SOIL TESTS

LAKE SHAFER
MONTICELLO, INDIANA

PREPARED BY:
ALT & WITZIG ENGINEERING, INC.
GEOTECHNICAL DIVISION
PROJECT NO: S3141

PREPARED FOR:
SHAFER/FREEMAN LAKES ENVIRONMENTAL
MONTICELLO, INDIANA

Property of
Lake and River Enhancement Section
Division of Fish and Wildlife/IDNR
402 W. Washington Street, W-273
Indianapolis, IN 46204

APRIL 7, 1993

Alt & Witzig Engineering, Inc.
3405 W. 96th Street • Indianapolis, Indiana 46268
(317) 875-7000 • Fax (317) 876-3705

April 7, 1993

Shafer/Freeman Lakes Environmental
Conservation Corporation
P.O. Box 372
Monticello, Indiana 47960
ATTN: Mr. John Conely

RE: Soil Tests
Lake Shafer
Monticello, Indiana
Alt & Witzig File: S3141

Gentlemen:

We are submitting three (3) copies of the laboratory test results for the above referenced project.

If you have any questions regarding these matters, please do not hesitate to contact us.

Very truly yours,

ALT & WITZIG ENGINEERING, INC.

Thomas J. Coffey

Thomas J. Coffey, P.E.

TJC:kdc

Alt & Witzig Engineering, Inc.

3405 W. 96th STREET
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(317) 875-7000
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Tested For:
Mr. Mike Bonoff
International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/4/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1

Remarks: Thursday, April 4, 1991

Location	Moisture Content (%)	Specific Gravity
Site 1	137	2.12 *
Site 2	30	2.66
Site 3	28	2.59
Site 4	26	2.64
Site 5	33	2.58
Site 6	53	2.29 *
Site 7	29	2.71
Site 8	25	2.63
Site 9	129	2.30 *
Site 10	24	2.63
Site 11	44	2.46 *
Site 12	58	2.35 *

NOTE: All samples were completely saturated, many with standing water. Samples were drained for thirty (30) seconds before moisture content was taken.

* Low specific gravities may be due to the high organic content (shells & decayed organic matter).

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Tested For:
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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1A

Remarks: Thursday, April 4, 1991

CLASSIFICATION TEST DATA

Sample	Description	#4-#200 % Sand	*% Passing #40	#200-.002mm % Silt	-.002mm %Clay	-0.001mm % Colloids	LL	PL	PI	Unified Classification
Site 7	Br Poorly Graded Sand w/ Silt	93	* 92	---------	7	----------	--	--	--	SP - SM
Site 8	Br Poorly Graded Sand	98	* 31	---------	2	----------	--	--	--	SP
Site 9	Br Sandy Silt	36	*100	55	9	9	NP	NP	NP	ML
Site 10	Br Poorly Graded Sand	99	* 17	---------	1	----------	--	--	--	SP
Site 11	Br Silty Sand	81	* 70	12	7	6	--	--	--	SM
Site 12	Br Silty Sand	66	*100	27	7	7	NP	NP	NP	SM

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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1B

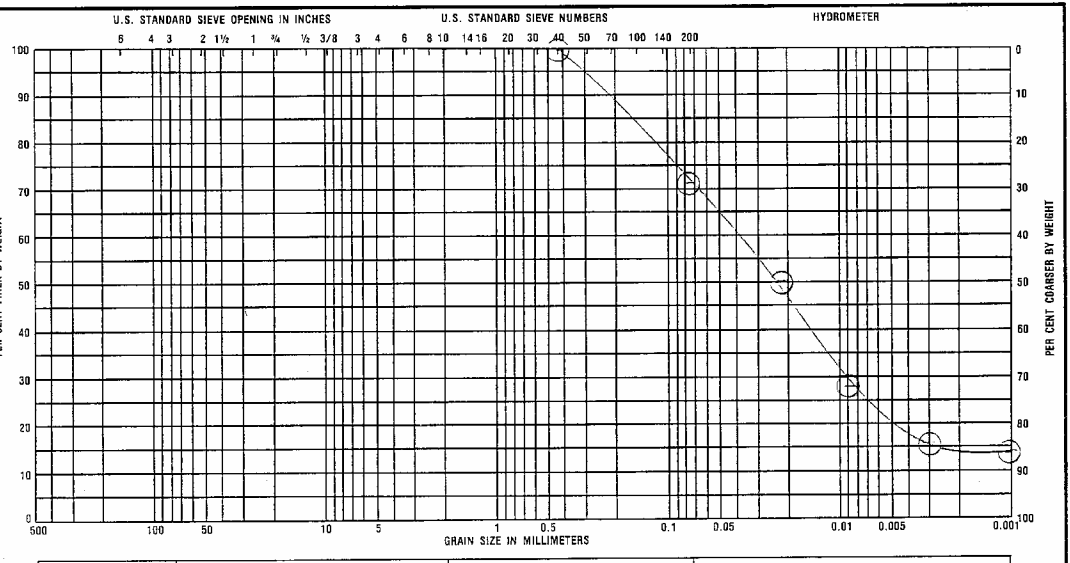
Remarks: Thursday, April 4, 1991

CLASSIFICATION TEST DATA

Sample	Description	*% Passing #4-#200 % Sand	#40 .002mm % Silt	#200- -.002mm %Clay	-0.001mm % Colloids	LL	PL	PI	Unified Classification
Site 1	Br Silt w/ Sand	28 *100	43	15	14	NP	NP	NP	ML
Site 2	Br Poorly Graded Sand w/ Silt	94 * 95	---------	6	----------	--	--	--	SP - SM
Site 3	Br Poorly Graded Sand	98 * 82	---------	2	----------	--	--	--	SP
Site 4	Br Poorly Graded Sand	99 * 65	---------	1	----------	--	--	--	SP
Site 5	Br Poorly Graded Sand w/ Silt	93 * 87	---------	7	----------	--	--	--	SP - SM
Site 6	Br Sandy Silt	30 *100	61	9	8	NP	NP	NP	ML

2

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat'w %	LL	PL	PI
Site 1			Brown Silt w/Sand (ML)		NP	NP	NP

Project Lake Shafer Report # T1163-1C

Client: International Science & Technology, Inc.

Date 4/04/91

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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1D

Remarks: Thursday, April 4, 1991

Sample: Site 2

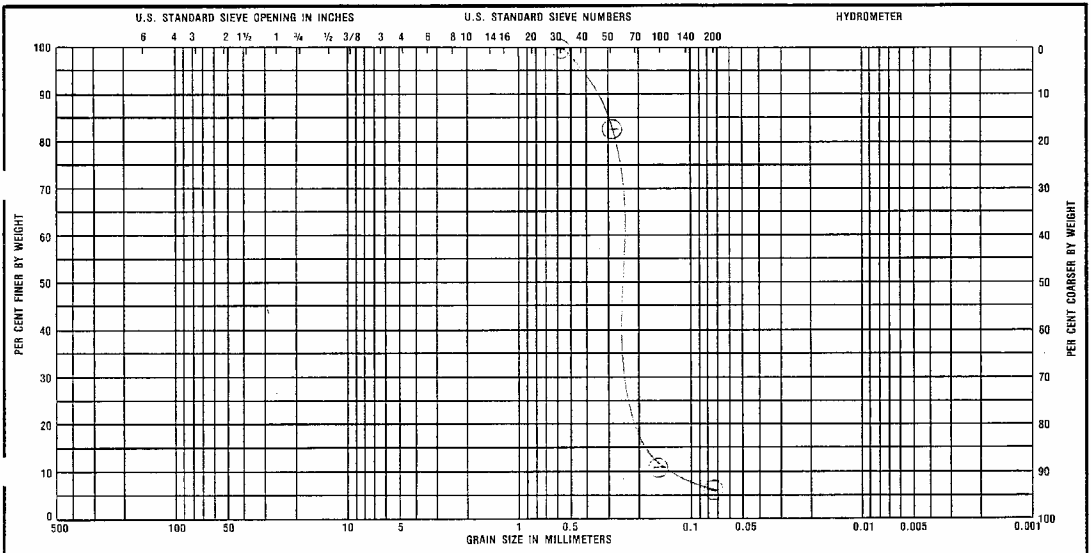
Description of Material: Brown Poorly Graded Sand w/ Silt (SP-SM)

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
No. 30	100
No. 50	83
No. 100	11
No. 200	6

2

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer Report #1163-1E
Site 2			Brown Poorly Graded Sand w/ Silt (SP-SM)					Client: International Science & Technology, Inc.
								Date 4/04/91

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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1F

Remarks: Thursday, April 4, 1991

Sample: Site 3

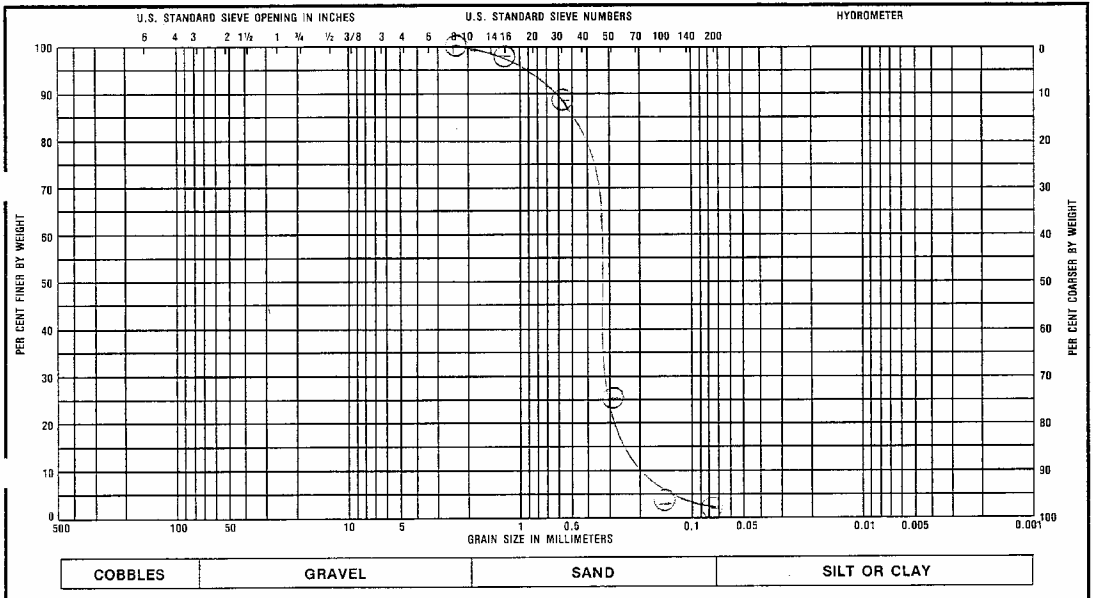
Description of Material: Brown Poorly Graded Sand (SP)

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
No. 8	100
No. 16	98
No. 30	88
No. 50	30
No. 100	4
No. 200	3

2

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer Report # 1163-1G
Site 3			Brown Poorly Graded Sand (SP)					Client: International Science & Technology, Inc.
								Date 4/04/91

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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1H

Remarks: Thursday, April 4, 1991

Sample: Site 4

Description of Material: Brown Poorly Graded Sand

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
3/8"	100
No. 4	99
No. 8	96
No. 16	90
No. 30	74
No. 50	22
No. 100	2
No. 200	1

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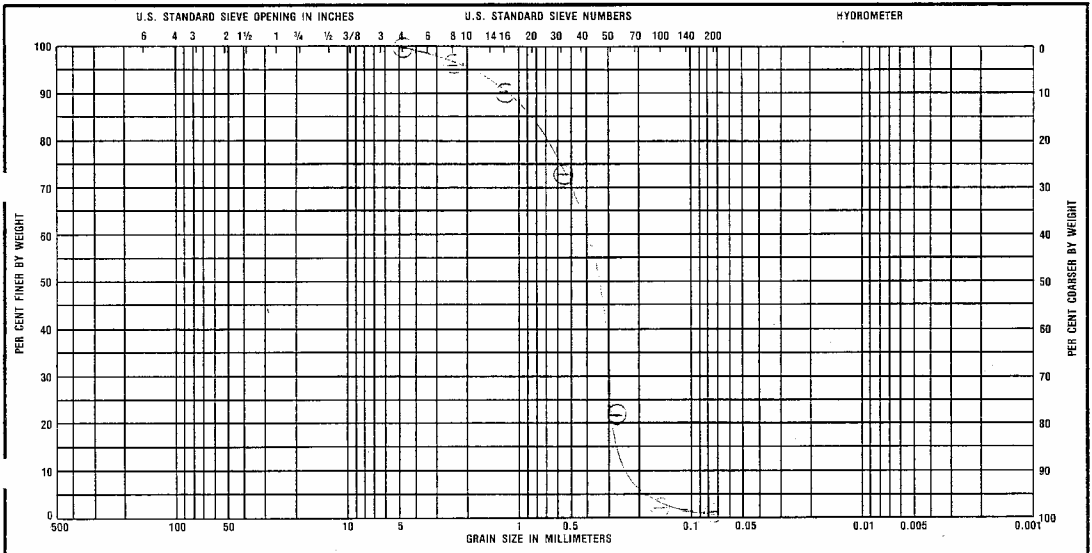
REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer Report # 1163-11
Site 4			Brown Poorly Graded Sand (SP)					Client: International Science & Technology, Inc.
								Date 04/04/91

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10501 Hague Road
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Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1J

Remarks: Thursday, April 4, 1991

Sample: Site 5

Description of Material: Brown Poorly Graded Sand w/ Silt

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
No. 8	100
No. 16	99
No. 30	93
No. 50	52
No. 100	9
No. 200	7

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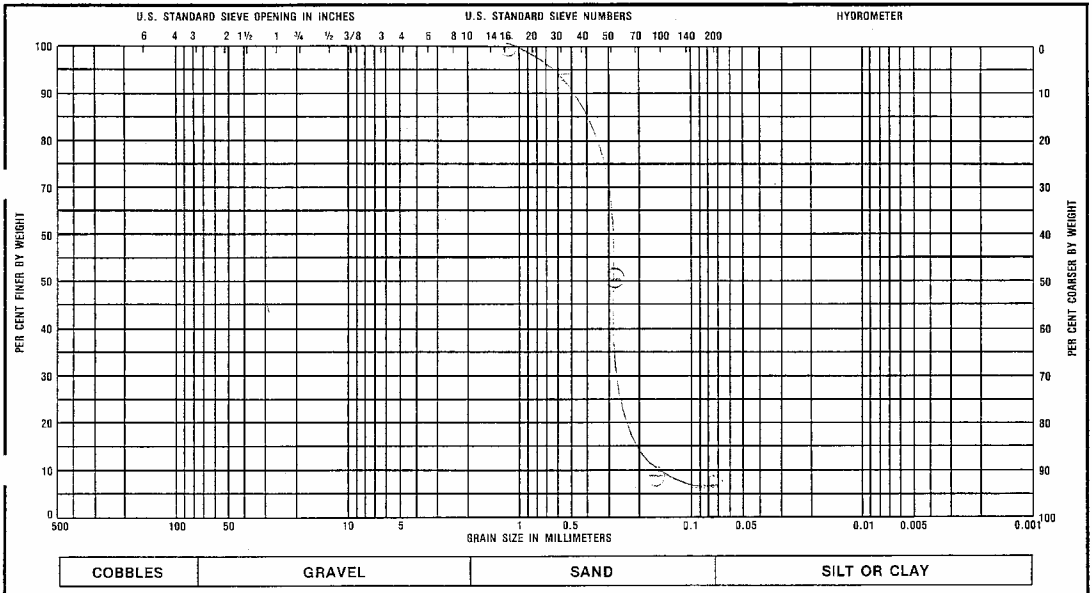
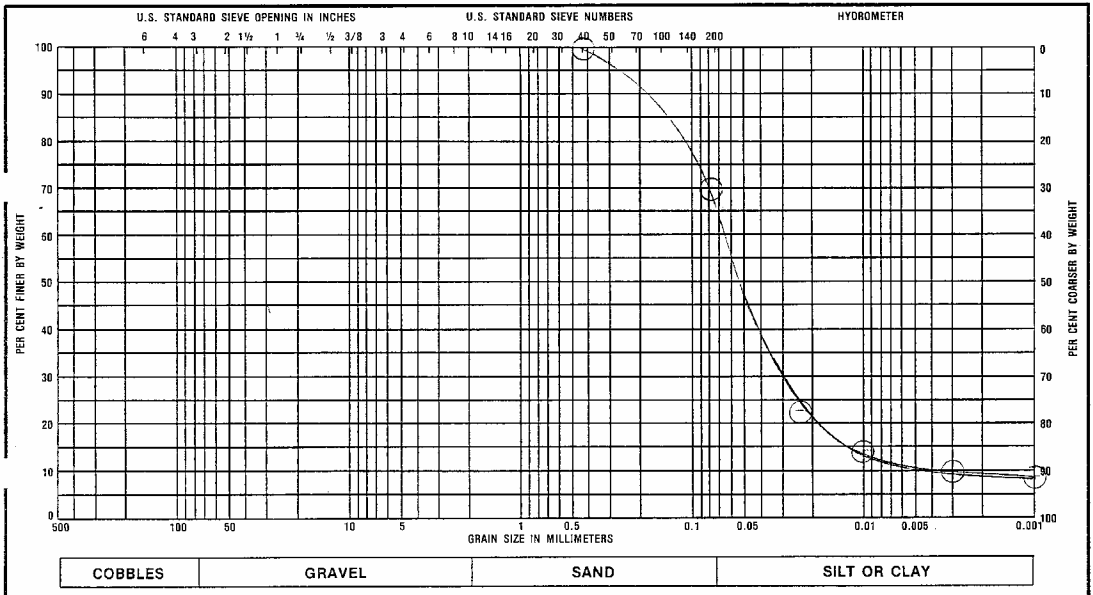


Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer Report # 1163-IK
Site 5			Brown Poorly Graded Sand w/Silt (SP-SM)					Client: International Science & Technology, Inc.
								Date 04/04/91

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI
Site 6			Brown Sandy Silt (ML)		NP	NP	NP

Project Lake Shafer Report # 1163-1L

Client: International Science & Technology, Inc.

Date 04/04/91

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10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1M

Remarks: Thursday, April 4, 1991

Sample: Site 7

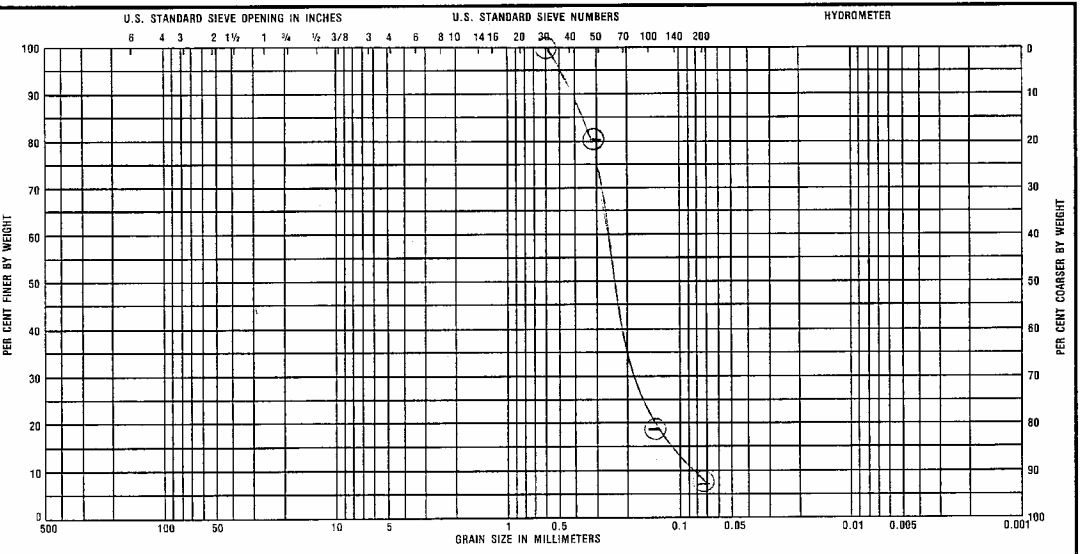
Description of Material: Brown Poorly Graded Sand w/ Silt (SP -SM)

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
No. 8	100
No. 16	100
No. 30	99
No. 50	80
No. 100	18
No. 200	7

2

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI
Site 7			Poorly Graded Sand W/ Silt (SP-SM)				

Project Lake Shafer Report # 1163-1N

Client: International Science & Technology, Inc.

Date 04/04/91

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Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-10

Remarks: Thursday, April 4, 1991

Sample: Site 8

Description of Material: Brown Poorly Graded Sand (SP)

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
3/8"	100
No. 4	99
No. 8	92
No. 16	80
No. 30	57
No. 50	8
No. 100	3
No. 200	2

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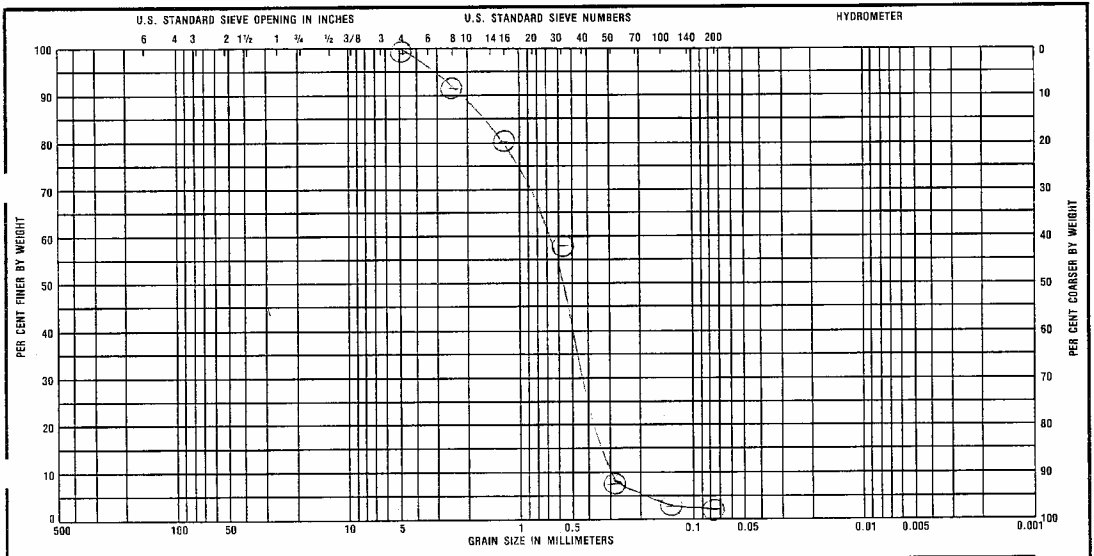
REPORT OF SOIL ANALYSIS



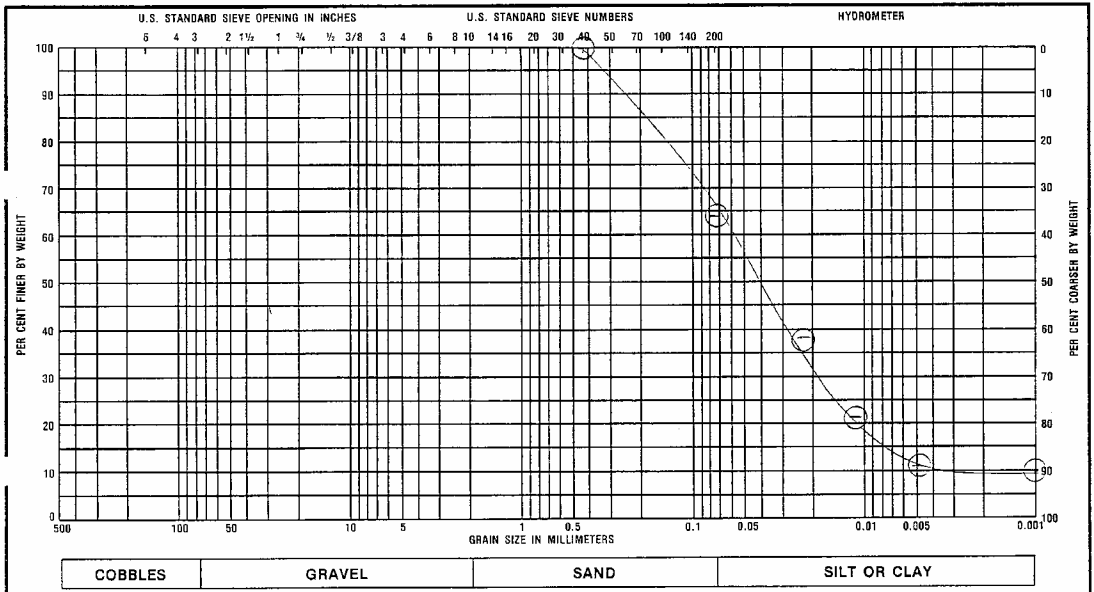
Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI
Site 8			Brown Poorly Graded Sand (SP)				

Project Lake Shafer Report # 1163-1P

Client: International Science & Technology, Inc.

Date 04/04/91

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer Report # 1163-1Q
Site 9			Brown Sandy Silt (ML)		NP	NP	NP	Client: International Science & Technology, Inc.
								Date 04/04/91

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International Science & Technology, Inc.
10501 Hague Road
Indianapolis, IN 46256

Date: 4/04/91

Project:
Lake Shafer
Monticello, Indiana

Our Report No.: T1163-1R

Remarks: Thursday, April 4, 1991

Sample: Site 10

Description of Material: Brown Poorly Graded Sand (SP)

GRADATION ANALYSIS

SIEVE SIZE	% PASSING
No. 4	100
No. 8	94
No. 16	71
No. 30	31
No. 50	3
No. 100	1
No. 200	1

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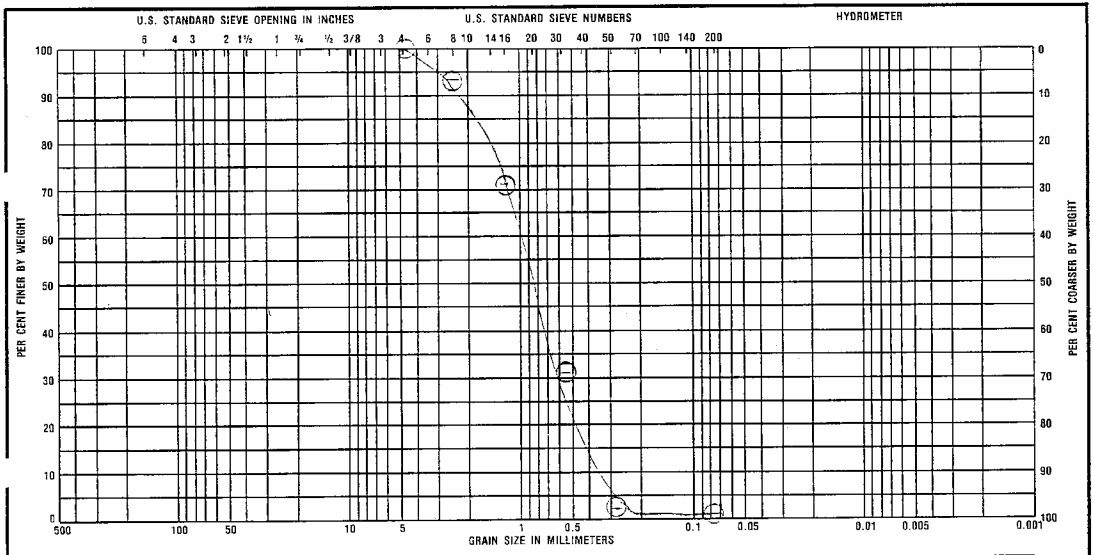
REPORT OF SOIL ANALYSIS



COBBLES	GRAVEL	SAND	SILT OR CLAY

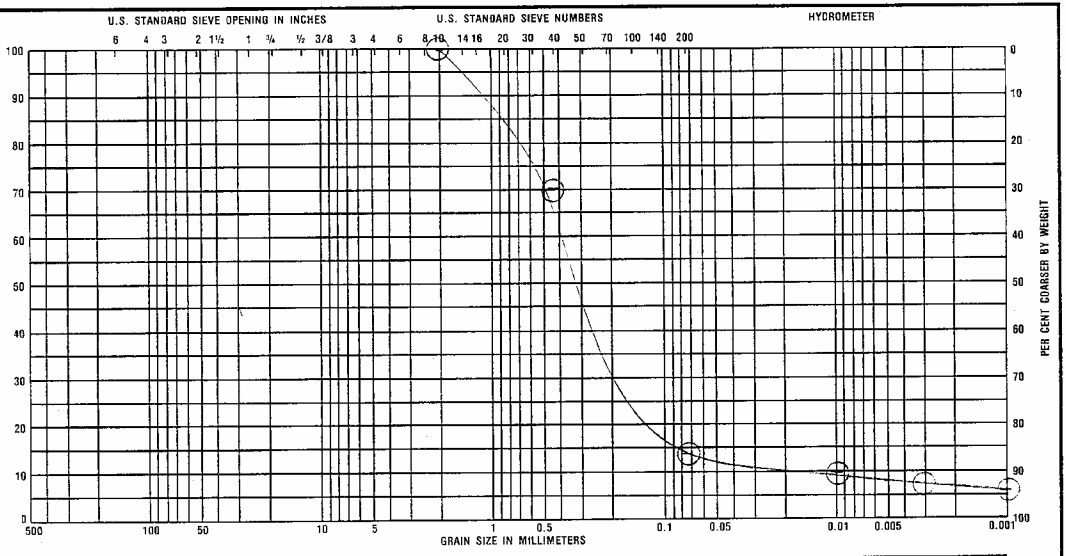
Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI
Site 10			Brown Poorly Graded Sand (SP)				

Project Lake Shafer Report # 1163-1S

Client: International Science & Technology, Inc.

Date 04/04/91

REPORT OF SOIL ANALYSIS



COBBLES	GRAVEL	SAND	SILT OR CLAY

Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI
Site 1			Brown Silty Sand (SM)				

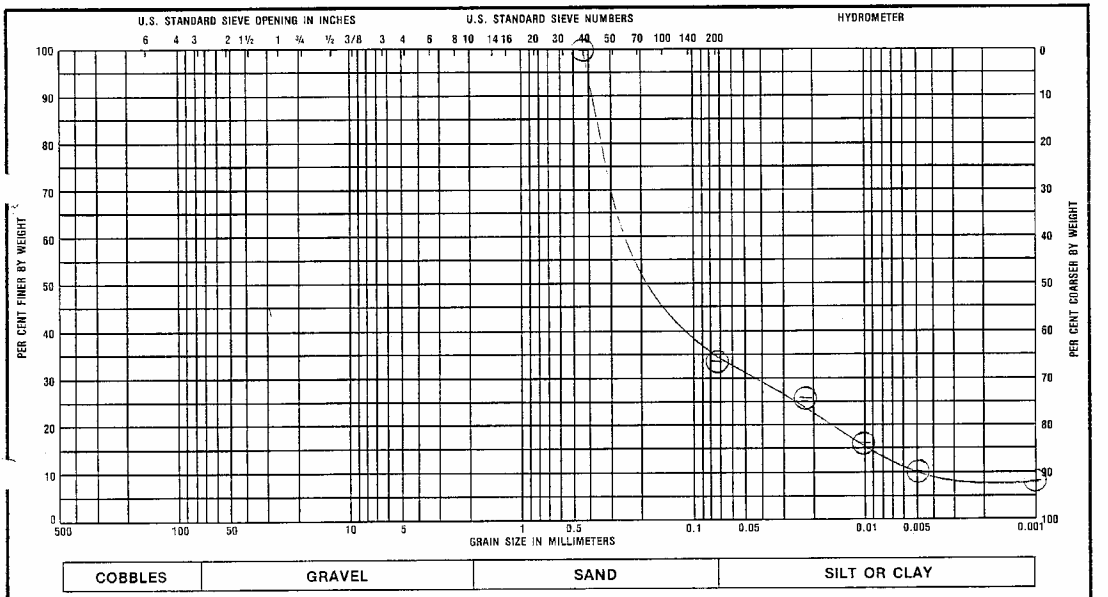
Project Lake Shafer Report # 1163-1T

Client: International Science & Technology, Inc.

Date 04/04/91

AW

REPORT OF SOIL ANALYSIS



Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project Lake Shafer	Report # 1163-1U
Site 12			Brown Silty Sand (SM)		NP	NP	NP	Client: International Science & Technology, Inc.	
								Date 04/04/91	