New Jersey
ACCUTEST
Laboratories

10/25/07

Technical Report for

Honeywell International Inc.

CMHLLVA: Dundalk Marine Terminal, Balitmore, MD

COPR Investigation Phase 2

Accutest Job Number: J71120X

Sampling Dates: 09/07/07 - 09/10/07

Report to:

CH2M Hill
3011 S.W. Williston Road
Gainesville, FL 32608-3928

ATTN: Mark Stinnett

RECEIVED
NOV 09 2007
By

Total number of pages in report:

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Client Service contact: Nadine Yakes 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.

Sample Summary

Honeywell International Inc.

Job No: J71120X

CMHLLVA: Dundalk Marine Terminal, Balitmore, MD
Project No: COPR Investigation Phase 2

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
J71120-1X	09/07/07	11:12	09/11/07	SO	Soil	IC-B-1-SOI-220240-G
J71120-2X	09/10/07	07:46	09/11/07	SO	Soil	IC-A-1-SOI-120140-G

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

50

J 71120

Accutest Labs
2235 ROUTE 130
Dayton, NJ 8810
732-329-0200

Honeywell

Chain Of Custody / Analysis Request

AESI Ref:	39336.39570
COC#	37825-091107-ACTD-1G
Lab Proj # (SDG):	
Lab ID	ACTD
Site ID	Dundalk
Lab Job #	
Authorized User:	Honeywell

Privileged & Confidential

Site Name: Dundalk Marine Terminal
Location of Site: BALTIMORE, MD
Phase: RI
Sampling Program: COPR Investigation Phase 2

Sampling Co.: CH2MHILL
EDD To: John.Mitchell@ch2m.com
Sampler:
PO #
Analysis Turnaround Time (TAT): 28
Consultant: CH2M
Full Report TAT: 28

Client Contact: (name, co., address)
Bill Soukup
HydroQual, Inc
1200 MacArthur Blvd. Mahwah, NJ 07430
Preliminary Data To: Mark.Stinnet@ch2m.com,John.Mitchell@ch2m.com
Sample Receipt Acknowledgement To: Mark.Stinnet@ch2m.com,John.Mitchell@ch2m.com
Hard Copy To: Amy Klopper, Christina Jensen
Invoice To: Honeywell

Text & Excel File Drive | Excel & Text File Order

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	Sample Identification				Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	ASTM D2216-Moisture	ASTM D854-Specific Gravity	ASTM D422-Grain Size with hydrometer	ASTM D4318-Atterberg Limits	ASTM D2435-Consolidation Test	ASTM D2166-Compression	ASTM D4767-CU Strength	ASTM D3080-04-Direct Shear	ASTM D5084-Hydraulic Conductivity	ASTM D2937-Bulk Density	ASTM D2434-Permeability	ASTM D1498-ORP	Sampling Method (code)	Lab Sample Numbers
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units															
1	IC-B-1	22.0	24.0	IC-B-1-SOI-220240-G •	9/7/2007	11:12	SOI	SOIL	REG	2	grab	N			X	X			-1						Grab	
2	IC-A-1	12.0	14.0	IC-A-1-SOI-120140-G •	9/10/2007	7:46	SOI	SOIL	REG	1	grab	N			X	X			-2						Grab	
3																										
4																									• 1 BAG	
5																									REC'D	
6																										
7																										
8																										
9																									SUB	
10																										
11																										
12																										

Relinquished by	Company	Received by	Company	Condition	Custody Seals Intact
Cathy Cannon	CH2M HILL 9/10/07 Date/Time	A. Acevedo	9/11/07 11:19 Date/Time	Cooler Temp.	
Relinquished by: A. Acevedo	Company 9/11/07 1445 Date/Time	Received by	Company 9/11/07 1445 Date/Time	Condition	Custody Seals Intact
				Cooler Temp.	

Preservatives: (Other; Specify):

0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 (pH<2), 4Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); sp (special instructions)

4.6°C

B

CHAIN OF CUSTODY

ACCUTEST®

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Accutest Job #:

Accutest Quote #:

Client Information

Name: Accutest Laboratories

Address: 2235 Route 130

Dayton, NJ 08810

Send Report to: Nadine Yakes

Phone #: 732-329-0200 x226

Facility Information

Project Name: DMT, Baltimore, MD

Location:

Project No.: J71120X

FAX #: (732) 329-3499

Analytical Information

Field ID / Point of Collection	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Preservation HCL	NaOH	HNO3	H2So4	None	ASTM D422-Grain Size	ASTM D4318-Atterberg Limits	0	0			
-1	9/7	11:12		Soil	1						X	X					
-2	9/10	7:46		Soil	1						X	X					

Turnaround Information

- [ ] 21 Day Standard — Approved By:
- [ ] 14 Day
- [ ] 7 Days *EMERGENCY*
- [ ] Other 28 (Days)

21 Day Turnaround Hardcopy, Emergency or RUSH is FAX Data unless previously approved.

Data Deliverable Information

- [ ] NJ Reduced
- [X] NJ Full
- [ ] FULL CLP
- [ ] Disk Deliverable
- [ ] Other (Specify)
- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] State Forms

Comments / Remarks

Sample Custody must be documented below each time samples change possesion, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	9/13/07 1700	1 FedX	2		2
3		3	4		4
5		5			

Seal #: Preserved where applicable ☐ On Ice ☐

Accutest
Subcontractor Order

Date/Time:	9/12/07 12:10 PM	**Sub Lab:**	Golder
Accutest Job No.	J71120X	**Address:**	3730 Chamblee Tucker Road
Client Project:	DMT, Baltimore, MD		Atlanta GA 30341
CSR:		**Contact:**	Sample Management
		Phone:	(770) 492-8280

Sample #:	Analyses	
1		ASTM D422-Grain Size / ASTM D4318-Atterberg Li
2		ASTM D422-Grain Size / ASTM D4318-Atterberg Li
0		
0		
0		
0		
0		
0		
0		
0		
	Turn Around	28

Sample Managment receipt: _____ **Date:** 9/13/07

(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)

e/sop_new/subform

SUBCONTRACT DATA

SEPTEMBER 2007

073-90241-002
J71120X

ACCUTEST/DMT, BALTIMORE, MD/NJ
SUMMARY OF SOIL DATA

Sample Identification	Sample Type	Sample Depth	Soil Classi-fication	Natural Moisture %	Atterberg Limits				Grain Size Distribution			Compaction		Gs	Unit Weight		Permeability (cm/sec)	Additional Tests Conducted (See Notes)
					L.L.	P.L.	P.I.	L.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm	Maximum Dry Density (lb/cuft)	Optimum Moisture %		Moisture %	Dry (lb/cuft)		
J71120X-1	Bag	-	CL	27.3	37	22	15	0.32	100.0	86.2	-	-	-	-	-	-	-	-
J71120X-2	Bag	-	CL	20.6	25	17	8	0.50	99.8	81.9	-	-	-	-	-	-	-	-

ABBREVIATIONS: LIQUID LIMIT (LL)
PLASTIC LIMIT (PL)
PLASTICITY INDEX (PI)
LIQUIDITY INDEX (LI)
SPECIFIC GRAVITY (Gs)
MOISTURE (Mc)

This Report Has Been
Spot-Check Reviewed By
The Accutest QA Staff.

Reviewer [signature]

Review Date 10/25/07

NOTES: T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
C = CONSOLIDATION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH

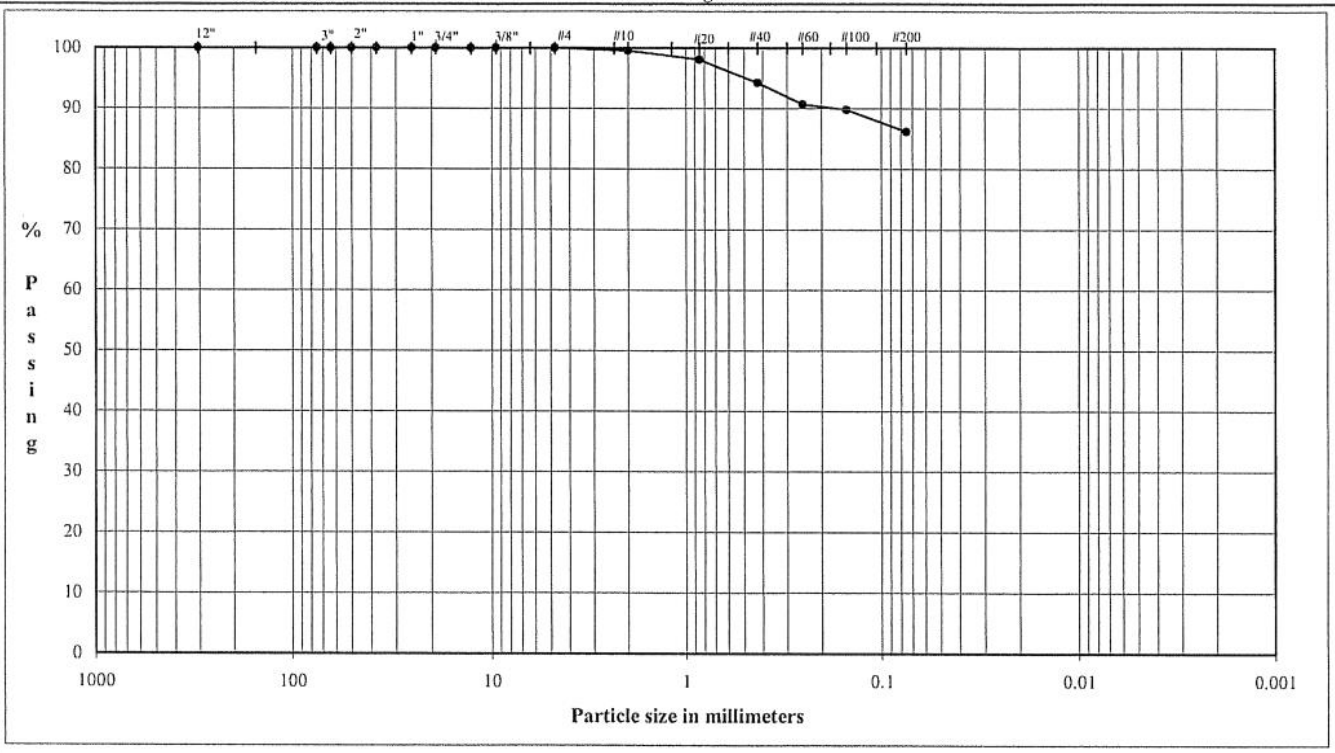
J71120X

SEPTEMBER 2007 073-90241-002

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

ASTM D421, D422, D4318

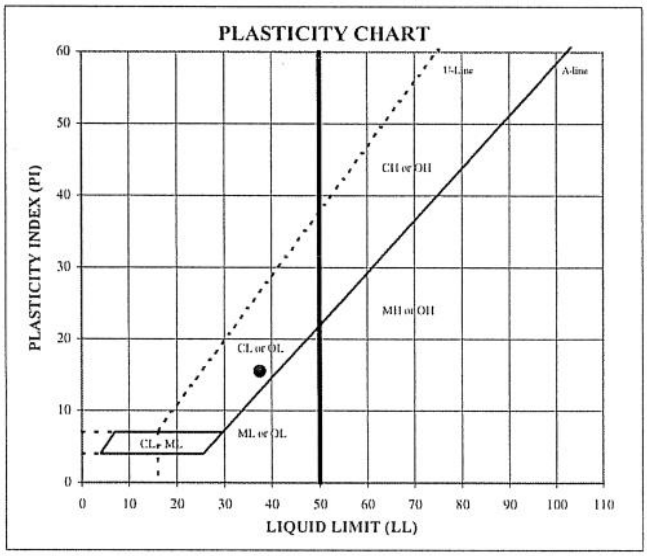
PROJECT NAME: ACCUTEST/DMT, BALTIMORE, MD/NJ
SAMPLE ID: J71120X-1 Depth: -
TYPE: Bag



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	100.0		
3.0"	75.0	100.0	Cobbles	0.00
2.5"	63.5	100.0		
2.0"	50.0	100.0		
1.5"	37.5	100.0		
1.0"	25.0	100.0		
0.75"	19.0	100.0	Coarse Gravel	0.00
0.50"	12.7	100.0		
0.375"	9.5	100.0		
#4	4.8	100.0	Fine Gravel	0.00
#10	2.00	99.5	Coarse Sand	0.47
#20	0.85	98.1		
#40	0.43	94.2	Medium Sand	5.29
#60	0.25	90.7		
#100	0.15	89.8		
#200	0.075	86.2	Fine Sand	8.02
			Fines	86.22



ATTERBERG LIMITS
Method -B (Dry preparation)

M_c	LL	PL	PI	LI
27.3	37	22	15	0.32

DESCRIPTION: Grayish Brown, SILTY CLAY, some medium to fine sand.

USCS: CL

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

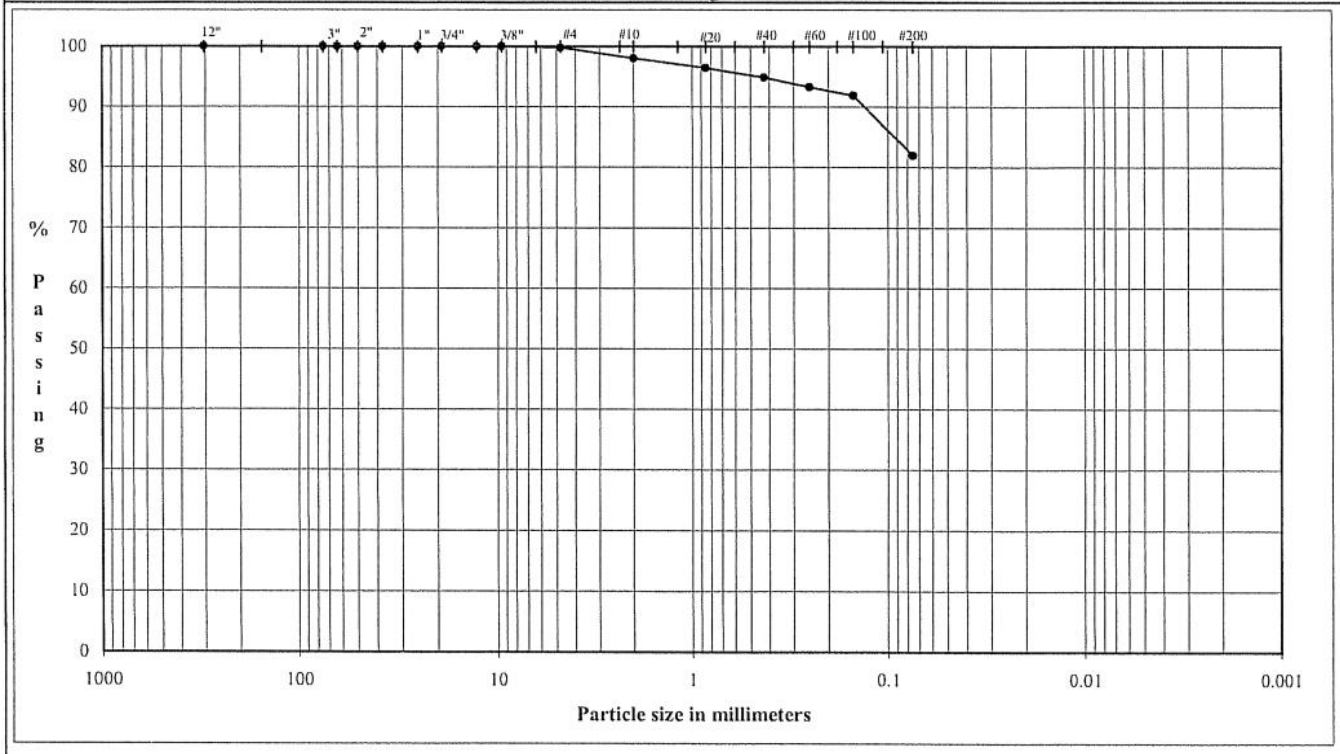
TECH	CA/TJ/SDM
DATE	09/18/07
CHECK	DA
REVIEW	AWM

SEPTEMBER 2007 073-90241-002

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

ASTM D421, D422, D4318

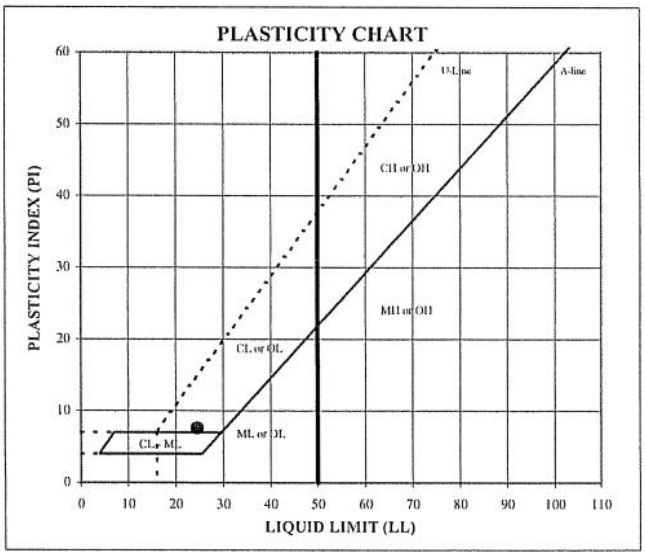
PROJECT NAME: **ACCUTEST/DMT, BALTIMORE, MD/NJ**
SAMPLE ID: **J71120X-2** Depth: -
TYPE: **Bag**



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	**100.0**		
3.0"	75.0	**100.0**	Cobbles	**0.00**
2.5"	63.5	**100.0**		
2.0"	50.0	**100.0**		
1.5"	37.5	**100.0**		
1.0"	25.0	**100.0**		
0.75"	19.0	**100.0**	Coarse Gravel	**0.00**
0.50"	12.7	**100.0**		
0.375"	9.5	**100.0**		
#4	4.8	**99.8**	Fine Gravel	**0.22**
#10	2.00	**98.0**	Coarse Sand	**1.76**
#20	0.85	**96.5**		
#40	0.43	**94.9**	Medium Sand	**3.14**
#60	0.25	**93.3**		
#100	0.15	**91.9**		
#200	0.075	**81.9**	Fine Sand	**12.94**
			Fines	**81.94**



ATTERBERG LIMITS
Method -B (Dry preparation)

M_c	LL	PL	PI	LI
20.6	**25**	**17**	**8**	**0.50**

DESCRIPTION: Grayish Brown, SILTY CLAY, some medium to fine sand, trace fine gravel.

USCS: CL

LL (oven-dried)
< 0.75 = ORGANIC (OL/OH)

TECH	CA/TJ/SDM
DATE	09/18/07
CHECK	DA
REVIEW	[illegible]