Mr. Oscar Conyears
Conyears Construction Company
403 West 4th Street
Brinkley, Arkansas 72021

Re: Solid Waste Disposal
   Pine Bluff Arsenal
   Pine Bluff, Arkansas

Dear Mr. Conyears:

This report is furnished in response to your request on October 7, 1994, for our services to perform Permeability Tests.

SCOPE

On October 7, 1994, two (2) relatively undisturbed Shelby tube samples of clay material from site 1 and site 2 were obtained and delivered for testing from site 1 and site 2.

TEST PROCEDURES

The following procedure was considered in the performance of these tests:

   EM-1110-2-1906   Coefficient of Permeability (Falling Head)

TEST RESULTS

Please see attachments.
It has been a pleasure to have provided this assistance to you, and we are always available should you need further services.

Very truly yours,

ANDERSON ENGINEERING CONSULTANTS, INC.

Scott W. Anderson, P.E.
Senior Geotechnical Engineer

Emmett S. Champion, Jr.
Laboratory Supervisor

cc: Dexter Doyne, Doyne Construction
    COE

Attachments: Test Results - Plates 1 through 2

SWA/clw
4105LRT
COEFFICIENT OF PERMEABILITY  
(FALLING HEAD)

Project: SOLID WASTE DISPOSAL SITE  
Project No.: 4105

Location: PINE BLUFF ARSENAL  
Date: 10/08/94

Boring No: ST  
Sample No: 1  
Depth: 0.5'-2.0'

Soil Description: REDDISH BROWN CLAY

Liquid Limit: N/A  
Plastic Limit: N/A  
PI: N/A

<table>
<thead>
<tr>
<th>Diameter, Inch</th>
<th>Diameter, Cm.</th>
<th>Height, Inch</th>
<th>(L) Height, Cm.</th>
<th>Area, Square Inch</th>
<th>(A) Area, Sq. Cm.</th>
<th>Volume, Cubic Inch</th>
<th>Volume, Cubic Cm.</th>
<th>Initial Wt., Gram</th>
<th>(a) Burette Area, Sq. Cm.</th>
<th>Wet Unit Wt., PCF</th>
<th>Water Content, %</th>
<th>Dry Unit Wt., PCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.500</td>
<td>6.35</td>
<td>1.875</td>
<td>4.76</td>
<td>4.91</td>
<td>31.67</td>
<td>9.20</td>
<td>150.85</td>
<td>301.9</td>
<td>1.64</td>
<td>125.0</td>
<td>24.5</td>
<td>100.3</td>
</tr>
</tbody>
</table>

TIME, ++WATER HEAD HEAD K20*  
MIN. DEG. START END hi/hf ln hi/hf CM./SEC.  
(T) C (Rt) (hi) (hf)  
451 25.0 0.890 233.0 231.5 1.0065 0.0065 5.24E-08

*Coefficient of Permeability as per EM-1110-2-1906

Notes: Refer to Standard Proctor Curve Number N/A

LOCATION: SOUTH CELL .165' EAST, IN LINE WITH POWER LINES.

Technician: Emmett S. Champion, Jr.
Reviewed by: Scott W. Anderson, P.E.
COEFFICIENT OF PERMEABILITY
(FALLING HEAD)

Project: SOLID WASTE DISPOSAL SITE
Location: PINE BLUFF ARSENAL
Boring No: ST Sample No: 2
Soil Description: REDDISH BROWN AND LIGHT BROWN CLAY

Liquid Limit: N/A Plastic Limit: N/A PI: N/A

| Diameter, Inch | 2.500 | Diameter, Cm | 6.35 |
| Height, Inch | 1.875 | (L) Height, Cm | 4.76 |
| Area, Square Inch | 4.91 | (A) Area, Sq. Cm | 31.67 |
| Volume, Cubic Inch | 9.20 | Volume, Cubic Cm | 150.85 |
| Initial Wt., Gram | 288.7 | (a) Burette Area, Sq. Cm | 1.60 |
| Wet Unit Wt., PCF | 119.5 | Est. SP. GR | 2.70 |
| Water Content, % | 25.3 | Void Ratio | 0.7666 |
| Dry Unit Wt., PCF | 95.4 |

<table>
<thead>
<tr>
<th>TIME, ++WATER TEMP. ++</th>
<th>HEAD</th>
<th>HEAD</th>
<th>K20*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN. (T)</td>
<td>C (Rt)</td>
<td>START (hi)</td>
<td>END (hf)</td>
</tr>
<tr>
<td>431</td>
<td>25.0</td>
<td>0.890</td>
<td>233.0</td>
</tr>
</tbody>
</table>

*Coefficient of Permeability as per EM-1110-2-1906

Notes: Refer to Standard Proctor Curve Number N/A

LOCATION: NORTH CELL - 143' EAST FROM NORTH GATE POST TO COTTONWOOD

Technician: [Signature]
Emmett S. Champion, Jr.
Reviewed by: Scott W. Anderson, P.E.