ecology and environment, inc.
ROSSLYN CENTER, 1700 NORTH MOORE ST., ARLINGTON, VA. 22209, TEL. 703-522-6065
International Specialists in the Environmental Sciences

MEMORANDUM

DATE: May 27, 1988

TO: John Osborn, FIT-RPO, USEPA, Region X

FOR: Joyce Crosson, RSCC, USEPA, Region X

THRU: Jeffrey Villnow, FIT-OM, E&E, Seattle JV

FROM: Thomas Cammarata, Geochemist, E&E, Seattle T.C
For Andrew Hafferty, Senior Chemist, E&E, Seattle RHM

SUBJ: QA of Case 3703J (Particle Size Analysis)

REF: TDD F10-8802-07

CC: Raleigh Farlow, ESD-DPO, USEPA, Region X
Wayne Wirtanen, DPO, USEPA, Region I
Deborah Flood, HWD-SM, USEPA, Region X
Joseph Hunt, E&E, Seattle

The Quality Assurance review of three samples, Case 3703J, collected from Spokane Junkyard, has been completed. A Particle Size Analysis was performed on three soil samples by Aquatec, Inc., of Burlington, Vermont. The samples were numbered:

81351
81352
81352

1) Particle Size Analysis - Reasonable

The procedures for Particle Size Analysis of three soil samples followed guidelines in ASTM designation: D422-63.

PSA/3703J

JUN 6 1988
Superfund Branch
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International Specialists in the Environmental Sciences

TO: Debbie Flood
from: J. Crosson
Webb-info

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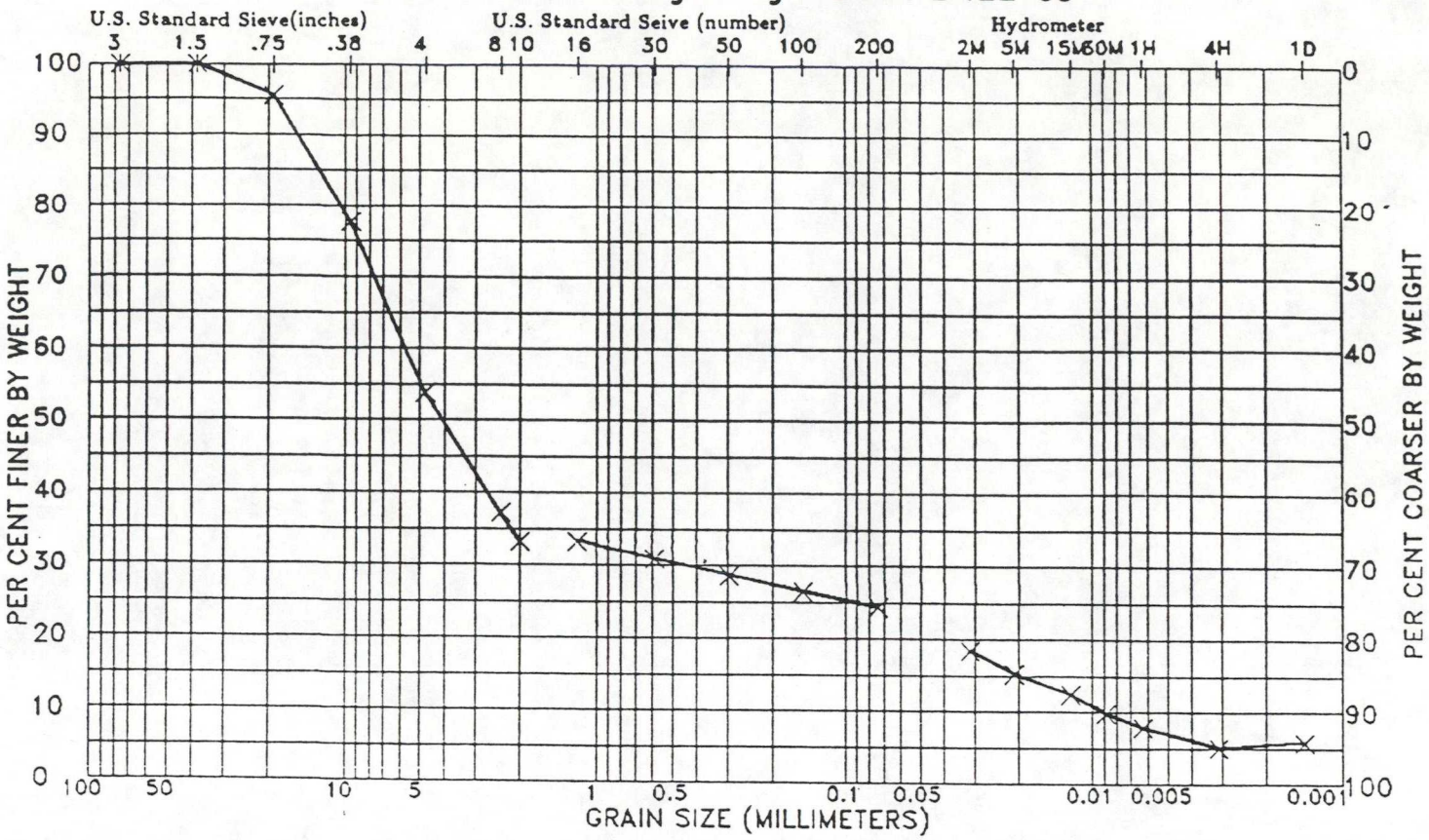
Superfund Branch

Aquatec, Inc. -- 1988

SAMPLE: 81351

aquatec

Particle Size Analysis by ASTM D422-63



88074835

Specific Gravity= 2.501

Sieve size	% Finer	Mass Finer
3 inch	100.00	408.90
1.5 inch	100.00	408.90
.75 inch	95.52	390.60
.375 inch	77.70	317.70
Number 4	53.78	219.90
Number 8	37.27	152.40
Number 10	33.26	136.00
Number 16	33.26	136.00
Number 30	30.85	126.13
Number 50	28.53	116.66
Number 100	26.36	107.77
Number 200	24.28	99.29

Elasped time (nom. min.)	% Finer	Diameter (um)
+2 minutes	18.37	31.49
+5 minutes	15.15	20.92
+15 min.	12.44	12.29
+30 min.	9.72	8.83
+60 min.	7.75	6.25
+250 min	5.02	3.10
+1440 min	5.75	1.42

TC 5/27/88

Submitted by: Joseph Com

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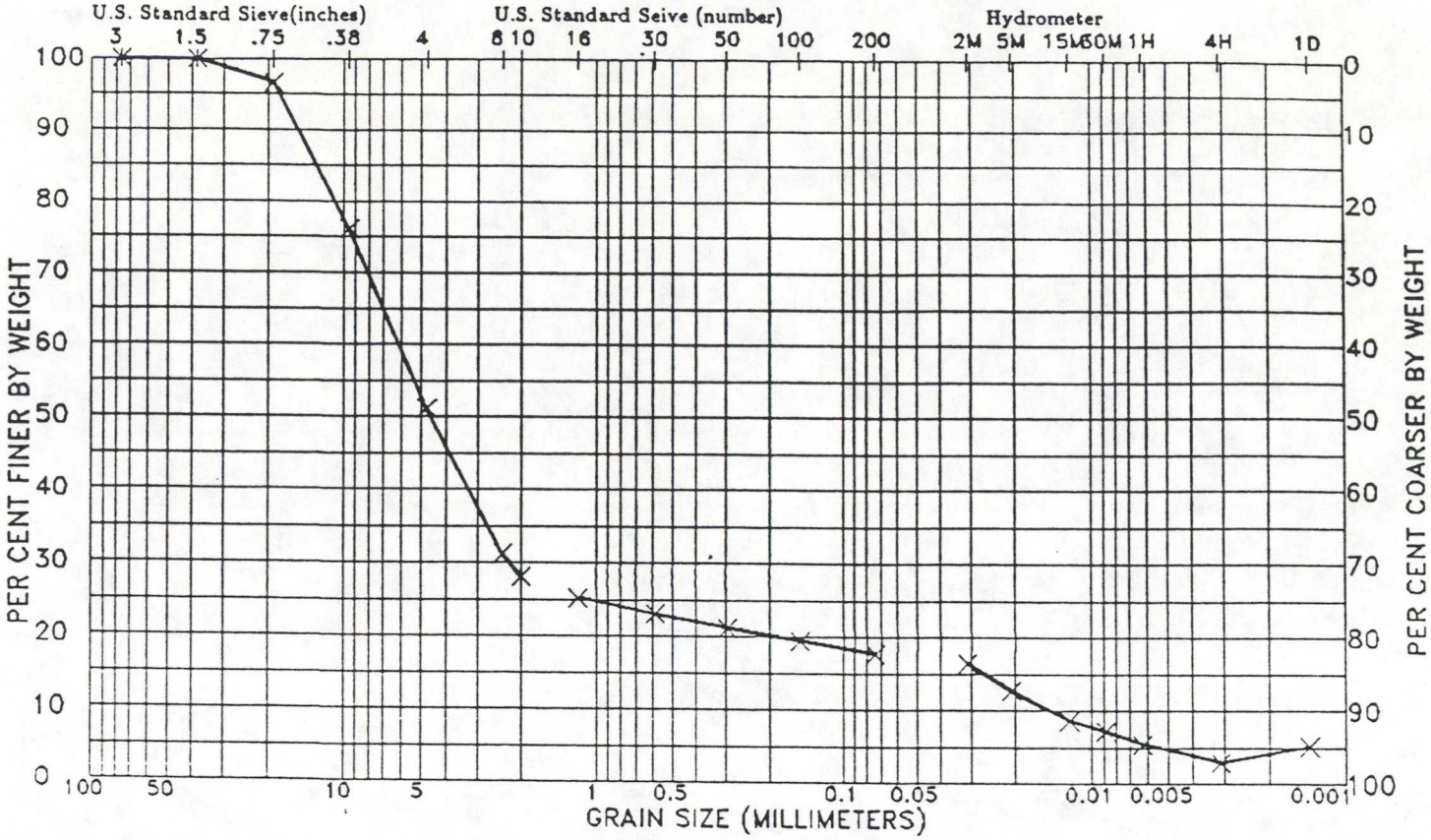
aquatec

Particle Size Analysis by ASTM D422-63



88074836

Specific Gravity= 2.544

Sieve size	% Finer	Mass Finer
3 inch	100.00	378.10
1.5 inch	100.00	378.10
.75 inch	96.61	365.30
.375 inch	76.17	288.00
Number 4	51.02	192.90
Number 8	31.24	118.10
Number 10	28.09	106.20
Number 16	25.19	95.24
Number 30	22.98	86.90
Number 50	21.08	79.70
Number 100	19.35	73.16
Number 200	17.62	66.62

Elasped time (nom. min.)	% Finer	Diameter (um)
+2 minutes	16.35	31.20
+5 minutes	12.67	20.82
+15 min.	8.60	12.30
+30 min.	7.06	8.81
+60 min.	5.39	6.26
+250 min	2.91	3.09
+1440 min	5.08	1.39

T.C 5/27/88

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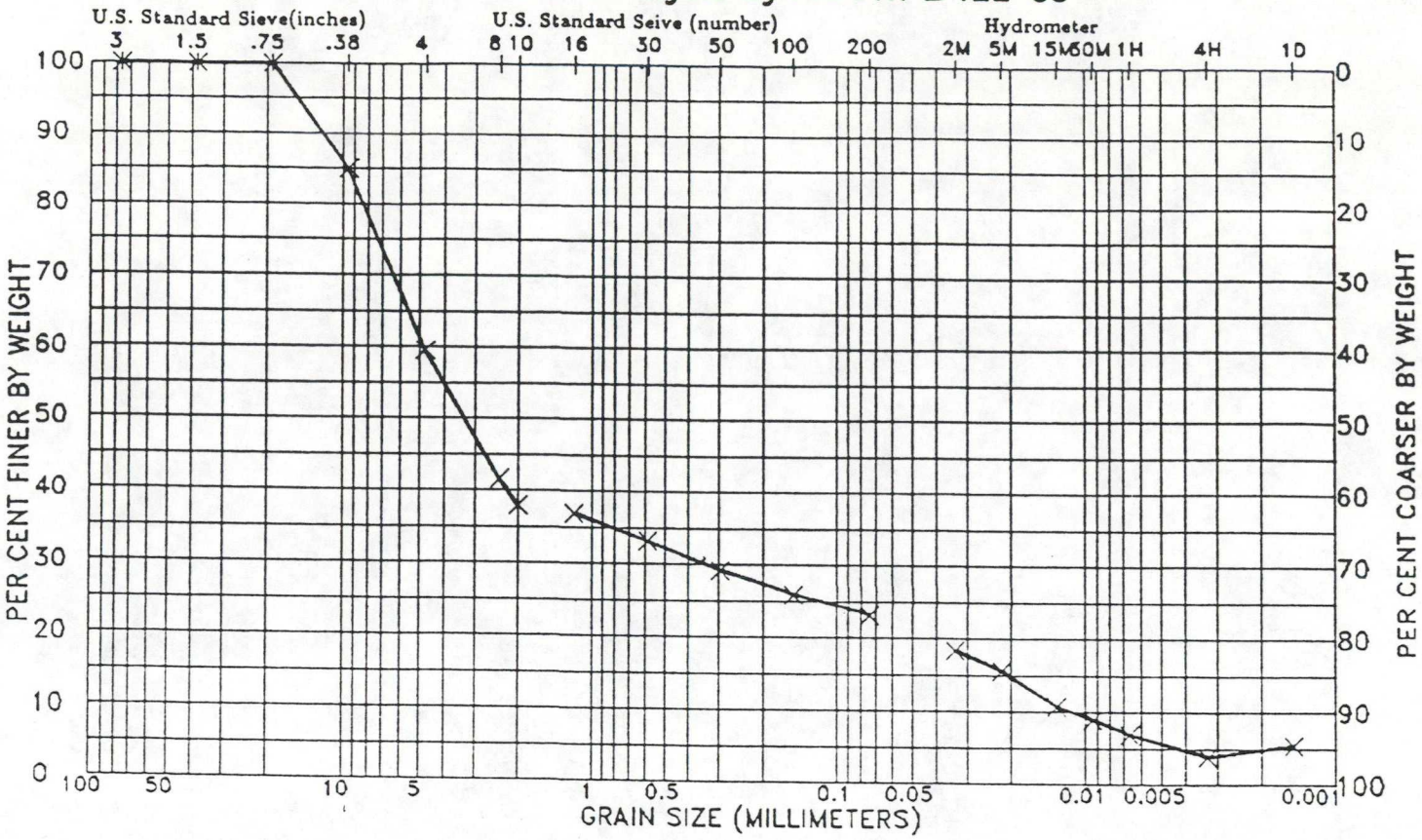
Submitted by: Joseph Cu

Aquatec, Inc. -- 1988

SAMPLE: 81353

aquatec

Particle Size Analysis by ASTM D422-63



88074837

Specific Gravity= 2.394

Sieve size	% Finer	Mass Finer
3 inch	100.00	383.90
1.5 inch	100.00	383.90
.75 inch	100.00	383.90
.375 inch	85.02	326.40
Number 4	59.52	228.50
Number 8	41.63	159.80
Number 10	37.93	145.60
Number 16	36.91	141.70
Number 30	33.15	127.27
Number 50	29.19	112.06
Number 100	25.89	99.39
Number 200	23.10	88.66

Elasped time (nom. min.)	% Finer	Diameter (um)
+2 minutes	18.34	33.80
+5 minutes	15.49	21.89
+15 min.	10.71	13.06
+30 min.	8.87	9.38
+60 min.	6.85	6.67
+250 min	3.74	3.28
+1440 min	5.37	1.48

T.C. 5/23/88

000005

Submitted by: Joseph Cu