

QA/QC Soil testing results

Included in this QA/QC submittal are copies of the recent tests and observations performed during the course of the construction of the manure storage systems. Included are copies of proctor tests and moisture density control which were performed on the completed clay liner lifts, core trench and building pads.

The material used to construct the 18" clay liner is the same material identified in Section 3.D of the approved plans from Boring 2 from 7-11 feet. The preliminary atterburg limit tests on this material had a PI of 55 and 41 respectively. The recompacted permeability had a coefficient of permeability 5.0×10^{-7} cm/sec. Given that it was determined that the liner would be constructed 18 inches thick and with a 98% compaction ration and $\pm 2\%$ optimum moisture to meet seepage requirements.

Waste Storage Pond 1 & 2 have a liner thickness of (18") inches. The ten state standards specifies that the coefficient of permeability (k) in centimeters per second shall not exceed the value derived from the equation $k = 2.6 \times 10^{-9} \times L$, where L equals the thickness of the seal in centimeters. Therefore the value shall not exceed: $k = 2.6 \times 10^{-9} \times 18" \times 2.54 \text{ cm} = 1.2 \times 10^{-7} \text{ cm/sec}$. According to the Appendix 10D of the AWMFH the seepage rate will be reduced in the future by a conservative estimate of $\frac{1}{2}$ order of magnitude based off manure sealing of the liner. It is expected with future manure sealing the minimum coefficient of permeability is equal to 5.0×10^{-7} cm/sec $\pm \frac{1}{2}$ order of magnitude = 1.0×10^{-7} cm/sec therefore meeting the ten state standard requirements.

For Waste Storage Pond 1, the nuclear density tests, tested the 18" thick liner in two levels from 0-9" and 9"-18". The required amount of tests was 12 tests (4 tests per lift, 3 lifts at 6" thick) as per the approved quality assurance plan and technical specifications. The tests were conducted on 2/12/13 and met the 98% compaction requirement. Test number 3 had a 17.7% moisture content which is -3% below optimum moisture content. All other tests were within the $\pm 2\%$ optimum moisture content. This test 3 outside the specified range for optimum moisture content is considered to be negligible in the performance of the clay liner. The final test results are therefore considered to be satisfactory and the liner meets requirements.

For Waste Storage Pond 2, the nuclear density tests, tested the 18" thick liner in two levels from 0-9" and 9"-18". The required amount of tests was 12 tests (4 tests per lift, 3 lifts at 6" thick) as per the approved quality assurance plan and technical specifications. The tests were conducted on 3/27/13 and 3/28/13 and met the 98% compaction requirement and the $\pm 2\%$ optimum moisture content. The final test results are therefore considered to be satisfactory and meet the liner requirements.

Moisture density tests were taken on the core trenches for both Waste Storage Ponds respectively to make sure construction met the compaction requirements of the core

trench. During construction when a test failed the contractor would compact the failed area further and the failed area would be retested. The core trench (keyway) density tests were all greater than the required 95%.

Moisture density tests were taken for the fill area of both building pads respectively to make sure construction met the compaction requirements of the core trench. During construction when a test failed the contractor would compact the failed area further and the failed area would be retested. The building pad density tests were all greater than the required 95%.

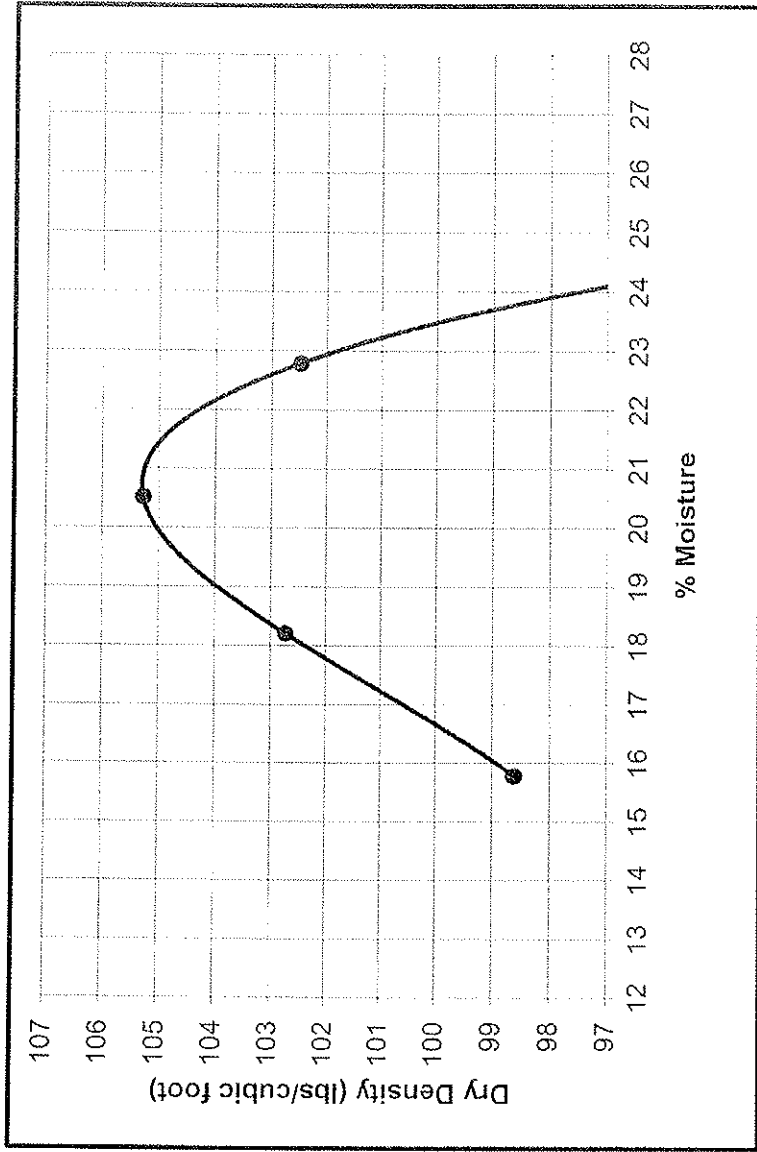


LABORATORY COMPACTION CHARACTERISTICS OF SOIL

CLIENT: DeHaan, Grabs & Associates, LLC DATE: 6/14/12 SAMPLE LOCATION: 8-2, Bulk Grab Sample LL= 64
 PROJECT NUMBER: 12-15049 LAB NO. 1 SAMPLE DESCRIPTION: Red with Light Gray Streaks PL= 23
 PROJECT NAME: Proposed Pond and Building Pads TEST METHOD: ASTM D698 AASHTO CLASS.: N/A PI= 41

VISUAL CLASSIFICATION: Fat Clay, with Sand

Maximum Dry Density (lbs./cubic foot)	105.2
Optimum Moisture (percent)	20.7

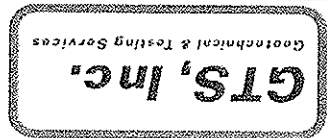


HYDRAULIC CONDUCTIVITY TEST RESULTS

PROJECT: Mt. Judea - Proposed Pond and Building Pads
 BORING: B-2
 DEPTH (ft): 7 - 11

PROJECT NUMBER: 12-15049
 SAMPLE: N/A
 SAMPLE TYPE: Recompacted

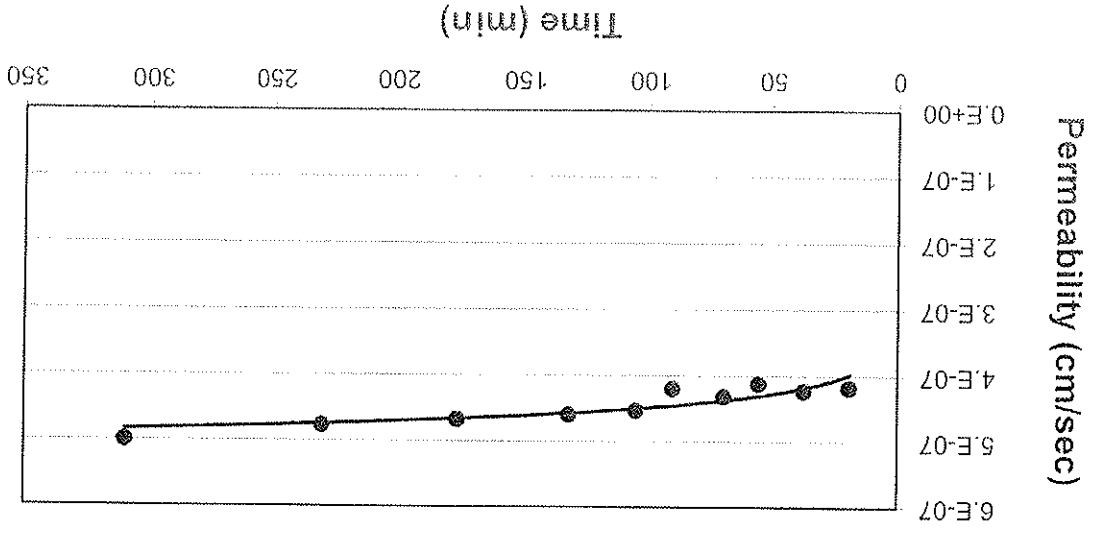
Hydraulic Conductivity Test Procedures Performed
 In Accordance With ASTM D 5084 Method C
 (Flexible Wall - Falling Head - Rising Tail)



1915 North Shiloh Drive, Suite 1
 Fayetteville, Arkansas 72704
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 Fax: (479) 521-6232

Hydraulic Conductivity, k (cm/s): 5.E-07

Test Parameters		Initial Sample Data		Final Sample Data	
Cell Pressure (psi):	8	Diameter (in):	2.57	Diameter (in):	2.55 (after consolidation and testing)
Inflow Pressure (psi):	4	Length (in):	4.58	Length (in):	4.54
Outflow Pressure (psi):	3	Moisture Content:	21.3%	Moisture Content:	25.3%
Back Pressure (psi):	3	Wet Unit Weight (pcf):	125.2	Wet Unit Weight (pcf):	130.3
Confining Pressure (psi):	4	Dry Unit Weight (pcf):	103.2	Dry Unit Weight (pcf):	103.9
		Initial Hydraulic Gradient:	5.29	Final Hydraulic Gradient:	5.03



Notes: Sample was recompacted at 98.1% of MDD at a moisture content of 21.2% (at OMC +0.5%)



1915 N. Shiloh Dr, Suite 1
 Fayetteville, Arkansas 72704
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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/12/13 TESTED BY: Jason Henson START TIME: 11:15 AM
 REPORT NO: 12-11216.001 CLIENT: Jason Henson END TIME: 12:15 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	5 ft. below Finish Subgrade	8	122.1	20.2	101.6	96.6%	95
2	1	Finish Subgrade	8	127.2	19.3	106.6	101.3%	95

Test Number Location:

1 Farm, Barn, 30 ft. south and 15 ft. west of northeast corner

2 Gestation Barn, 10 ft. north and 15 ft. east of southwest corner

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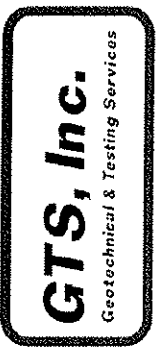
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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME:	C&H Hog Farm		DATE:	1/17/13 <th>TESTED BY:</th> <td>Jason Henson <th>START TIME:</th> <td>11:00 AM </td></td>	TESTED BY:	Jason Henson <th>START TIME:</th> <td>11:00 AM </td>	START TIME:	11:00 AM	
REPORT NO:	12-11216.002 Page 1		CLIENT:	Jason Henson <th>MILEAGE:</th> <td>197 <th>END TIME:</th> <td>4:30 PM </td></td>	MILEAGE:	197 <th>END TIME:</th> <td>4:30 PM </td>	END TIME:	4:30 PM	
PROJECT LOCATION:	Mt. Judea, Arkansas <th>CLIENT REPRESENTATIVE:</th> <td>Jason Henson <th>Maximum Dry Density</th> <td>105.2 <th colspan="2">Optimum Moisture Content</th> </td></td>		CLIENT REPRESENTATIVE:	Jason Henson <th>Maximum Dry Density</th> <td>105.2 <th colspan="2">Optimum Moisture Content</th> </td>	Maximum Dry Density	105.2 <th colspan="2">Optimum Moisture Content</th>	Optimum Moisture Content		
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41				20.7
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)	
1	1	6 ft. below Finish Subgrade	8	126.2	20.8	104.5	99.3%	95	
2	1	6 ft. below Finish Subgrade	8	127.3	18.3	107.6	102.3%	95	
3	1	6 ft. below Finish Subgrade	8	130.9	20.3	108.8	103.4%	95	
4	1	6 ft. below Finish Subgrade	8	130.6	23.4	105.9	100.7%	95	
5	1	2 ft. below Finish Subgrade	8	126.6	16.9	108.3	102.9%	95	
6	1	3 ft. below Finish Subgrade	8	119.6	18.3	101.1	96.1%	95	
7	1	3 ft. below Finish Subgrade	8	122.0	17.9	103.4	98.3%	95	
8	1	3 ft. below Finish Subgrade	8	121.3	19.3	101.6	96.6%	95	
Test Number	Location:								
1	Farrowing Barn pad, 10 ft. south and 7 ft. west of northeast corner								
2	Farrowing Barn pad, 20 ft. south and 12 ft. east of northwest corner								
3	Farrowing Barn pad, 15 ft. north and 15 ft. east of southwest corner								
4	Farrowing Barn pad, 30 ft. north and 11 ft. west of southeast corner								
5	N. Keyway, 25 ft. east of start, Pond #2								
6	N. Keyway, 50 ft. west of corner to E. Keyway								
7	E. Keyway, 15 ft. south of corner to N. Keyway								
8	E. Keyway, 90 ft. south of corner to N. Keyway								

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1915 N. Shiloh Dr, Suite 1
 Fayetteville, Arkansas 72704
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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/17/13 TESTED BY: Jason Henson CLIENT: Jason Henson MILEAGE: 197

REPORT NO: 12-11216.002 Page 2 DATE: 1/17/13 TESTED BY: Mason Drummond START TIME: 11:00 AM END TIME: 4:30 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1	1 ft. below Finish Subgrade	8	132.0	18.0	111.9	106.4%	95
10	1	5 ft. below Finish Subgrade	8	124.2	18.0	105.3	100.1%	95
11	1	5 ft. below Finish Subgrade	8	127.5	20.5	105.8	100.6%	95
12	1	4 ft. below Finish Subgrade	8	130.5	21.6	107.3	102.0%	95
13	1	4 ft. below Finish Subgrade	8	129.4	20.2	107.7	102.4%	95
14	1	4 ft. below Finish Subgrade	8	124.0	18.5	104.7	99.5%	95
15	1	4 ft. below Finish Subgrade	8	127.8	17.2	109.1	103.7%	95

Test Number	Location:
9	W. Keyway for Pond #2, south of Pond #2
10	Farrowing Barn pad, 5 ft. south and 40 ft. east of northwest corner
11	Farrowing Barn pad, 20 ft. south and 15 ft. west of northeast corner
12	Farrowing Barn pad, 10 ft. south and 15 ft. east of northwest corner
13	Farrowing Barn pad, 30 ft. north and 30 ft. east of southwest corner
14	Farrowing Barn pad, 7 ft. south and 15 ft. west of northeast corner
15	Farrowing Barn pad, 20 ft. north and 20 ft. west of southeast corner

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 Fayetteville, Arkansas 72704
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PROJECT NAME: C&H Hog Farm DATE: 1/18/13 TESTED BY: Jason Henson START TIME: 9:30 / 12:00
 REPORT NO: 12-11216.003 CLIENT: Jason Henson

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson END TIME: 10:00 / 4:30
 MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	Finish Subgrade	8	125.0	21.2	103.2	98.1%	95
2	1	Finish Subgrade	8	125.4	21.5	103.1	98.0%	95
3	1	4 ft. below Finish Subgrade	8	130.4	18.3	110.2	104.8%	95
4	1	4 ft. below Finish Subgrade	8	126.6	19.4	106.0	100.8%	95
5	1	4 ft. below Finish Subgrade	8	131.2	20.0	109.3	103.9%	95
6	1	4 ft. below Finish Subgrade	8	126.0	17.5	107.2	101.9%	95
7	1	4 ft. below Finish Subgrade	8	126.1	18.6	106.3	101.0%	95
8	1	4 ft. below Finish Subgrade	8	126.9	19.1	106.6	101.3%	95

Location:

1	Farrowing Barn pad, 25 ft. south and 10 ft. east of northwest corner
2	Farrowing Barn pad, 40 ft. north and 12 ft. east of southwest corner
3	Farrowing Barn pad, 60 ft. north and 6 ft. west of southeast corner
4	Farrowing Barn pad, 30 ft. south and 15 ft. west of northeast corner
5	Farrowing Barn pad, 25 ft. north and 5 ft. west of southeast corner
6	Farrowing Barn pad, 70 ft. south and 25 ft. east of northwest corner
7	Farrowing Barn pad, 10 ft. south and 25 ft. east of northwest corner
8	Farrowing Barn pad, 30 ft. north and 11 ft. west of southeast corner

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 Fayetteville, Arkansas 72704
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PROJECT C&H Hog Farms

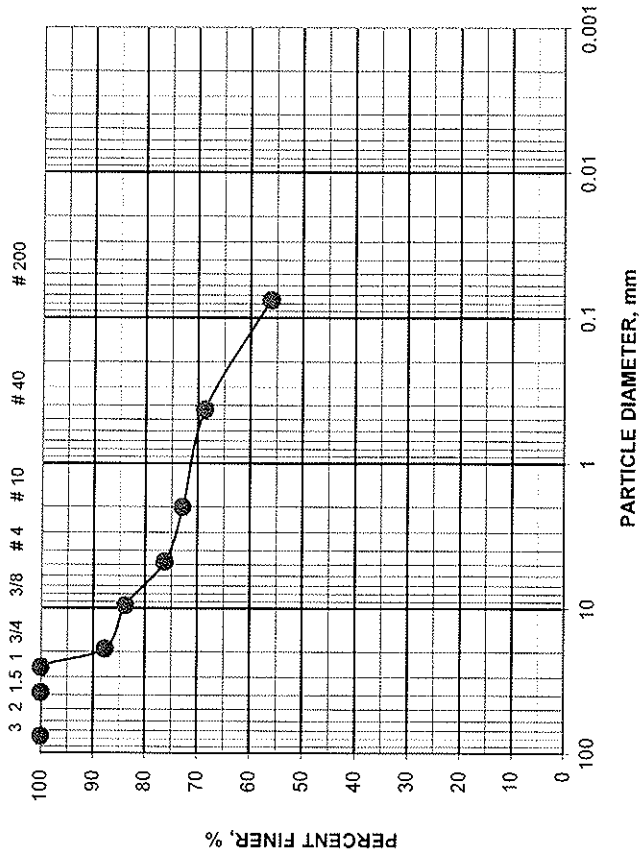
JOB NO. 12-11216 DATE 1/19/2013

SAMPLE LOCATION	On-Site	SIEVE SIZE	PERCENT PASSING
SAMPLE NO.	1251	3.00"	100.0%
DEPTH (FT)	Not Provided	1.50"	100.0%
PLASTIC LIMIT	29	1.00"	100.0%
LIQUID LIMIT	64	3/4"	87.7%
PLASTICITY INDEX	35	3/8"	83.8%
		No. 4	76.2%
		No. 10	72.8%
		No. 40	68.6%
		No. 200	56.1%

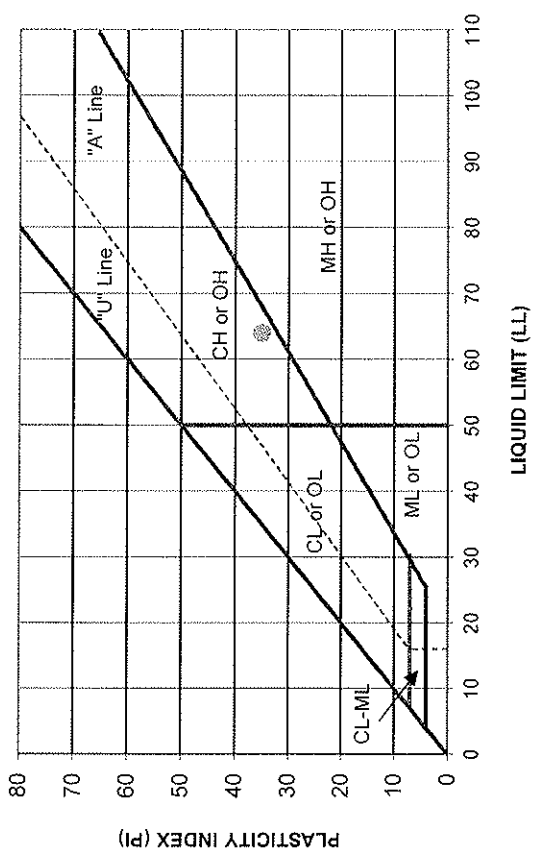
VISUAL CLASSIFICATION	Gray and Red Fat Clay with Sand	
ASTM DESCRIPTION	AASHTO CLASSIFICATION	AASHTO GI
Gravelly Fat Clay with Sand, CH	A-7-6	17

GRAIN SIZE DISTRIBUTION CURVE

U.S. STANDARD SIEVE OPENINGS IN INCHES & STANDARD SIEVE NUMBERS



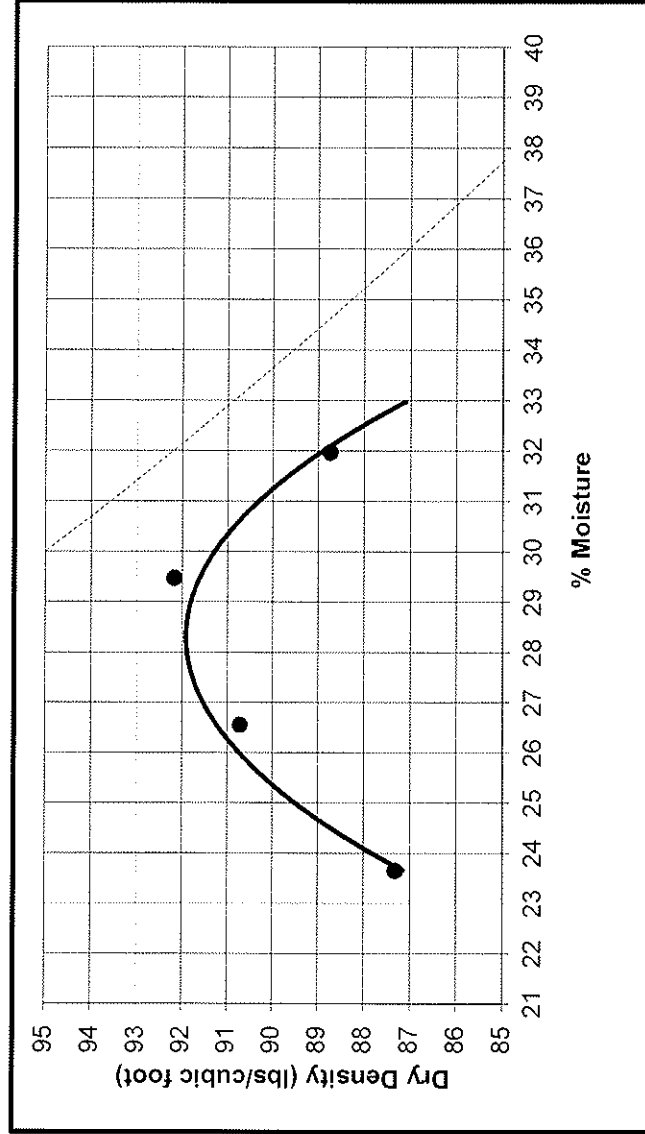
PLASTICITY CHART





LABORATORY COMPACTION CHARACTERISTICS OF SOIL

CLIENT: Jason Henson **DATE:** 1/19/13 **SAMPLE LOCATION:** On-Site **LL=** 64
Project Number 12-11216 **LAB NO.** 1251 **SAMPLE DESCRIPTION:** Gravelly Fat Clay with Sand, CH **PL=** 29
Project Name C&H Hog Farms **TEST METHOD:** ASTM D698 **AASHTO Class:** A-7-6 **PI=** 35



Maximum Dry Density (lbs./cubic foot) **92.3**

Optimum Moisture (percent) **29.0**

Corrected Values

Maximum Dry Density (lbs./cubic foot) **96.4**

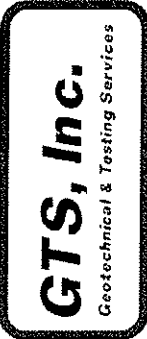
Optimum Moisture (percent) **26.4**

Oversized Rock Specific Gravity 2.26
Oversized Rock Absorption 8.1

ASTM D-4718, Correction for Oversize Particles	
% Retained 3/4" Sieve	Optimum Moisture
5%	28.0%
10%	26.9%
15%	25.9%

ASTM D-4718, Correction for Oversize Particles	
% Retained 3/4" Sieve	Corrected Density lbs./ft ³
20%	99.2
25%	101.0
30%	103.0

ASTM D-4718, Correction for Oversize Particles	
% Retained 3/4" Sieve	Optimum Moisture
12.3%	24.8%
24.8%	23.8%
23.8%	22.7%



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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/19/13 TESTED BY: Jason Henson START TIME: 9:00 AM
 REPORT NO: 12-11216.004 CLIENT: Jason Henson END TIME: 3:45 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	3 ft. below Finish Subgrade	8	128.5	17.6	109.3	103.9%	95
2	1	3 ft. below Finish Subgrade	8	123.3	16.9	105.5	100.3%	95
3	1	3 ft. below Finish Subgrade	8	129.4	16.0	111.5	106.0%	95
4	1	Finish Subgrade	8	126.3	18.1	107.0	101.7%	95
5	1	Finish Subgrade	8	126.1	19.7	105.4	100.2%	95
6	1	2 ft. below Finish Subgrade	8	121.3	18.7	102.2	97.1%	95
7	1	Finish Subgrade	8	126.3	19.6	105.6	100.4%	95

Test Number	Location:
1	Farrowing Barn pad, 20 ft. south and 15 ft. west of northeast corner
2	Farrowing Barn pad, 30 ft. south and 10 ft. west of northeast corner
3	Farrowing Barn pad, 30 ft. north and 20 ft. west of southeast corner
4	Farrowing Barn pad, 40 ft. south and 20 ft. east of northwest corner
5	Farrowing Barn pad, 20 ft. south and 15 ft. east of northwest corner
6	Farrowing Barn pad, 20 ft. south and 20 ft. west of northeast corner
7	Farrowing Barn pad, 80 ft. south and 35 ft. west of northeast corner

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME:	C&H Hog Farm	DATE:	2/6/13	TESTED BY:	Mason Drummond	START TIME:	10:45 AM		
REPORT NO:	12-11216.013	CLIENT:	Jason Henson	END TIME:	11:30 AM	MILEAGE:	197		
PROJECT LOCATION:	Mt. Judea, Arkansas	CLIENT REPRESENTATIVE:	Jason Henson	LL, PI		Maximum Dry Density	Optimum Moisture Content		
Proctor ID	Description	Location	Test Method	USCS	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2		20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.					
1	1	Finish Subgrade	8	127.2	20.2	105.9	100.7%	95	
2	1	Finish Subgrade	8	124.8	17.2	106.5	101.2%	95	
3	1	3 ft. below Finish Subgrade	8	128.9	17.4	109.8	104.4%	95	
4	1	3 ft. below Finish Subgrade	8	126.0	17.8	107.3	102.0%	95	
5	1	3 ft. below Finish Subgrade	8	127.7	16.8	109.3	103.9%	95	
Test Number	Location:								
1	Pond #2, East Keyway, 25 ft. south of corner to North Keyway								
2	Pond #2, East Keyway, 90 ft. south of corner to North Keyway								
3	Pond #1, East Keyway, 95 ft. north of corner to South Keyway								
4	Pond #1, East Keyway, 20 ft. north of corner to South Keyway								
5	Pond #1, South Keyway, 30 ft. west of corner to East Keyway								

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/21/13 TESTED BY: Mason Drummond START TIME: 12:30 PM
 REPORT NO: 12-11216.005 CLIENT: Jason Henson END TIME: 3:45 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	7 ft. below Finish Subgrade	8	122.7	20.3	102.0	97.0%	95
2	1	7 ft. below Finish Subgrade	8	123.4	17.2	105.2	100.0%	95
3	1	8 ft. below Finish Subgrade	8	128.0	18.3	108.2	102.9%	95
4	1	7 ft. below Finish Subgrade	8	127.3	19.4	106.6	101.3%	95

Test Number	Location:
1	Pond #2, East Keyway, 25 ft. south of corner to North Keyway
2	Pond #2, East Keyway, 60 ft. south of corner to North Keyway
3	Pond #2, East Keyway, 70 ft. south of corner to North Keyway
4	Pond #2, East Keyway, 5 ft. south of corner to North Keyway

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 Fayetteville, Arkansas 72704
 office#: 479-521-7645
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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/21/13 TESTED BY: Mason Drummond START TIME: 12:30 PM
 REPORT NO: 12-11216.005 CLIENT: Jason Henson END TIME: 3:45 PM

PROJECT LOCATION: Mt. Judea, Arkansas		CLIENT REPRESENTATIVE: Jason Henson		MILEAGE: 197				
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	7 ft. below Finish Subgrade	8	122.7	20.3	102.0	97.0%	95
2	1	7 ft. below Finish Subgrade	8	123.4	17.2	105.2	100.0%	95
3	1	8 ft. below Finish Subgrade	8	128.0	18.3	108.2	102.9%	95
4	1	7 ft. below Finish Subgrade	8	127.3	19.4	106.6	101.3%	95

Test Number	Location:
1	Pond #2, East Keyway, 25 ft. south of corner to North Keyway
2	Pond #2, East Keyway, 60 ft. south of corner to North Keyway
3	Pond #2, East Keyway, 70 ft. south of corner to North Keyway
4	Pond #2, East Keyway, 5 ft. south of corner to North Keyway

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/22/13 TESTED BY: Mason Drummond START TIME: 10:00 AM
 REPORT NO: 12-11216.006 CLIENT: Jason Henson END TIME: 12:30 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	6 ft. below Finish Subgrade	8	122.0	20.4	101.3	96.3%	95
2	1	10 ft. below Finish Subgrade	8	130.0	22.2	106.4	101.1%	95
3	1	10 ft. below Finish Subgrade	8	124.7	19.7	104.2	99.0%	95
4	1	Finish Subgrade	8	127.6	15.5	110.5	105.0%	95
5	1	Finish Subgrade	8	128.7	16.7	110.3	104.8%	95

Test Number	Location:
1	Pond #2, East Keyway, 30 ft. south of corner to North Keyway
2	Pond #1, East Keyway, 90 ft. north of corner to South Keyway
3	Pond #1, East Keyway, 10 ft. north of corner to South Keyway
4	Farrowing Barn Pad, 7 ft. west of southeast corner, 15 ft. north of south side
5	Farrowing Barn Pad, 15 ft. west of northeast corner, 35 ft. south of north side

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/23/13 TESTED BY: Mason Drummond START TIME: 9:30 AM
 REPORT NO: 12-11216.007 Page 1 CLIENT: Jason Henson END TIME: 4:15 PM

PROJECT LOCATION: Mt. Judea, Arkansas		CLIENT REPRESENTATIVE: Jason Henson		MILEAGE: 197				
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	20.7	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	9 ft. below Finish Subgrade	8	130.9	24.0	105.5	100.3%	95
2	1	9 ft. below Finish Subgrade	8	127.1	21.4	104.8	99.6%	95
3	1	9 ft. below Finish Subgrade	8	124.1	18.2	104.9	99.7%	95
4	1251	5 ft. below Finish Subgrade	8	119.4	26.7	94.2	97.7%	95
5	1251	5 ft. below Finish Subgrade	8	114.4	26.4	90.5	93.9%	95
6	1251	5 ft. below Finish Subgrade	8	117.9	27.1	92.8	96.3%	95
7	1251	5 ft. below Finish Subgrade	8	119.7	26.3	94.8	98.3%	95
8	1	5 ft. below Finish Subgrade	8	125.1	22.2	102.4	97.3%	95

Test Number	Location:
1	Pond #1, East Keyway, 80 ft. north of corner to South Keyway
2	Pond #1, East Keyway, 15 ft. north of corner to South Keyway
3	Pond #1, South Keyway, 10 ft. west of corner to East Keyway
4	Pond #2, East Keyway, 80 ft. south of corner to North Keyway
5	Pond #2, East Keyway, 40 ft. south of corner to North Keyway - FAILED
6	Pond #2, East Keyway, 10 ft. south of corner to North Keyway
7	Pond #2, East Keyway, 20 ft. south of corner to North Keyway
8	Pond #2, North Keyway, 15 ft. west of corner to East Keyway

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/23/13 TESTED BY: Jason Henson START TIME: 9:30 AM
 REPORT NO: 12-11216.007 Page 2 CLIENT: Jason Henson END TIME: 4:15 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	20.7	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1	8 ft. below Finish Subgrade	8	125.0	17.1	106.7	101.4%	95
10	1	8 ft. below Finish Subgrade	8	129.7	19.9	108.2	102.9%	95
11	1	8 ft. below Finish Subgrade	8	126.4	16.6	108.4	103.0%	95
12	1251	8 ft. below Finish Subgrade	8	115.3	27.7	90.2	93.6%	95

Test Number	Location:
9	Pond #1, East Keyway, 30 ft. north of corner to South Keyway
10	Pond #1, East Keyway, 80 ft. north of corner to South Keyway
11	Pond #1, East Keyway, 15 ft. south of corner to North Keyway
12	Pond #1, North Keyway, 15 ft. west of corner to East Keyway - FAILED

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/26/13 TESTED BY: Mason Drummond START TIME: 8:30 AM
 REPORT NO: 12-11216.009 CLIENT: Jason Henson END TIME: 11:00 AM
 PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	7 ft. below Finish Subgrade	8	126.6	19.5	105.9	100.7%	95
2	1	7 ft. below Finish Subgrade	8	126.0	19.0	105.9	100.7%	95
3	1	7 ft. below Finish Subgrade	8	126.2	17.7	107.2	101.9%	95
4	1	4 ft. below Finish Subgrade	8	123.8	17.1	105.7	100.5%	95
5	1	4 ft. below Finish Subgrade	8	124.9	16.9	106.8	101.5%	95
6	1	4 ft. below Finish Subgrade	8	120.5	16.9	103.1	98.0%	95
7	1	6 ft. below Finish Subgrade	8	127.2	17.7	108.0	102.7%	95
8	1	6 ft. below Finish Subgrade	8	124.7	18.0	105.7	100.5%	95

Test Number	Location:
1	Pond #1, South Keyway, 40 ft. west of corner to East Keyway
2	Pond #1, East Keyway, 15 ft. north of corner to South Keyway
3	Pond #1, East Keyway, 8 ft. north of corner to South Keyway
4	Pond #2, East Keyway, 70 ft. south of corner to North Keyway
5	Pond #2, East Keyway, 5 ft. south of corner to North Keyway
6	Pond #2, North Keyway, 25 ft. west of corner to East Keyway
7	Pond #1, East Keyway, 15 ft. north of corner to South Keyway
8	Pond #1, South Keyway, 30 ft. west of corner to South Keyway

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 1/28/13 TESTED BY: Mason Drummond START TIME: 11:00 / 2:00

REPORT NO: 12-11216.010 Page 1 CLIENT: Jason Henson END TIME: 12:00 / 5:00

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	3 ft. below Finish Subgrade	8	123.0	16.6	105.6	100.4%	95
2	1	3 ft. below Finish Subgrade	8	122.6	18.8	103.2	98.1%	95
3	1	5 ft. below Finish Subgrade	8	122.7	19.4	102.8	97.7%	95
4	1	5 ft. below Finish Subgrade	8	123.1	17.6	104.7	99.5%	95
5	1	5 ft. below Finish Subgrade	8	123.1	19.6	102.7	97.6%	95
6	1	5 ft. below Finish Subgrade	8	122.7	16.8	105.0	99.8%	95
7	1	5 ft. below Finish Subgrade	8	118.9	17.2	101.4	96.4%	95
8	1	6 ft. below Finish Subgrade	8	122.6	16.6	105.1	99.9%	95

Test Number	Location:
1	Pond #2, North Keyway, 30 ft. west of corner to East Keyway
2	Pond #2, East Keyway, 28 ft. south of corner to North Keyway
3	Pond #1, East Keyway, 85 ft. north of corner to South Keyway
4	Pond #1, East Keyway, 40 ft. north of corner to South Keyway
5	Pond #1, East Keyway, 10 ft. north of corner to South Keyway
6	Pond #1, South Keyway, 35 ft. west of corner to East Keyway
7	Pond #1, South Keyway, 10 ft. west of corner to East Keyway
8	Pond #1, East Keyway, 95 ft. north of corner to South Keyway

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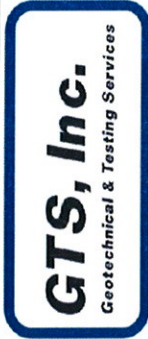
PROJECT NAME: C&H Hog Farm DATE: 1/28/13 TESTED BY: Mason Drummond START TIME: 11:00 / 2:00
 REPORT NO: 12-11216.010 Page 2 CLIENT: Jason Henson END TIME: 12:00 / 5:00

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1	6 ft. below Finish Subgrade	8	127.7	17.9	108.3	102.9%	95
10	1	6 ft. below Finish Subgrade	8	130.2	20.5	108.8	103.4%	95
11	1	7 ft. below Finish Subgrade	8	121.7	16.3	104.7	99.5%	95
12	1	3 ft. below Finish Subgrade	8	121.8	19.8	101.7	96.7%	95

Test Number	Location:
9	Pond #1, East Keyway, 65 ft. north of corner to South Keyway
10	Pond #1, East Keyway, 8 ft. south of corner to North Keyway
11	Pond #1, East Keyway, 30 ft. south of corner to North Keyway
12	Pond #1, North Keyway, 30 ft. west of corner to East Keyway

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 2/1/13 TESTED BY: Mason Drummond START TIME: 11:45 AM
 REPORT NO: 12-11216.011 CLIENT: Jason Henson END TIME: 12:45 PM
 PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	4 ft. below Finish Subgrade	8	128.4	18.2	108.6	103.2%	95
2	1	4 ft. below Finish Subgrade	8	125.5	17.8	106.6	101.3%	95
3	1	4 ft. below Finish Subgrade	8	129.7	20.2	106.3	101.0%	95
4	1	2 ft. below Finish Subgrade	8	126.6	22.8	103.1	98.0%	95
5	1	2 ft. below Finish Subgrade	8	126.8	21.6	104.3	99.1%	95

Test Number	Location:
1	Pond #1, South Keyway, 30 ft. west of corner to East Keyway
2	Pond #1, East Keyway, 30 ft. north of corner to South Keyway
3	Pond #1, East Keyway, 95 ft. north of corner to South Keyway
4	Pond #2, East Keyway, 80 ft. south of corner to North Keyway
5	Pond #2, East Keyway, 10 ft. south of corner to North Keyway

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PROJECT NAME: C&H Hog Farm		DATE: 2/2/13	TESTED BY: Mason Drummond	START TIME: 10:30 AM				
REPORT NO: 12-11216.012		CLIENT: Jason Henson	END TIME: 11:15 AM					
PROJECT LOCATION: Mt. Judea, Arkansas		CLIENT REPRESENTATIVE: Jason Henson						
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	MILEAGE: 197
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	20.7	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	1 ft. below Finish Subgrade	8	126.3	16.4	108.4	103.0%	95
2	1	1 ft. below Finish Subgrade	8	126.3	20.8	104.6	99.4%	95
3	1	3 ft. below Finish Subgrade	8	125.6	20.2	104.5	99.3%	95
4	1	3 ft. below Finish Subgrade	8	130.1	20.3	108.1	102.8%	95
5	1251	3 ft. below Finish Subgrade	8	123.4	27.9	96.5	100.1%	95
Test Number	Location:							
1	Pond #2, East Keyway, 25 ft. south of corner to North Keyway							
2	Pond #2, East Keyway, 80 ft. south of corner to North Keyway							
3	Pond #1, East Keyway, 70 ft. north of corner to South Keyway							
4	Pond #1, East Keyway, 15 ft. north of corner to South Keyway							
5	Pond #1, South Keyway, 30 ft. west of corner to East Keyway							

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PROJECT NAME: C&H Hog Farm DATE: 2/7/13 TESTED BY: Mason Drummond START TIME: 10:45 AM
 REPORT NO: 12-11216.014 CLIENT: Jason Henson END TIME: 12:15 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	Finish Subgrade	8	127.2	20.2	105.9	100.7%	95
2	1	Finish Subgrade	8	124.8	17.2	106.5	101.2%	95
3	1	1 ft. below Finish Subgrade	8	128.9	17.4	109.8	104.4%	95
4	1	1 ft. below Finish Subgrade	8	126.0	17.8	107.8	102.5%	95
5	1	1 ft. below Finish Subgrade	8	127.7	16.8	109.3	103.9%	95
6	1	1 ft. below Finish Subgrade	8	129.9	21.5	106.9	101.6%	95
7	1	1 ft. below Finish Subgrade	8	129.0	24.8	103.4	98.3%	95

Test Number	Location:
1	Pond #2, East Keyway, 25 ft. south of corner to North Keyway
2	Pond #2, East Keyway, 90 ft. south of corner to North Keyway
3	East Keyway, 10 ft. south of South Keyway, runs between Pond #1 and Pond #2
4	East Keyway, 20 ft. north of corner to South Keyway
5	South Keyway, 30 ft. west of corner to East Keyway
6	East Keyway, 65 ft. north of corner to South Keyway
7	East Keyway, 10 ft. north of corner to South Keyway

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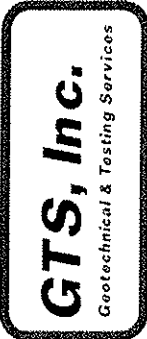
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Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	MILEAGE:
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1	9 in. below Finish Grade	8	127.4	19.4	106.7	101.4%	98
2	1	9 in. below Finish Grade	8	129.5	21.1	106.9	101.6%	98
3	1	9 in. below Finish Grade	8	123.2	17.7	104.7	99.5%	98
4	1	9 in. below Finish Grade	8	124.9	19.3	104.7	99.5%	98
5	1	9 in. below Finish Grade	8	127.1	19.4	106.4	101.1%	98
6	1	9 in. below Finish Grade	8	125.7	18.8	105.8	100.6%	98
7	1	Finish Grade	8	127.9	21.1	105.6	100.4%	98
8	1	Finish Grade	8	124.9	20.5	103.6	98.5%	98
Test Number	Location:							
1	Pond #1 Basin, south							
2	Pond #1 Basin, north							
3	Pond #1, East bank inline, center							
4	Pond #1, North bank inline, center							
5	Pond #1, West bank inline, center							
6	Pond #1, South bank inline near keyway, center							
7	Pond #1, East Keyway, 30 ft. north of corner to South Keyway							
8	Pond #1, East Keyway, 90 ft. north of corner to South Keyway							

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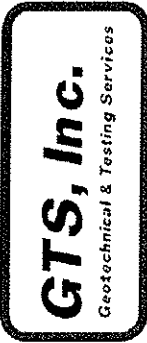
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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm		DATE: 2/12/13	TESTED BY: Mason Drummond	START TIME: 10:30 AM				
REPORT NO: 12-11216.015 Page 2		CLIENT: Jason Henson	END TIME: 3:15 PM	MILEAGE: 197				
PROJECT LOCATION: Mt. Judea, Arkansas		CLIENT REPRESENTATIVE: Jason Henson						
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64.41	105.2	20.7	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1	Finish Grade	8	127.1	22.4	103.8	98.7%	98
10	1	Finish Grade	8	128.4	22.4	104.9	99.7%	98
11	1	Finish Grade	8	126.3	18.7	106.4	101.1%	98
12	1	Finish Grade	8	135.4	24.7	108.6	103.2%	98
13	1	Finish Grade	8	126.1	21.0	105.1	99.9%	98
14	1	Finish Grade	8	127.6	21.8	104.8	99.6%	98
15	1	Finish Grade	8	128.5	20.9	106.3	101.0%	98
Test Number	Location:							
9	Pond #1, East Keyway, 30 ft. north of corner to South Keyway							
10	Pond #1, east pond bank incline, center							
11	Pond #1, south pond bank incline, center							
12	Pond #1, west pond bank incline, center							
13	Pond #1, north pond bank incline, center							
14	Pond #1 basin, north side							
15	Pond #1 basin, south side							

CC:



1915 N. Shiloh Dr, Suite 1
 Fayetteville, Arkansas 72704
 office#: 479-521-7645
 Fax #: 479-521-6232

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NUCLEAR DENSITY REPORT ASTM D 6938-08

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PROJECT NAME: C&H Hog Farm DATE: 3/27/13 TESTED BY: Jason Henson CLIENT: Jason Henson START TIME: 9:30 AM

REPORT NO: 12-11216.016 Page 1 END TIME: 11:45 AM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64.35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1251	9 in. below Finish Subgrade	8	125.6	25.9	99.7	103.4%	98
2	1251	9 in. below Finish Subgrade	8	121.1	25.1	96.7	100.3%	98
3	1251	9 in. below Finish Subgrade	8	124.4	26.6	98.2	101.9%	98
4	1251	9 in. below Finish Subgrade	8	121.6	26.2	96.3	99.9%	98
5	1251	9 in. below Finish Subgrade	8	121.5	25.1	97.1	100.7%	98
6	1251	9 in. below Finish Subgrade	8	121.0	25.7	96.3	99.9%	98
7	1251	9 in. below Finish Subgrade	8	122.1	26.1	96.8	100.4%	98
8	1251	9 in. below Finish Subgrade	8	122.2	26.8	96.3	99.9%	98

Test Number	Location:
1	Pond #2, south pond bank
2	Pond #2, east pond bank on south side
3	Pond #2, east pond bank on north side
4	Pond #2, north pond bank
5	Pond #2, west pond bank on north side
6	Pond #2, pond base, northwest section
7	Pond #2, pond base, middle section, east side
8	Pond #2, pond base, south section, east side

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PROJECT NAME:	C&H Hog Farm	DATE:	3/27/13	TESTED BY:	Mason Drummond	START TIME:	9:30 AM	
REPORT NO:	12-11216.016 Page 2	CLIENT:	Jason Henson			END TIME:	11:45 AM	
PROJECT LOCATION:	Mt. Judea, Arkansas	CLIENT REPRESENTATIVE:	Jason Henson			MILEAGE:	197	
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64.35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1251	9 in. below Finish Subgrade	8	125.1	26.5	98.8	102.5%	98
Test Number	Location:							
9	Pond #2, west pond bank, south section							

CC:



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 Fayetteville, Arkansas 72704
 office#: 479-521-7645
 Fax #: 479-521-6232

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm DATE: 3/28/13 TESTED BY: Mason Drummond START TIME: 1:15 PM
 REPORT NO: 12-11216.017 Page 1 CLIENT: Jason Henson END TIME: 2:00 PM

PROJECT LOCATION: Mt. Judea, Arkansas CLIENT REPRESENTATIVE: Jason Henson MILEAGE: 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1251	Finish Subgrade	8	120.0	25.5	95.5	99.1%	98
2	1251	Finish Subgrade	8	119.6	25.1	95.6	99.2%	98
3	1251	Finish Subgrade	8	124.6	25.1	99.5	103.2%	98
4	1251	Finish Subgrade	8	117.5	24.3	94.5	98.0%	98
5	1251	Finish Subgrade	8	120.9	25.4	96.4	100.0%	98
6	1251	Finish Subgrade	8	122.9	25.3	98.1	101.8%	98
7	1251	Finish Subgrade	8	121.7	24.9	97.4	101.0%	98
8	1251	Finish Subgrade	8	122.4	25.2	97.8	101.5%	98

Test Number	Location:
1	Pond #2, east pond bank on south side
2	Pond #2, east pond bank on north side
3	Pond #2, pond base, northwest section
4	Pond #2, north pond bank
5	Pond #2, east pond bank on north side
6	Pond #2, pond base, middle section, east side
7	Pond #2, east pond bank on south side
8	Pond #2, south pond bank

CC:



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 Fayetteville, Arkansas 72704
 office#: 479-521-7645
 Fax #: 479-521-6232

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NUCLEAR DENSITY REPORT ASTM D 6938-08

PROJECT NAME: C&H Hog Farm **DATE:** 3/28/13 **TESTED BY:** Jason Henson **START TIME:** 1:15 PM
REPORT NO: 12-11216.017 Page 2 **CLIENT:** Jason Henson **END TIME:** 2:00 PM

PROJECT LOCATION: Mt. Judea, Arkansas **CLIENT REPRESENTATIVE:** Jason Henson **MILEAGE:** 197

Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Moisture Content	
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	26.4	
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, lbs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
9	1251	Finish Subgrade	8	124.8	27.5	97.9	101.6%	98

Test Number	Location:
9	Pond #2, pond base, southwest section

CC: _____

SECTION J. Livestock Mortality Management Plan

Mortalities will be disposed with an incinerator. The use of an incinerator to dispose of the carcasses uses propane or diesel. The ashes are land applied. Incinerators reduce carcasses to ashes. The Incinerator meets state requirements for burners and emissions. Minimum incinerator capacity shall be based on the average daily weight of animal mortality and the length of time the incinerator will be operated each day.

In the case of emergency when it may not be possible for the incinerator to keep up a proposed emergency burial site will be used.

The primary method of carcass disposal in the future may be In-Vessel Composter called a BIOvator.

The following is an Excerpt from Act 87 of 1963-Code 2-33-101 and Act 150 of 1985-Code 19-6-448 by the Arkansas Livestock and Poultry Commission

Carcasses may be buried at a site at least 100 yards away from a well and in a place where a stream cannot be contaminated. Anthrax carcasses are to be covered with 1 inch of lime.

Other carcasses may be covered with lime, particularly when needed to control odors. All carcasses are to be covered with at least 2 feet of dirt. Carcasses are not to be buried in a landfill, without prior approval of the State Veterinarian.

*Act 87 of 1963, Act 150 of 1985, and Act 522 of 1993: **Disposal of carcass of animal dying from contagious or infectious disease.***

9141. Any person that has the care or control of any animal that dies from any contagious disease shall immediately cremate or bury the animal.

9142. An animal which has died from any contagious disease shall not be transported, except to the nearest crematory. The transportation of the animal to the crematory shall be pursuant to such regulations as the director may adopt.

9143. An animal which has died from any contagious disease shall not be used for the food of any human being, domestic animal, or fowl.

From: [Hogan, Stephen](#)
To: [Deardoff, Amy](#)
Subject: FW: Part 1 2nd email
Date: Friday, April 12, 2013 1:04:31 PM
Attachments: [20130412112459.pdf](#)

Amy,

Please add this to zylab and the web. ARG590001

Thanks,

Stephen

From: Nathan Pesta [mailto:Nathanpdga@btinet.net]
Sent: Friday, April 12, 2013 11:23 AM
To: Hogan, Stephen
Subject: Part 1 2nd email

Nathan A.Pesta P.E.
Senior Project Engineer
DeHaan, Grabs and Associates, LLC
Bus 701-663-1116
Cell 701-400-3950
Fax 701-667-1356
www.dgaengineering.com