

TEST REQUEST FORM

Sample/Specimen No: 0-129 Cost Code/Work Order No. ED332

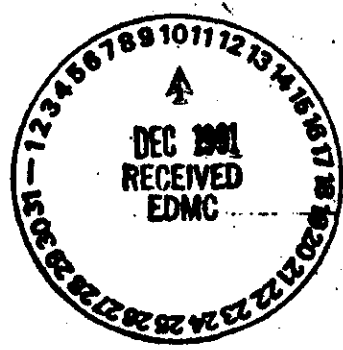
Requested By: Org. 8232 Person J Lindberg Date 3-12-90

| Test Requested | No. of Samples | Test Lab Information (Instruction Used) |
|-------------------|----------------|-----------------------------------------|
| <u>Sieve Anal</u> | <u>1</u> | <u>ETAL 07</u> |
| <u>Hydro</u> | <u>1</u> | <u>ETAL 07</u> |
| <u>Sp6</u> | <u>1</u> | <u>ETAL 10</u> |
| <u>NA</u> | <u>NA</u> | <u>NA</u> |

Remarks Field Sample
1100-2-F-4

Received By: RG Alexander Date 3-9-90

Approved By: RG Alexander Date 3-9-90



921211053

SIEVE ANALYSIS DATA SHEET

Sample ID 0-129 Page 1 of 1

Tested By R.G. ALEXANDER Date 3-12-90

Procedure ETAL-07 Rev 1 Date Issued 11-15-89

| EQUIPMENT ITEM | CALIBRATION NO. | DATE DUE |
|----------------|-----------------|----------------|
| Balance | <u>3304</u> | <u>3-25-90</u> |
| Thermometer | <u>6007</u> | <u>8-16-90</u> |
| <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |

Sample Description SANDY GRAVEL Sieve Time 10 (min)

reduced by splitting quartering stockpile

(B) (A)
BEFORE TEST WT. N/A AFTER TEST WT. N/A $\frac{B-A}{B} \times 100 = \frac{N/A}{B} \% \text{ LOSS}$

| Sieve ID Number | Sieve Size | Sample Weight | Cumulative Wt. Retained (g) | % Retained | Cumulative % Retained | Cumulative % Pass | % Pass |
|-----------------|------------|---------------|-----------------------------|------------|-----------------------|-------------------|--------|
| N/A | 2 | 4890.76 | 261.53 | 5.3 | 5.3 | 94.7 | 94.7 |
| | 1 1/2 | | 382.61 | 7.8 | 7.8 | 92.2 | 92.2 |
| | 1 | | 624.33 | 12.8 | 12.8 | 87.2 | 87.2 |
| | 3/4 | | 851.61 | 17.4 | 17.4 | 82.6 | 82.6 |
| | 1/2 | | 1220.67 | 25.0 | 25.0 | 75.0 | 75.0 |
| | 3/8 | | 1481.60 | 30.3 | 30.3 | 69.7 | 69.7 |
| | #4 | | 1997.51 | 40.8 | 40.8 | 59.2 | 59.2 |
| | #10 | | 2431.78 | 49.7 | 49.7 | 50.3 | 50.3 |
| | #40 | 91.21 | 28.62 | 31.4 | 31.4 | 68.6 | 34.5 |
| | #60 | | 50.87 | 55.8 | 55.8 | 44.2 | 22.2 |
| | #100 | | 65.40 | 71.7 | 71.7 | 28.3 | 14.2 |
| ↓ | #200 | ↓ | 74.65 | 81.8 | 81.8 | 18.2 | 9.2 |

Fines Modules (FM) N/A (See ASTM C 136-83, Section B.2)

MATERIALS FINER THAN NO. 200 SIEVE BY WASHING

C=Percentage of Material Passing a 200 Sieve 18.2%
 D=Original Dry Weight of Sample 91.21 g
 E=Dry Weight of Sample After Washing/Sieve 74.65 g
 $C = \frac{D-E}{D} \times 100$

Remarks

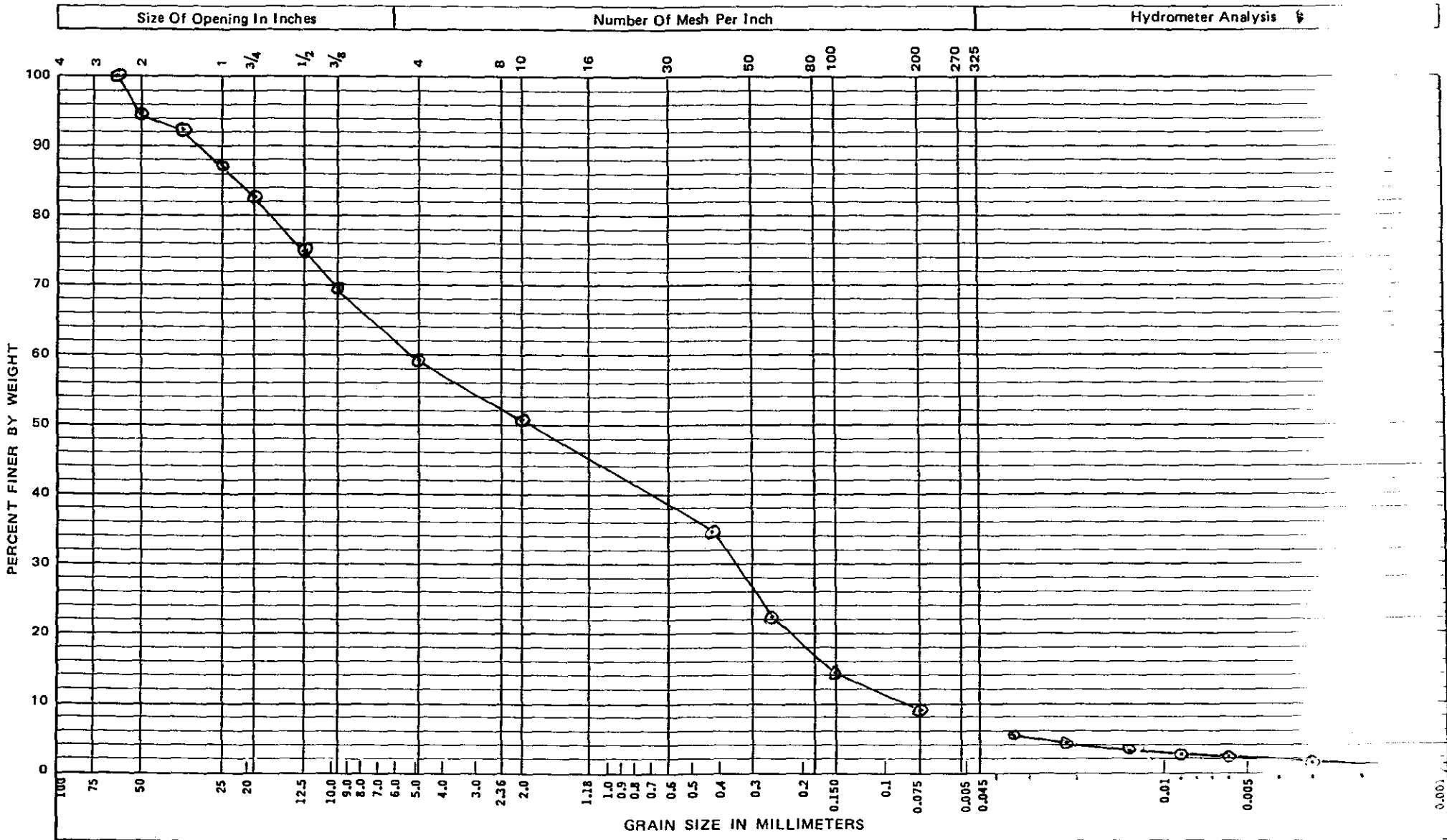
SMALL FIELD SAMPLE

Pan 17

ALL DATA ARE ACCURATELY AND COMPLETELY RECORDED. THE TEST OPERATOR WAS TRAINED AND USED CALIBRATED INSTRUMENTS
 Checked By HCBenny Date 3-14-90

9 2 1 2 1 1 0 5 4

GRAIN SIZE ANALYSIS PLOT



Specimen No. 0-129 Procedure No. ETAL-07 Rev. 1 Date Issued 11-15-84

Sample Description: SANDY GRAVEL
1100-2-K-4

Plotted by: R.G. ALEXANDER
Date: 3-12-90

Checked by: HLBenny
Date: 3-14-90

SOIL MOISTURE DATA SHEET

PROCEDURE NO. ETAL-14 REV. NO. 0

THERMOMETER NO. 0007 CALIBRATION DUE DATE 8-16-90

| SAMPLE NO. | WET WT. + CAN | DRY WT. + CAN | CAN WT. | WET WT. SOIL | DRY WT. SOIL | % WATER |
|------------|---------------|---------------|---------|--------------|--------------|---------|
| D-129 | 5122.60 | 5006.99 | 116.23 | 5006.37 | 4890.76 | 2.36 |
| X | | | | | | |
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ALL REQUIRED DATA ARE ACCURATELY AND COMPLETELY RECORDED. THE TEST OPERATOR WAS APPROPRIATELY TRAINED AND TEST PROCEDURES FOLLOWED TO PRODUCE THE ABOVE DATA

TEST OPERATOR: R.G. ALEXANDER

DATE 3-12-90

921211056

SPECIFIC GRAVITY OF SOILS DATA SHEET

Specimen/Sample No. 0-129 Page 1 of 1

| | |
|------------------------------------|---------------------|
| Test Operator <u>R.G ALEXANDER</u> | Date <u>3-12-90</u> |
| <u>EQUIPMENT ITEM</u> | <u>NO.</u> |
| <u>DATE DUE</u> | |
| Balance | <u>3304</u> |
| Oven Thermometer | <u>0007</u> |
| Thermometer | <u>6002</u> |
| Pycnometer | <u>2554</u> |
| | <u>3-25-90</u> |
| | <u>8-16-90</u> |
| | <u>2-9-91</u> |
| | <u>N/A</u> |

Wetting Agent "Q" WATER

| DETERMINATION NO. | | 1 | 2 | 3 |
|-------------------|--------------------------------------------|---------------|------------|------------|
| | Drying Container No. | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| | Wt. Container + Oven Dry Soil, ± 0.01g | <u>N/A</u> | <u>---</u> | <u>---</u> |
| | Wt. Container, ± 0.01g | <u>N/A</u> | <u>---</u> | <u>---</u> |
| W_o | Wt. Oven Dry Soil, g | <u>40.00</u> | <u>---</u> | <u>---</u> |
| | Pycnometer No. | <u>2554</u> | | |
| | Wt. Pycnometer, g | <u>135.72</u> | <u>---</u> | <u>---</u> |
| W_s | Wt. Pycnometer + Wetting Agent, g | <u>387.10</u> | <u>---</u> | <u>---</u> |
| W_b | Wt. Pycnometer + Wetting Agent + Soil, g | <u>412.37</u> | <u>---</u> | <u>---</u> |
| | Temperature, T_x at W_b , °C | <u>25.0 C</u> | | |
| G_w | Specific Gravity of Wetting Agent at T_x | <u>1.00</u> | <u>---</u> | <u>---</u> |
| G_t | Specific Gravity of Soil at T_x | <u>2.72</u> | <u>---</u> | <u>---</u> |
| G_s | Specific Gravity of Soil at 20°C | <u>2.71</u> | <u>---</u> | <u>---</u> |

$$G_t = \frac{G_w \cdot \gamma_w \cdot W_o}{W_o + (W_s - W_b)}$$

γ_w = Unit Weight Of Water (g/cc)

* $G_s = K \cdot G_t$

K values found in ASTM D854-58, Table 1

*NOTE $G_s = G_t$ When Test Run at 20 °c

| | |
|----------------------------------|-------------|
| Average Specific Gravity At 20°C | <u>2.71</u> |
|----------------------------------|-------------|

ALL REQUIRED DATA ARE ACCURATELY AND COMPLETELY RECORDED. THE TEST OPERATOR WAS APPROPRIATELY TRAINED AND UTILIZED CALIBRATED TEST INSTRUMENTS AS INDICATED ABOVE. APPROVED TEST PROCEDURES WERE FOLLOWED TO PRODUCE THE ABOVE DATA.

Checked By HL Benny Date 3-13-90

921211057

HYDROMETER ANALYSIS DATA SHEET

Sample ID 0-129

Page 1 of 1

Tested By HL Benny Date 3-13-90
 Procedure ETAL-07 Rev 1 Date Issued 11-15-89

| EQUIPMENT ITEM | NO. | CALIBRATION DUE DATE |
|--------------------------|-------------|----------------------|
| Hydrometer | <u>1000</u> | <u>2-16-91</u> |
| Balance | <u>3304</u> | <u>3-25-90</u> |
| Thermometer/Thermocouple | <u>0002</u> | <u>2-9-91</u> |

Specific gravity of Sample 2.71

% Passing No. 10 Sieve 50.3 (%)

Hygroscopic Correction Factor ∅

HYGROSCOPIC MOISTURE CONTENT

Wt. Container + Air Dry Soil NA (g)

Wt. Container + Oven Dry Soil NA (g)

Wt. Container NA (g)

Water Content NA (%)

WEIGHT OF SAMPLE

Wt. Container + Soil NA (g)

Wt. Container NA (g)

Wt. Soil 91.21 (g)

REMARKS

Tube G

W = 181.33

COMPOSITE CORRECTION

1st Reading 5 at 23.2 °C

2nd Reading NA at NA °C

| Date | Clock time | Elapsed time (min) | Hydrometer reading | Hydrometer with composite correction | Temp. (°C) | Soil in suspension (%) | Particle diameter (mm) |
|---------|------------|--------------------|--------------------|--------------------------------------|------------|------------------------|------------------------|
| 3-13-90 | 0623 | 2.0 | 15 | 10 | 23.7 | 5.6 | 0.034 |
| | 0626 | 5.0 | 13 | 8 | 23.8 | 4.4 | 0.022 |
| | 0636 | 15.0 | 11 | 6 | 23.6 | 3.3 | 0.013 |
| | 0651 | 30.0 | 10 | 5 | 23.2 | 2.7 | 0.009 |
| | 0721 | 60.0 | 9 | 4 | 23.2 | 2.2 | 0.006 |
| ✓ | 1031 | 250.00 | 8 | 3 | 22.9 | 1.6 | 0.003 |
| 3-14-90 | 0621 | 1,440.0 | 6 | 1 | 23.8 | 0.5 | 0.001 |

Formulas and Tables used to calculate percent Soil in suspension, particle diameter and hygroscopic correction factor are found in ASTM D422.

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Checked By R.G. Alexander

Date 3-14-90

9 2 1 2 1 1 1 5 9



Westinghouse
Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector JW Lindberg & Steve Clark Date Sampled 3-9-90 Time ^{10:00 AM} 12:00 hours
 Company Contact JW Lindberg Telephone (509) 376-5005

| Sample Number | Number and Type of Sample Containers | Type of Sample* | Analysis Requested |
|----------------|--------------------------------------|-----------------|--------------------------------|
| HRL-H-2 | 1 plastic bag set | soil | ASTM-D-422 Grain Size Analysis |
| HRL-D-4 | " | " | " |
| HRL-C-1 | " | " | " |
| HRL-M-4 | " | " | " |
| HRL-R-7 | " | " | " |
| HRL-T-6-AA-172 | " | " | " |
| 1100-3-E-5 | " | " | " |
| 1100-3-F-8 | " | " | " |
| 1100-3-H-5 | " | " | " |
| 1100-3-H-8 | " | " | " |
| 1100-2-D-3 | " | " | " |
| 1100-2-F-4 | " | " | " |
| 1100-2-H-1 | " | " | " |
| 1100-2-HH-1 | " | " | " |
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9212

Field Information** Run hydrometer on all samples listed hereon

Special Handling and/or Storage NA

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____
 Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.
 **Use back of page for additional information relative to sample location.
 A-6000-406 (07/89)



Westinghouse
Hanford Company

CHAIN OF CUSTODY

Company Contact: JWLindberg Telephone 6-5005

Sample Collected by: JWLindberg Date: 3-9-90 Time: 11:20-12:00Am

Sample Locations: 1100-2 Pit

Ice Chest No.: NA Field Logbook & Page No.: WHC-N-306, p.68

Remarks: EIT-5.2 with steel spade

Bill of Lading No.: NA Off Site Property No.: NA

Method of Shipment: Hand Carry

Shipped to: Jerry Alexander 2101M Bldge Soil Testing Lab

Sample Identification

| | |
|----------------------------------------|-------------------------------------------|
| <u>1100-2-D-3 Surface Soil Sample</u> | <u>Plastic Bags, Green duct tape seal</u> |
| <u>1100-2-F-4 Surface Soil Sample</u> | <u>" " " " "</u> |
| <u>1100-2-H-1 Surface Soil Sample</u> | <u>" " " " "</u> |
| <u>1100-2-HH-1 Surface Soil Sample</u> | <u>" " " " "</u> |

CHAIN OF POSSESSION

Relinquished by: JWLindberg JWLindberg Received by: R.G. Alexander R.G. ALEXANDER Date/Time: 3-9-90 / 1200

Relinquished by: _____ Received by: _____ Date/Time: _____

Relinquished by: _____ Received by: _____ Date/Time: _____

Relinquished by: _____ Received by: _____ Date/Time: _____

921211050

CONDITIONAL RADIATION RELEASE

Instructions: Sample # 1100-2-D-3
outside surfaces of
plastic bag - \rightarrow LD B, X / LD \downarrow
Direct & smear

Date: 3-9-90 By: A. M.
Radiation Monitoring

BL-6700-133 (10-77)

CONDITIONAL RADIATION RELEASE

Instructions: Sample # 1100-2-H-1
outside surfaces of
plastic bag - \rightarrow LD B, X / LD \downarrow
Direct & smear

Date: 3-9-90 By: A. M.
Radiation Monitoring

BL-6700-133 (10-77)

CONDITIONAL RADIATION RELEASE

Instructions: Sample # 1100-2-F-4
outside surfaces of
plastic bag (coning) - \rightarrow
LD B, X / LD \downarrow - smear
Direct

Date: 3-9-90 By: A. P. Mitchell
Radiation Monitoring

BL-6700-133 (10-77)

CONDITIONAL RADIATION RELEASE

Instructions: Sample # 1100-2-HH-1
outside surfaces of
plastic bag - \rightarrow LD B, X / LD \downarrow
Direct & smear

Date: 3-9-90 By: A. M.
Radiation Monitoring

BL-6700-133 (10-77)

9 2 1 2 1 1 1 7 6 1