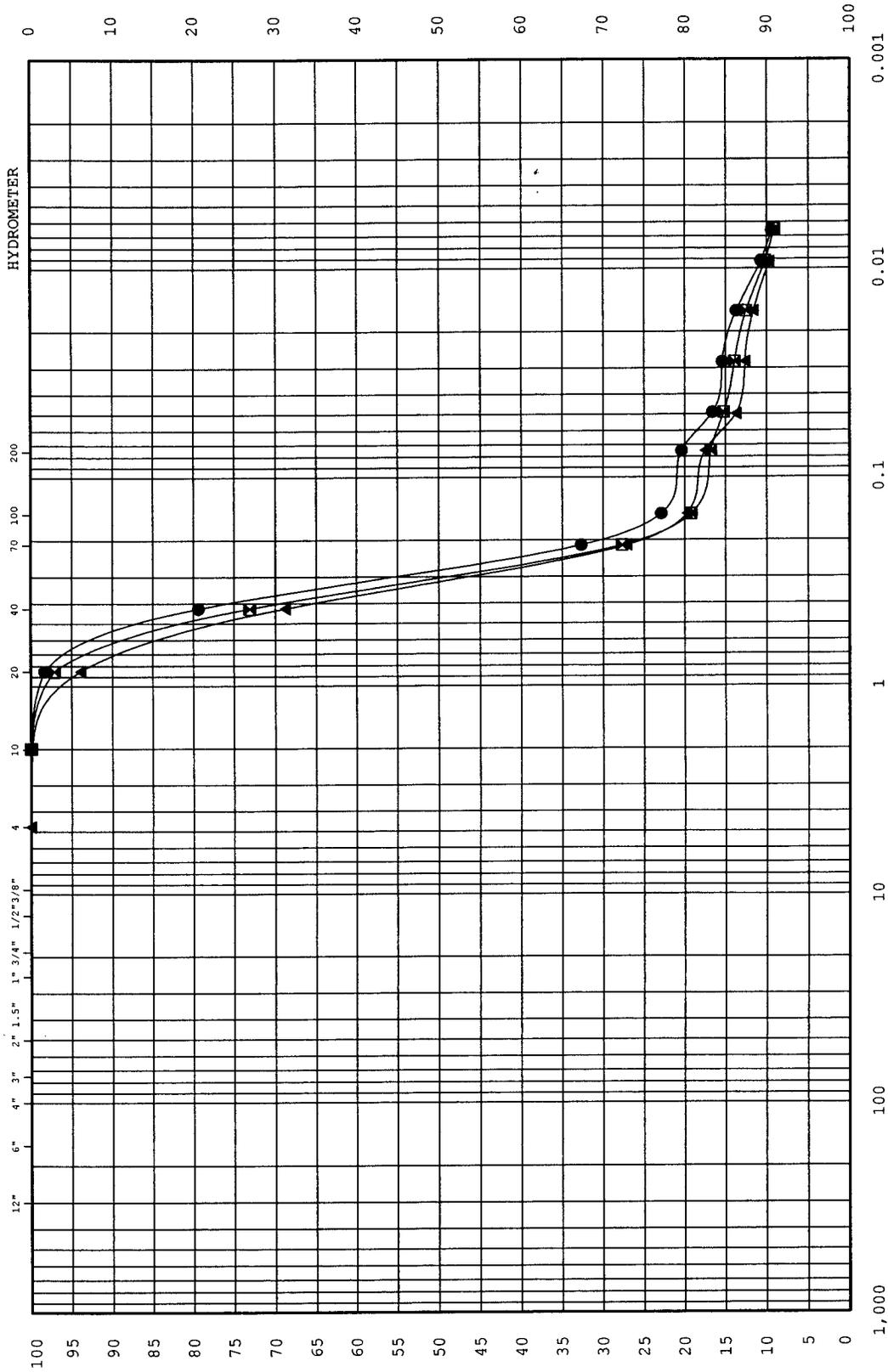
DATE:

Feb 04

Remarks:

ENG FORM ENG208/WICOMICCO RIVER DISPOSAL DIKE.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS



PERCENT COARSER BY WEIGHT

PERCENT FINER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND			SILT or CLAY	
	COARSE	FINE	COARSE	MEDIUM	FINE	—	—

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)	Mat wc%	LL	PL	PI
●	Jar-1	0.0-1.0	SILTY SAND	16.9	—	—	—
■	Jar-2	1.0-2.0	CLAYEY SAND	9.4	24	16	8
▲	Jar-3	2.0-3.0	CLAYEY SAND	20.2	50	27	23

PROJECT: **Wicomico River Disposal Dike**
 AREA: **Sharps Point Disposal Site - Cell 4**
Wicomico County, MD

BORING NO.: **TP-4**

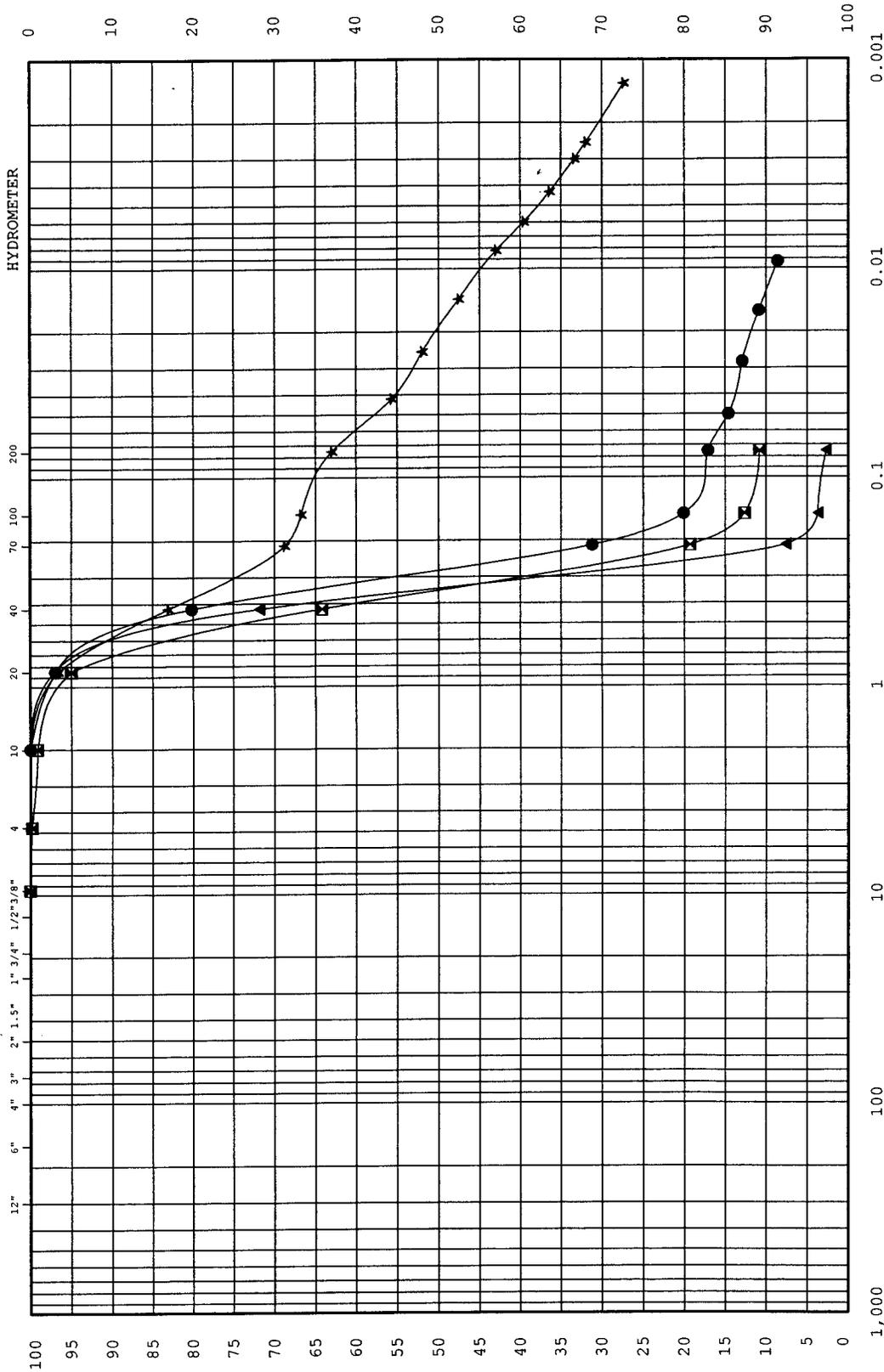
DATE:

Feb 04

Remarks:

GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

PERCENT COARSER BY WEIGHT



PERCENT FINER BY WEIGHT

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS

12" 6" 4" 3" 2" 1.5" 1" 3/4" 1/2" 3/8"

HYDROMETER

0

10

20

30

40

50

60

70

80

90

100

1,000 100 10 1 0.1 0.01 0.001

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL			SAND			SILT or CLAY		
	COARSE	FINE	FINE	COARSE	MEDIUM	FINE			

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)	Nat w%	LL	PL	PI
●	Jar-2	1.0-2.0	SILTY SAND	21.7	—	—	—
■	Jar-3	2.0-3.0	WELL-GRADED SAND with SILT	14.5	—	—	—
▲	Jar-4	3.0-6.5	POORLY GRADED SAND	20.0	NP	NP	NP
★	Jar-5	6.5-7.5	SANDY LEAN CLAY	25.1	48	18	30

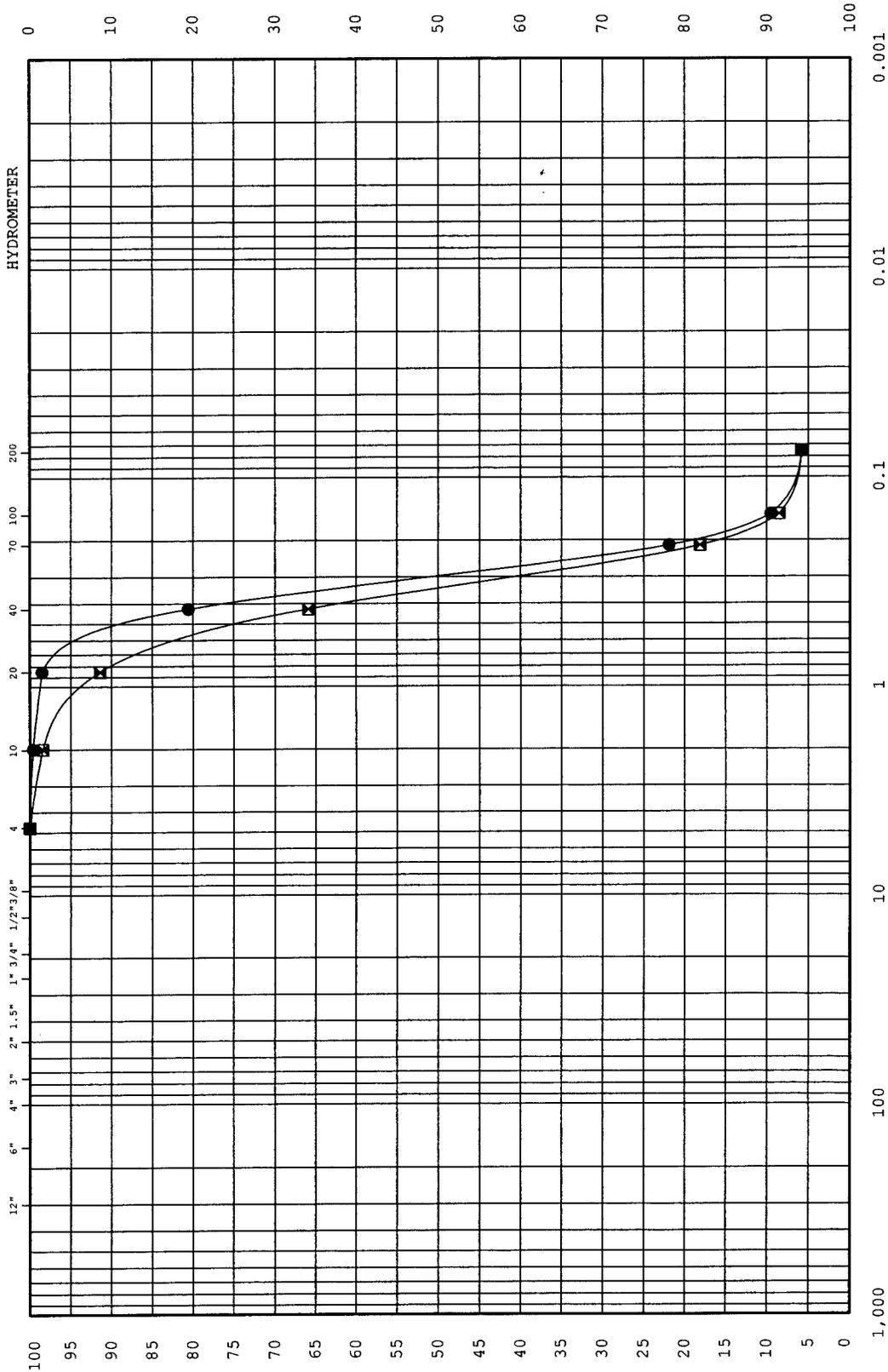
PROJECT: **Wicomico River Disposal Dike**
 AREA: **Sharps Point Disposal Site - Cell 4**
Wicomico County, MD

BORING NO.: **TP-5**

Remarks:
 ENG FORM ENG208/WICOMICO RIVER DISPOSAL DIKE.GPJ
GRADATION CURVES TEST METHODS: ASTM D 422, D4318, D2216

DATE: **Feb 04**

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS



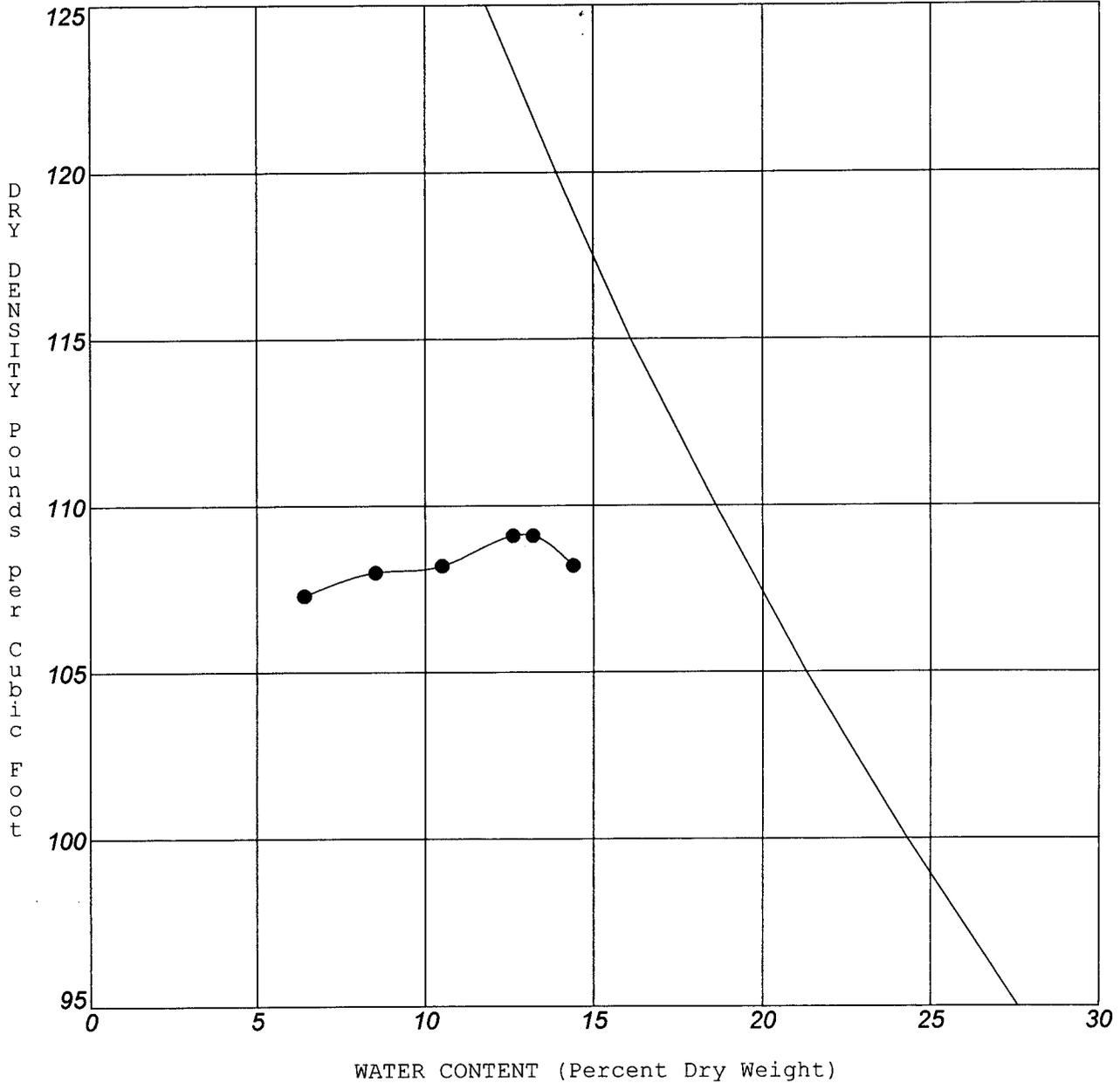
PROJECT: **Wicomico River Disposal Dike
Sharps Point Disposal Site - Cell 4**

DATE: Feb 04

AREA: **Wicomico County, MD**

TEST PIT NO. TP-4 SAMPLE NO. Bucket 1&2 DEPTH (FT): 0.0-4.0

TEST METHOD: ASTM D698 Procedure A



MAXIMUM DRY DENSITY: 109.0 pcf
 OPTIMUM WATER CONTENT: 13.0 %
 SPECIFIC GRAVITY: 2.62
 CLASSIFICATION: POORLY GRADED SAND with SILT **SP-SM**

Remarks:

LEGEND	
<input type="checkbox"/>	CORRECTED + No.4
<input type="checkbox"/>	CORRECTED + 3/8"
<input type="checkbox"/>	CORRECTED + 3/4"
<input checked="" type="checkbox"/>	NO CORRECTION NEEDED

MOISTURE-DENSITY RELATIONSHIP

U. S. Army Corps of Engineers
Baltimore, MD

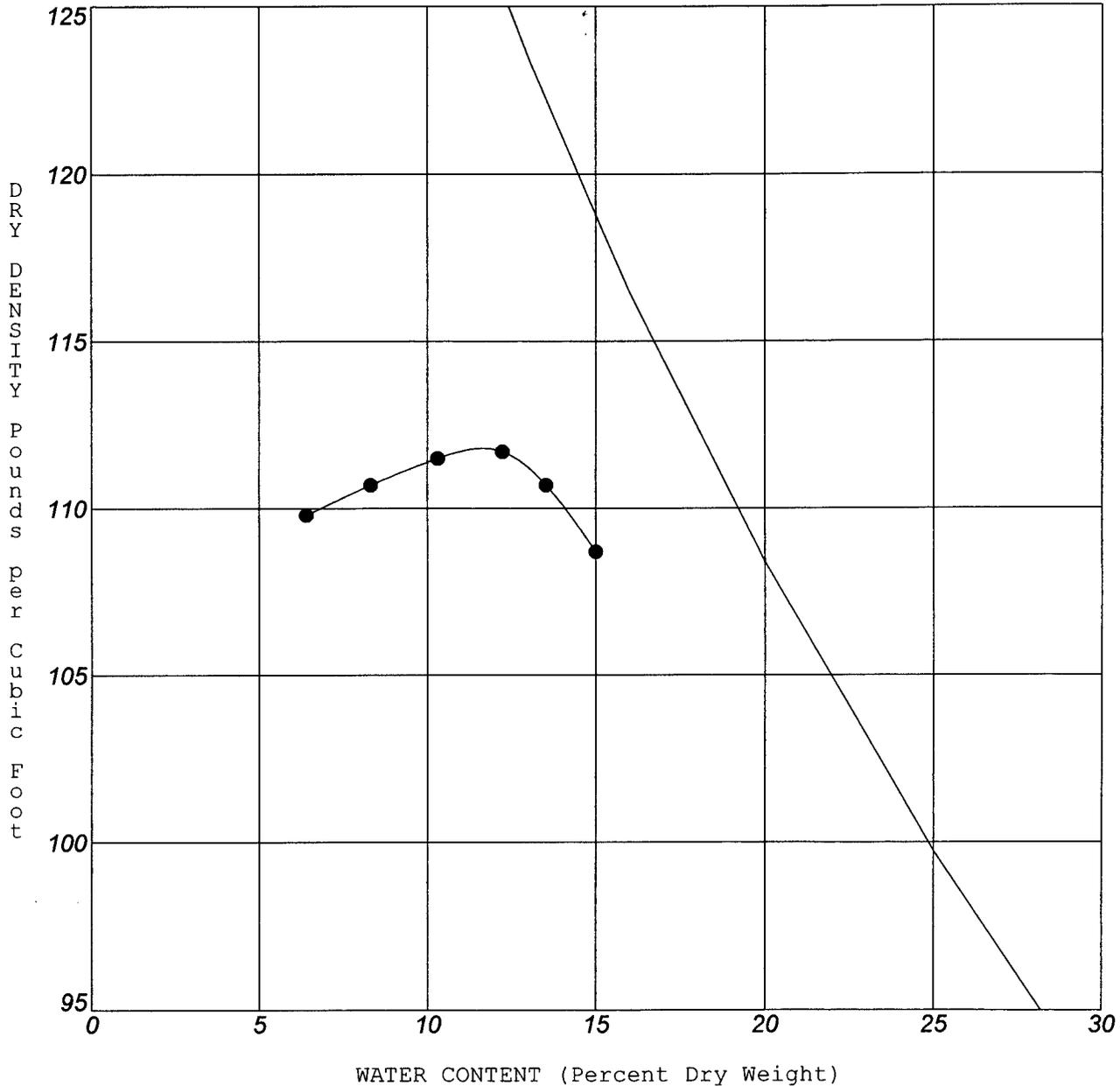
PROJECT: **Wicomico River Disposal Dike
Sharps Point Disposal Site - Cell 4**

DATE: Feb 04

AREA: **Wicomico County, MD**

TEST PIT NO. TP-8 SAMPLE NO. Bucket 1&2 DEPTH (FT): 0.0-8.0

TEST METHOD: ASTM D698 Procedure A



MAXIMUM DRY DENSITY: 111.7 pcf
 OPTIMUM WATER CONTENT: 12.0 %
 SPECIFIC GRAVITY: 2.66
 CLASSIFICATION: POORLY GRADED SAND with SILT **SP-SM**

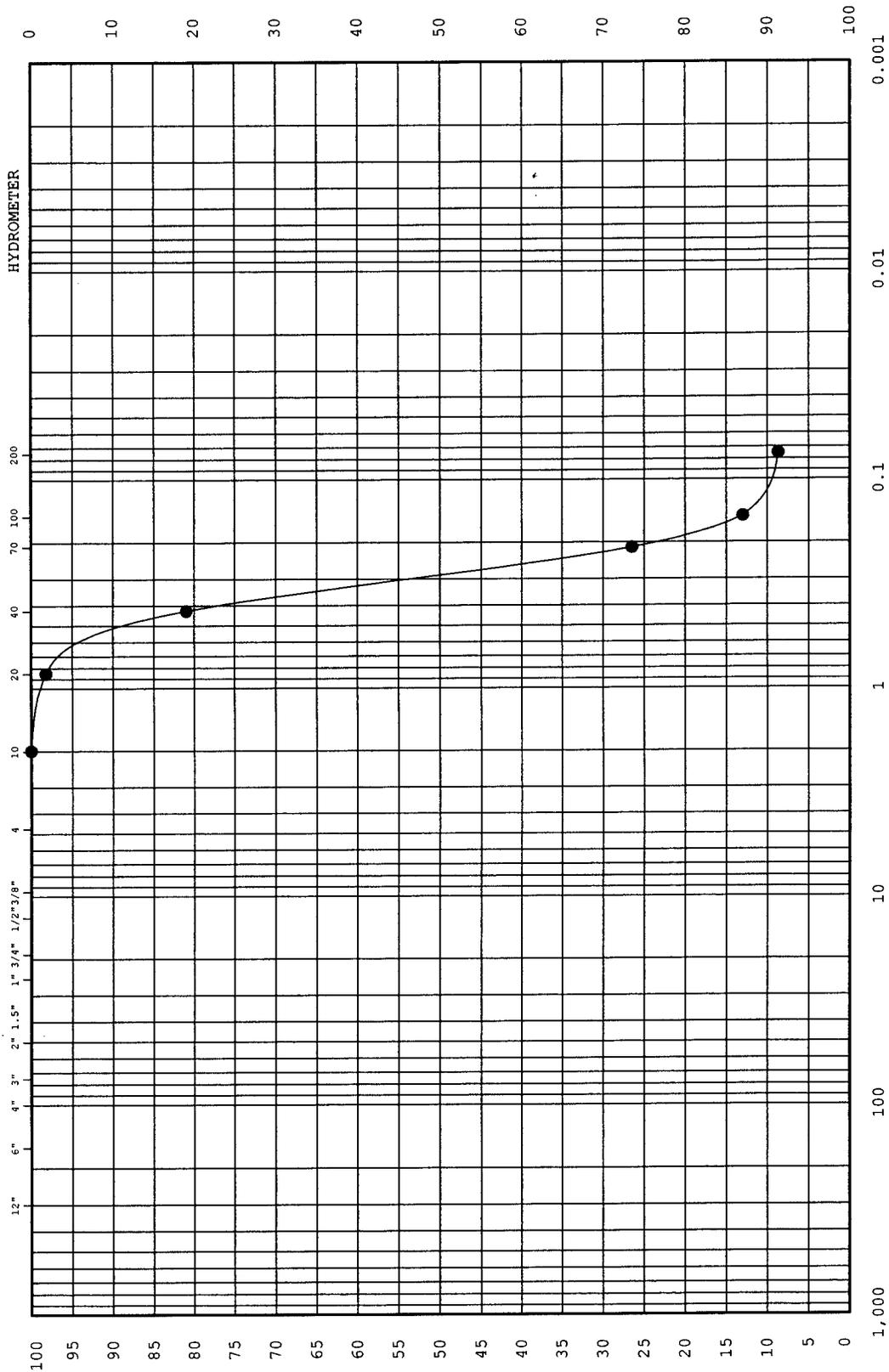
Remarks:

LEGEND	
<input type="checkbox"/>	CORRECTED + No.4
<input type="checkbox"/>	CORRECTED + 3/8"
<input type="checkbox"/>	CORRECTED + 3/4"
<input checked="" type="checkbox"/>	NO CORRECTION NEEDED

MOISTURE-DENSITY RELATIONSHIP

U. S. Army Corps of Engineers
Baltimore, MD

U.S. STANDARD SIEVE OPENING IN INCHES U.S. STANDARD SIEVE NUMBERS



GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND			SILT or CLAY		
	COARSE	FINE	COARSE	MEDIUM	FINE	FI	FL	PI

Legend	Sample No.	Depth (ft)	Classification (ASTM D 2487)	Mat wc%	LL	PL	PI
●	Bucket 1&2	0.0-8.0	POORLY GRADED SAND with SILT	20.9	NP	NP	NP
—							
—							
—							

PROJECT: **Wicomico River Disposal Dike**
 AREA: **Sharps Point Disposal Site - Cell 4**
Wicomico County, MD

BORING NO.: **TP-8**

DATE: **Feb 04**

Remarks:

ENG FORM ENG208 WICOMICOCO RIVER DISPOSAL DIKE.GPJ **GRADATION CURVES** TEST METHODS: ASTM D 422, D4318, D2216

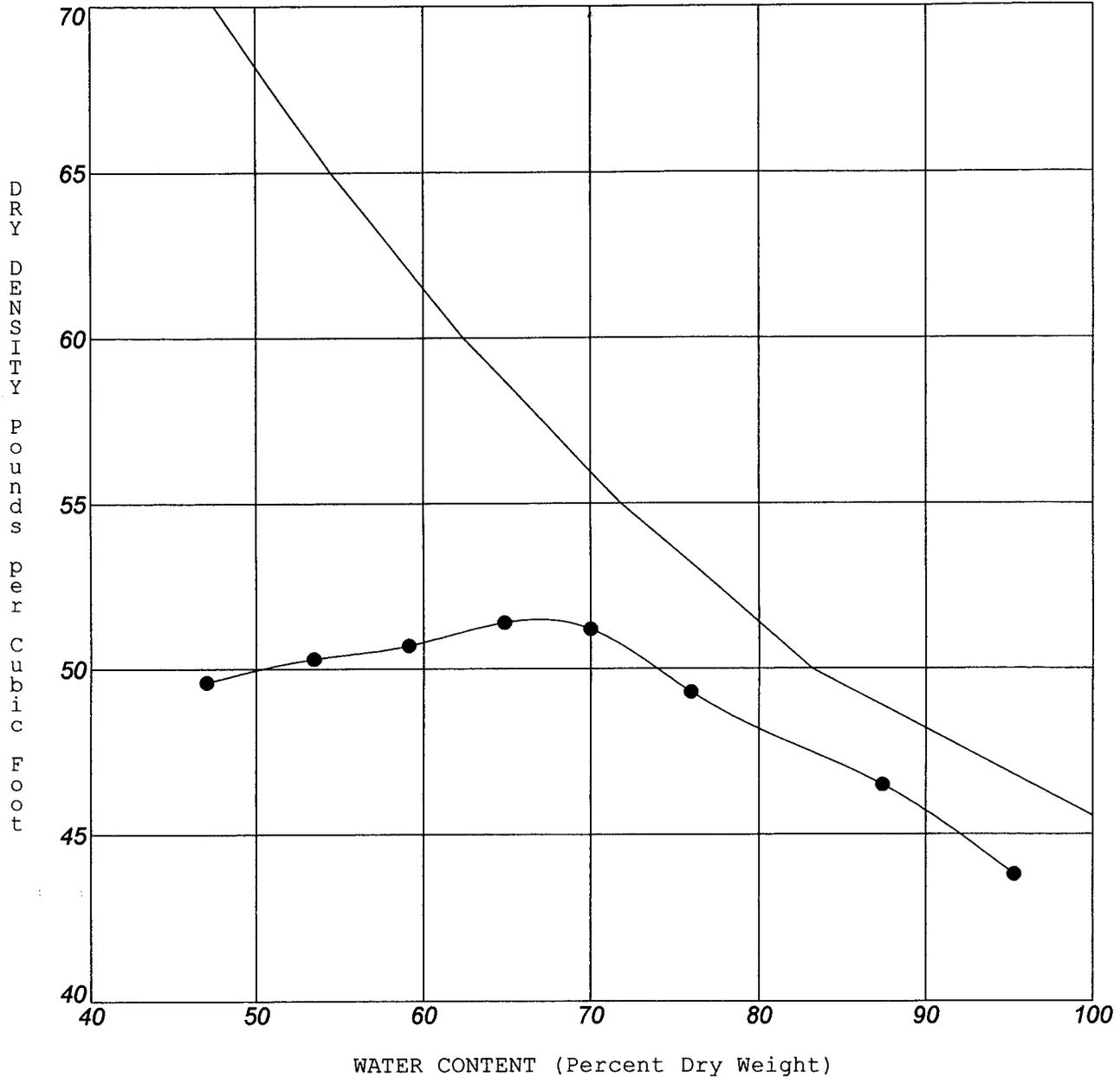
PROJECT: **Wicomico River Disposal Dike
Sharps Point Disposal Site - Cell 3**

DATE: Feb 04

AREA: **Wicomico County, MD**

TEST PIT NO. Cell-3B SAMPLE NO. Bucket 1&2 DEPTH (FT): 0.0-1.0

TEST METHOD: ASTM D698 Procedure A



MAXIMUM DRY DENSITY: 51.4 pcf

OPTIMUM WATER CONTENT: 67.5 %

SPECIFIC GRAVITY: 2.41

CLASSIFICATION: ELASTIC SILT

MH

Remarks:

LEGEND

○	CORRECTED + No.4
○	CORRECTED + 3/8"
○	CORRECTED + 3/4"
●	NO CORRECTION NEEDED

MOISTURE-DENSITY RELATIONSHIP

U. S. Army Corps of Engineers

Baltimore, MD

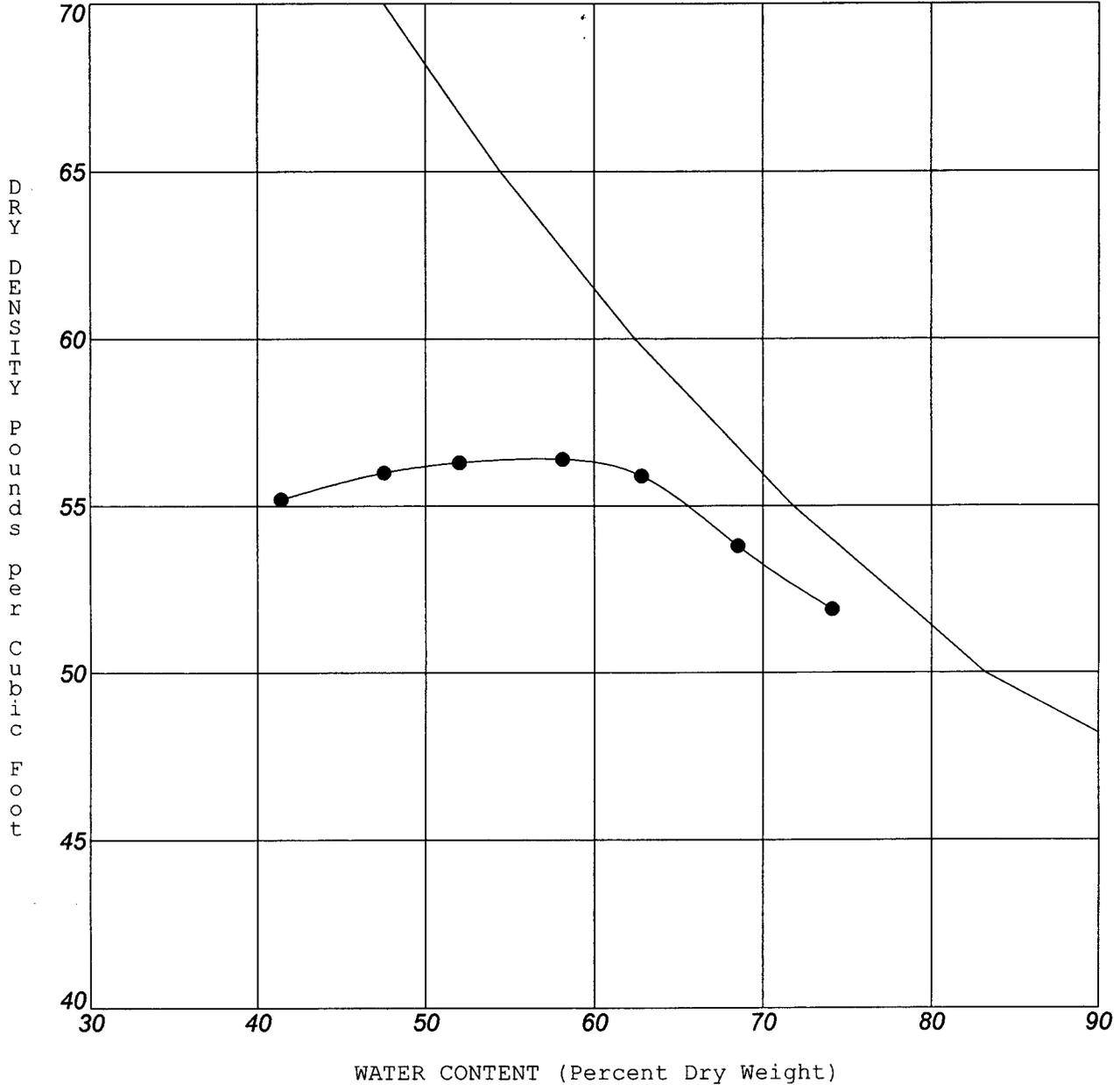
PROJECT: **Dredge Material Composite Sample
Sharps Point Disposal Site**

DATE: Mar 04

AREA: **Wicomico County, MD**

TEST PIT NO. Cell 2 SAMPLE NO. Bucket 1-2 DEPTH (FT): 0.0

TEST METHOD: ASTM D698 Procedure A



MAXIMUM DRY DENSITY: 56.5 pcf
OPTIMUM WATER CONTENT: 59.0 %
SPECIFIC GRAVITY (ASTM D854): 2.40
CLASSIFICATION: ELASTIC SILT **MH**

Remarks:

LEGEND	
○	CORRECTED + No.4
○	CORRECTED + 3/8"
○	CORRECTED + 3/4"
●	NO CORRECTION NEEDED

MOISTURE-DENSITY RELATIONSHIP

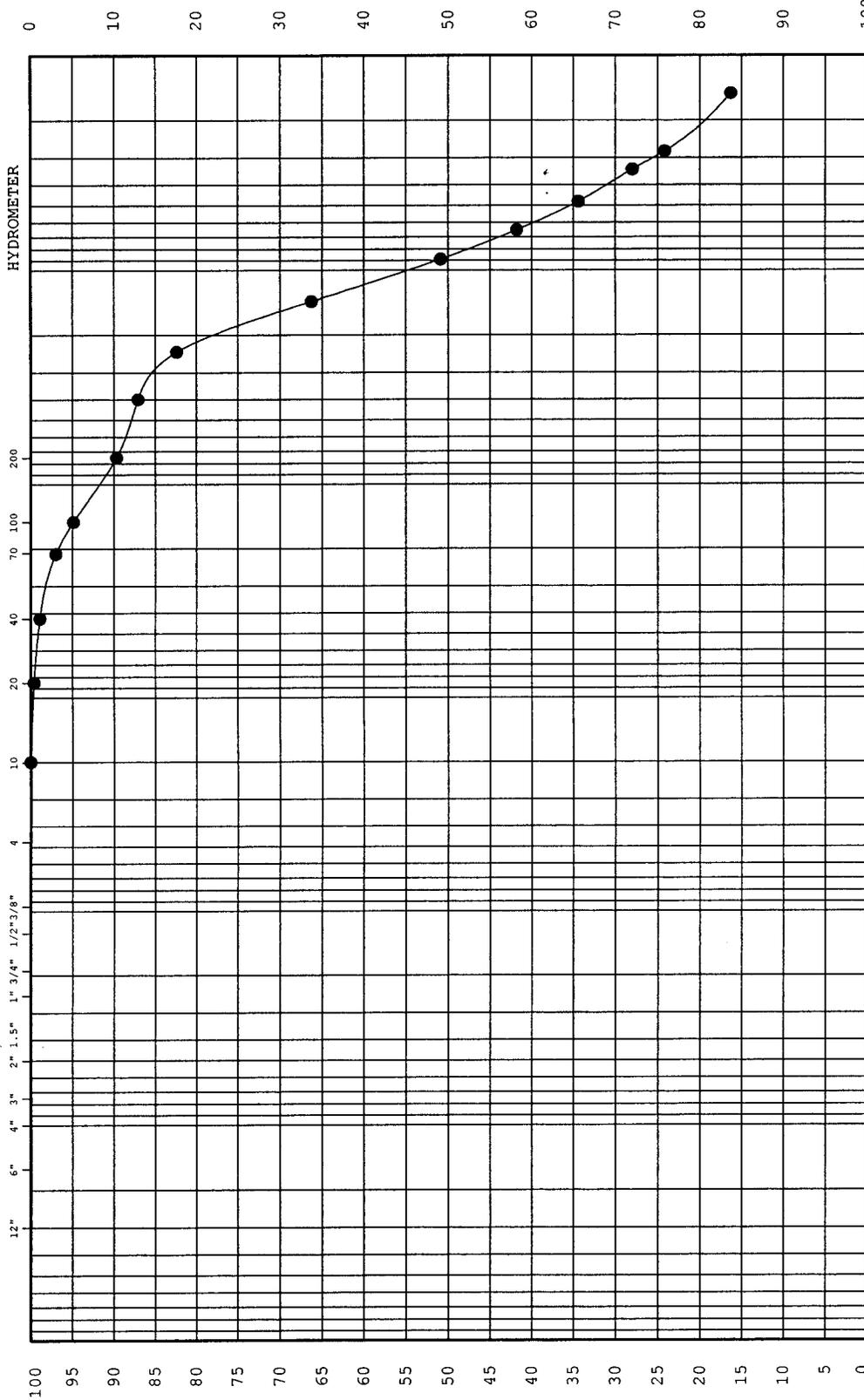
U. S. Army Corps of Engineers
Baltimore, MD

U.S. STANDARD SIEVE OPENING IN INCHES

12" 6" 4" 3" 2" 1.5" 1" 3/4" 1/2" 3/8"

U.S. STANDARD SIEVE NUMBERS

10 20 40 60 80 100



PERCENT COARSER BY WEIGHT

HYDROMETER

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND			SILT OR CLAY			
	COARSE	FINE	COARSE	MEDIUM	FINE				
Sample No.	Classification (ASTM D 2487)		Nat wc%	LL	PL	PI			
Bucket 1-2	ELASTIC SILT		MH 221.1	106	62	44			

PROJECT: Dredge Material Composite Sample
 AREA: Sharps Point Disposal Site
 Wicomico County, MD

BORING NO.: Cell 2

DATE: Mar 04

Remarks:

ASTM D 422, D4318, D2216

ENG FORM ENG2087/AT/COM/CO CC MATERIAL COMPOSITE.GPJ



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendal P. Philbrick
Acting Secretary

Michael S. Steele
Lt. Governor

WATER QUALITY CERTIFICATION

NABOP-NN-04-03

CERTIFICATION 04-WQ-003

PUBLIC NOTICE DATE January 23, 2004

TO: Operations Division
Baltimore District, Corps of Engineers
P.O. Box 1715
Baltimore, MD 21203-1715

RE: Wicomico River Maintenance Dredging -
to hydraulically remove approximately
190,000 cubic yards of material.
Disposal of the material will be at the
Mt. Vernon and Sharps Point disposal
sites.

This water quality certification is issued under authority of Section 401 of the Federal Water Pollution Control Act and its Amendments and the Environment Article, Sections 9-313 - 9-323, inclusive, Annotated Code of Maryland. A copy of this required certification has been sent to the Corps of Engineers. This certification does not relieve the applicant of responsibility for obtaining any other approvals, licenses or permits in accordance with federal, State, or local requirements and does not authorize commencement of the proposed project. The Maryland Department of the Environment has determined from a review of the plans that the construction of this facility and its subsequent operation as noted herein will not violate Maryland's water quality standards, provided that the following conditions are satisfied.

The applicant shall comply with the conditions marked (X) below:

(X) (1) The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify this department ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.

(X) (2) The proposed project shall be constructed in accordance with the plan and its revisions as approved by the:

- (X) (a) Corps of Engineers
- () (b) Water Management Administration

(X) (3) All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.

(X) (4) The applicant shall notify this Department upon transferring this ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request transfer of this water quality certification to his/her name.

(X) (5) The certification holder shall allow the Maryland Department of the Environment or its representative to inspect the project area at reasonable times and to inspect records regarding this project.

Page Two Water Quality Certification

() (6) Construction of any bulkhead shall be completed prior to filling behind the bulkhead. The bulkhead shall be constructed in such a manner so as to prevent the loss of fill material to waters of this State. Only clean fill, which is free of organic, metallic, toxic or deleterious materials shall be used.

() (7) The disturbance of the bottom of the water and sediment transport into the adjacent State waters shall be minimized. The applicant shall obtain and certify compliance with a grading and sediment control plan which has been approved by the:

- () (a) _____ Soil Conservation District or
- () (b) Erosion and Control Representative, Division of Environmental Services, Bureau of Highways, Department of Public Works of the City of Baltimore or
- () (c) The Department of the Environment, Water Management Administration or
- () (d) Montgomery County Department of Environmental Protection.

The approved plan shall be available at the project site during all phases of construction.

(X) (8) The spoil disposal area(s), including dikes where applicable, shall be constructed to limit the suspended solids content in the discharge to the waters of this State to four hundred (400) parts per million or less.

(X) (9) Dredging shall be done only in the period June 16 through February 14.

() (10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway. The natural vegetation shall be maintained and restored when disturbed or eroded. Stormwater drainage facilities shall be designed, implemented, operated and maintained in accordance with the requirements of the applicable approving authority.

() (11) _____ shall provide to the Water Management Administration a stormwater management plan including cross-sections which incorporates effective pollutant removal strategies in uplands to treat a minimum of the first one-half inch of runoff from impervious surfaces prior to release of stormwater into State waters or wetlands. There shall be no discharge of untreated stormwater to State waters or wetlands. The plan shall be provided by _____ and shall be implemented by _____.

() (12) _____ shall provide to the Water Management Administration a mitigation plan for the construction of - _____ acre(s) of _____ wetland for review and approval by _____. The plan shall be implemented by _____.

- The plan shall show:
- the source of hydrology for the constructed wetland
 - the source and amount of soil to be used in constructing the wetland
 - the species, size and density of vegetation to be planted in the constructed wetland and a planting schedule.
 - a monitoring/maintenance plan.

() (13) _____ shall monitor the mitigation site for a period of five years and shall determine whether the wetland construction has been successful. A successful mitigation project shall result in: _____ plants/acre and 85% survivability of plants in forested and scrub/shrub wetlands and plants covering 85% of the area for emergent wetlands. If these standards are not met,

_____ shall determine the reason(s) for failure, the problem(s) shall be corrected, and the area(s) shall be replanted and monitored.

Page Three Water Quality Certification

() (14) The mitigation site shall be constructed in accordance with the plan, dated _____.

() (15) _____ shall provide a _____ plan for review and approval by _____. This plan shall be implemented by _____.

() (16) At least one culvert in every stream crossing shall be depressed at least one foot below existing stream bottom under the low flow condition. A low flow channel shall be provided through any riprap structures. The culvert shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species.

() (17) Stormwater discharges from ponds, stormwater management outfalls, and stormwater facilities shall have a velocity no greater than four feet per second for the two year storm in order to prevent erosion in the receiving waterway or wetland.

() (18) Future stormwater discharges to certified pond(s) are prohibited unless the first one half inch of stormwater runoff from impervious surfaces is managed in uplands for effective pollutant removal.

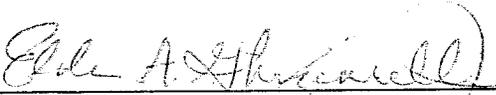
() (19) Authorized stormwater detention ponds shall have a maximum detention time of _____ hours.

() (20) _____ shall restore and revegetate all temporarily disturbed waters and wetlands to original contours upon completion of construction.

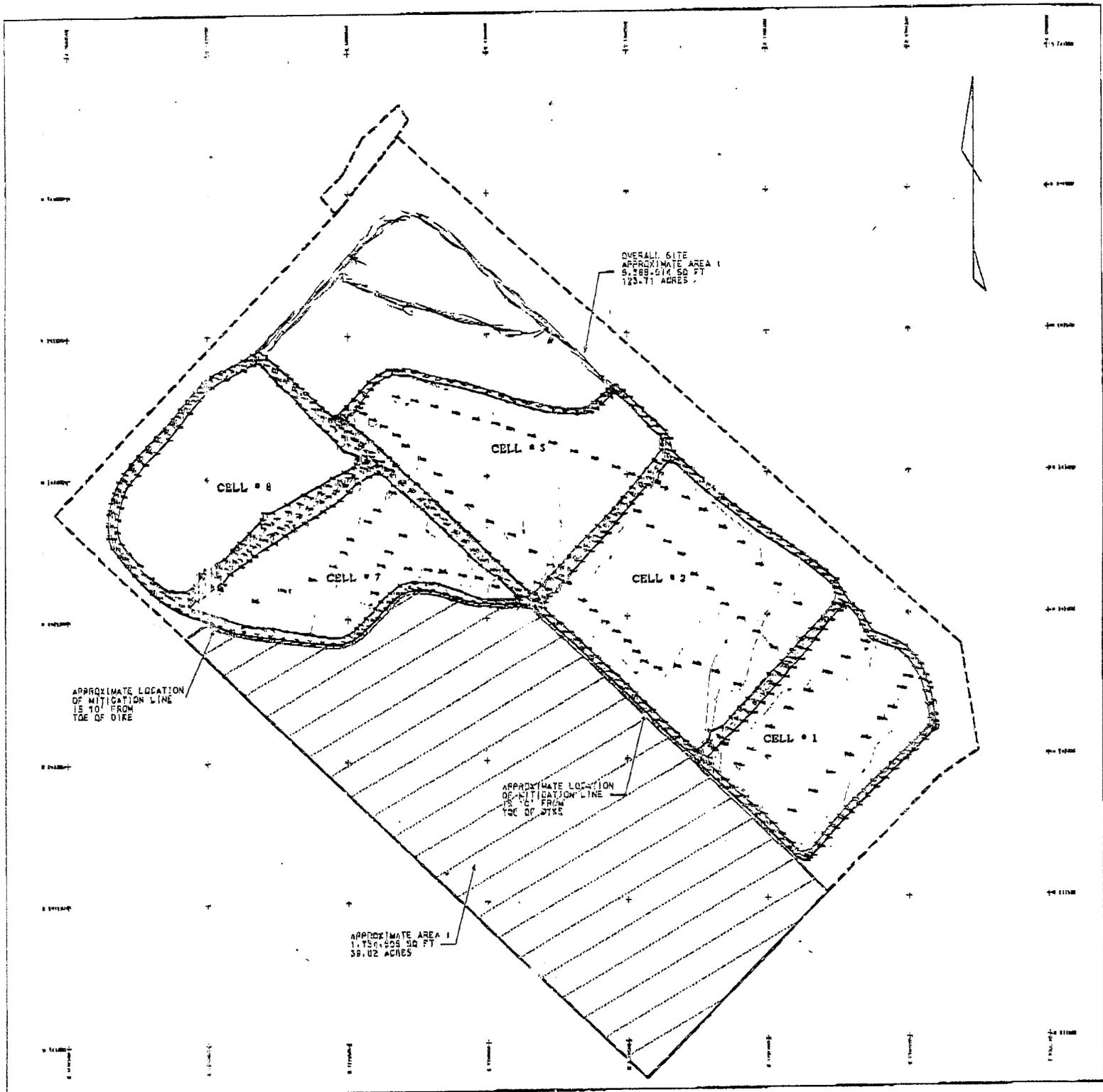
(X) (21) Disposal at the Sharps Point disposal site shall be undertaken in accordance with the attached diagram. There shall be no disposal in the hatched area of this diagram.

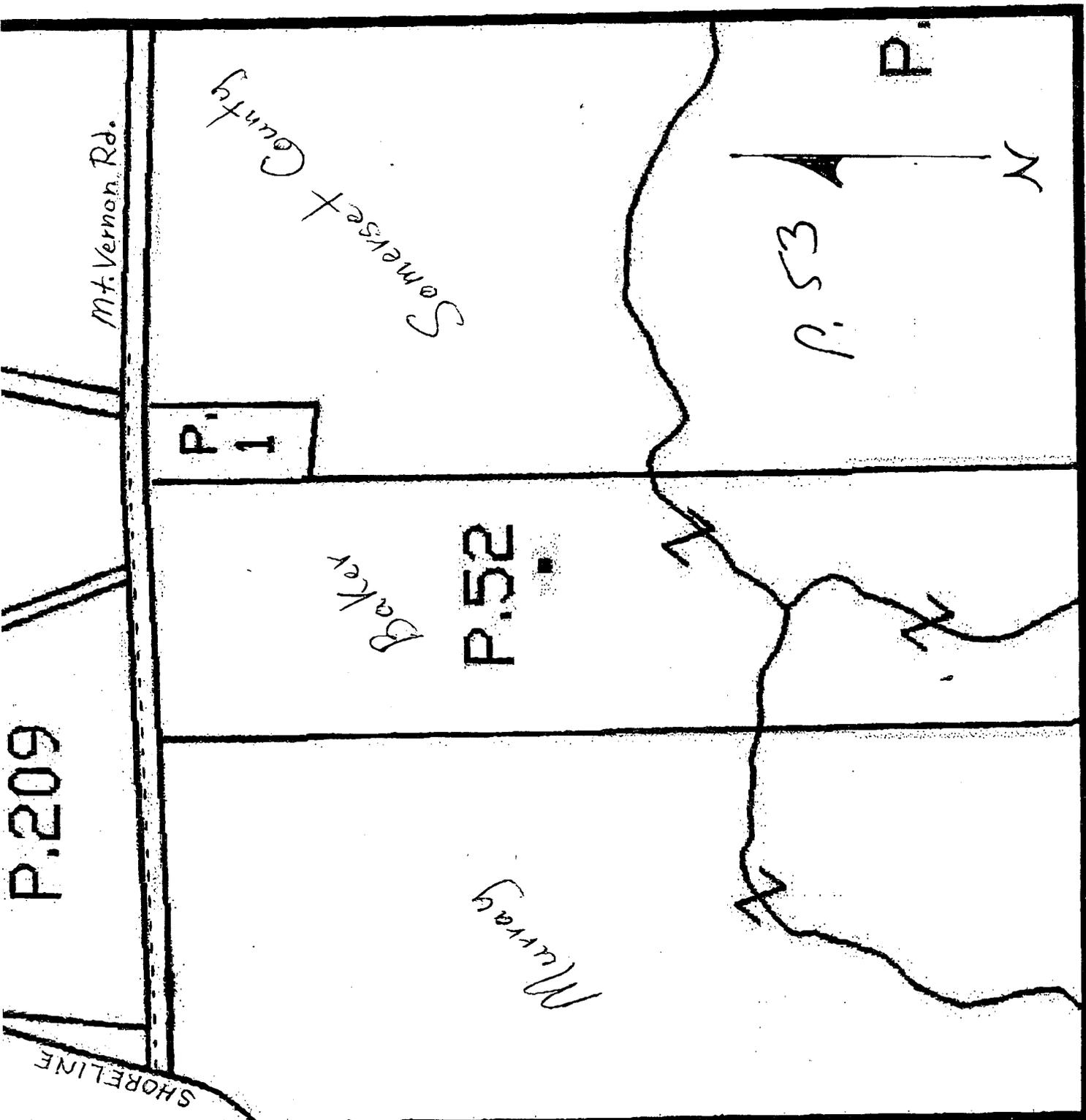
Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification and legal proceedings may be instituted against the applicant in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime.

CERTIFICATION APPROVED


Water Management Administration

3/04/07
Expiration Date





----- indicates proposed placement of drudge pipe along the north side of Mt. Vernon Road, within the Somerset County right of way.

MT. VERNON PLACEMENT SITE - PIPELINE RIGHT-OF-WAY MAP