

## QA/QC Soil testing results

Included in this QA/QC submittal are copies of the Arecent feets 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 5.0e-7 cm/sec. Given that it was determined that the liner would be constructed 18 inches thick and with a 98% compaction ration and +-2% optimum moisture to meet seepage requirements.

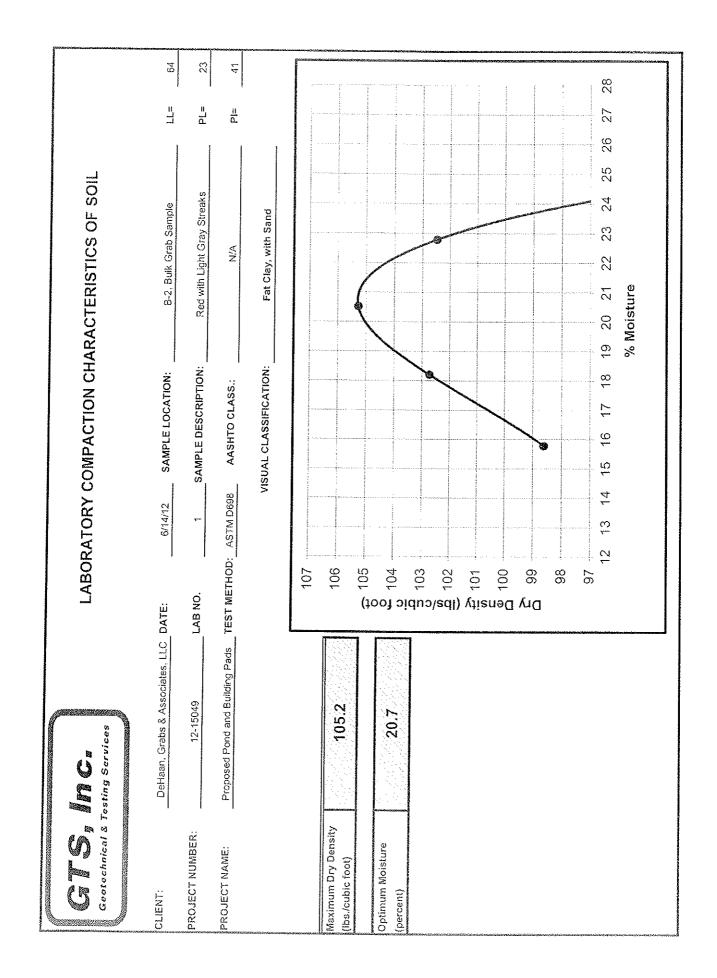
Waste Storage Pond 1 & 2 have a liner thickness of (18") inches. The ten state standards specifies that the coefficient of permeability (k) in centimeters per second shall not exceed the value derived from the equation  $k = 2.6 \times 10^{-9} \times L$ , where L equals the thickness of the seal in centimeters. Therefore the value shall not exceed:  $k = 2.6 \times 10^{-9} \times 18$ " x 2.54 cm = 1.2 x 10<sup>-7</sup> 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 x 10-7 cm/sec +  $\frac{1}{2}$  order of magnitude =  $1.0 \times 10^{-7}$  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 +-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 +- 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%.



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

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

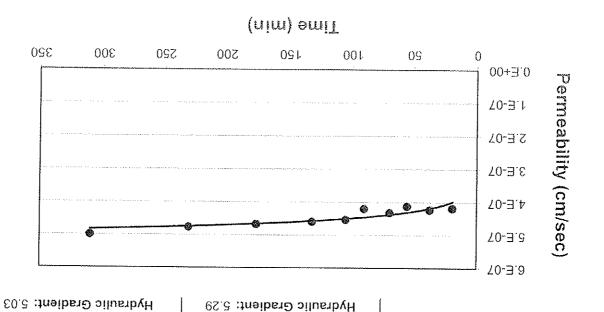
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## HYDRAULIC CONDUCTIVITY TEST RESULTS

betoempacted	SAMPLE TYPE:	
		BORING: B-2
∀/N	:3J9MA2	
		Proposed Pond and Building Pads
15-12046	PROJECT NUMBER:	PROJECT: Mt. Judea -

5.E-07	: Conductivity, k (כm/s):	Hyrdraulic
<u>eteO elqme2 leni</u> 3	<u>ste0                                    </u>	<u>Test Parameters</u>
after consolidation and testing) Diameter (in): ک.55	Diameter (in): ۲۵.57	Cell Pressure (psi): 8
τ€ndth (n) dtgn9.	88.4 :(nì) dîgne⊿	Inflow Pressure (psi): 4
Moisture Content: 25.3%	Moisture Content: 21.3%	Outflow Pressure (psi): 3
Wet Unit Weight (pct): 130.3	Wet Unit Weight (pot): 125.2	Back Pressure (psi): 3
Dry Unit Weight (pct): 103.9	Dry Unit Weight (pcf): 103.2	Confining Pressure (psi): 4

**Isitin** 



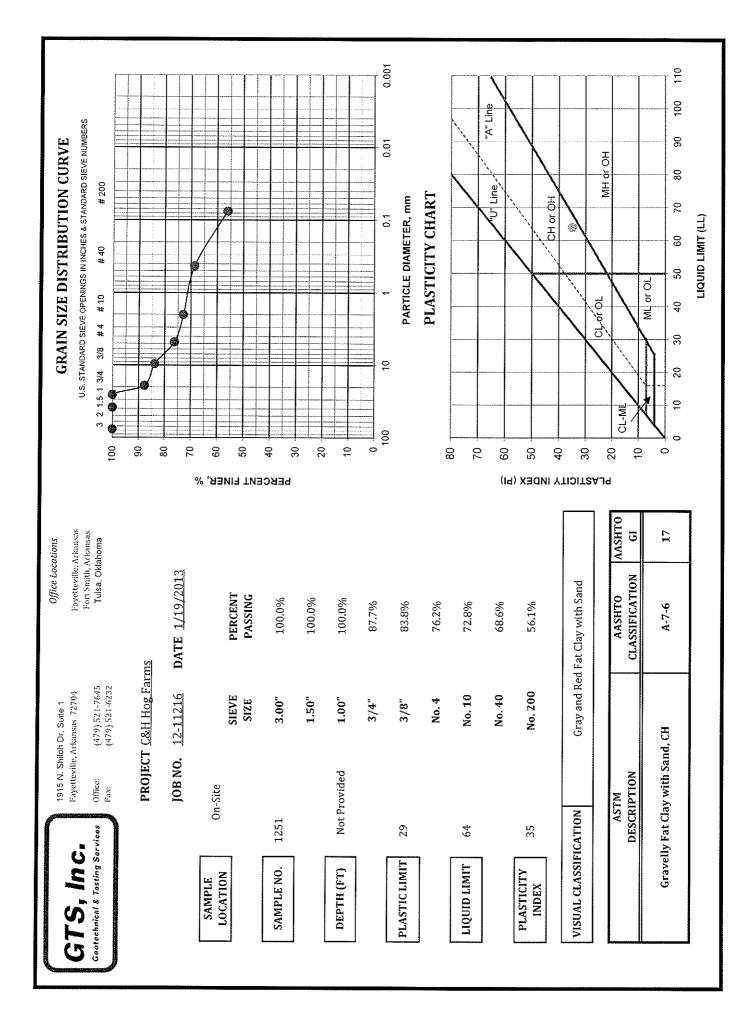
Votes: Sample was recompacted at 98.1% of MDD at a moisture content of 21.2% (at OMC +0.5%)

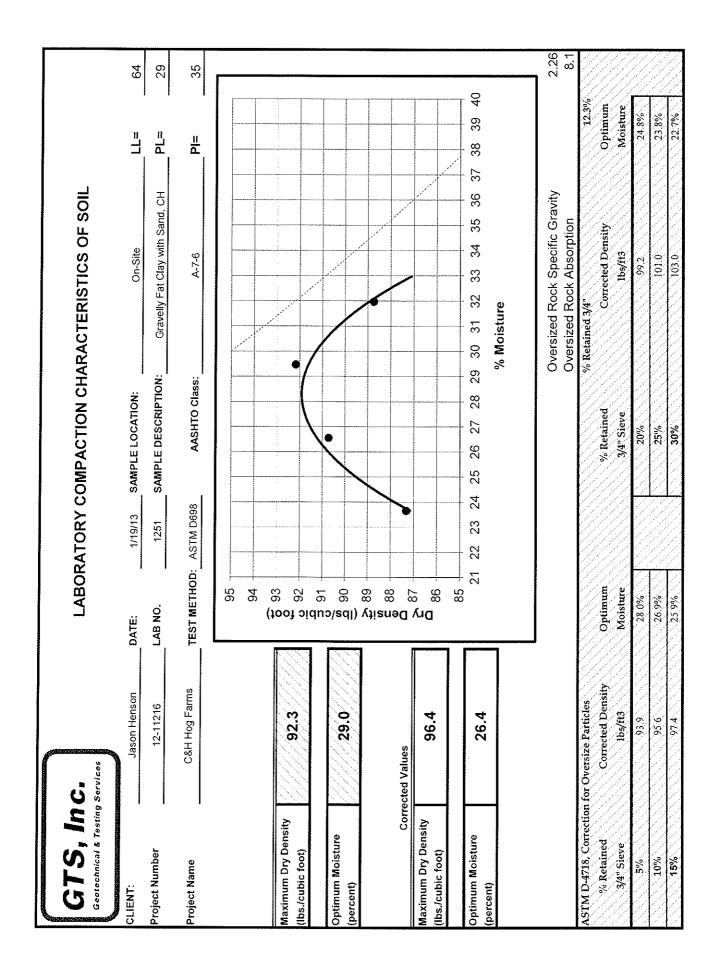
GTS, Inc. Geotechnical & Tosting Services	C. B Services	1915 N. Shiloh Dr, Suite 1 Fayetteville, Arkansas 72704 office#: 479-521-7645 Fax #: 479-521-6232			Office Locations Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma	0 5	Licen Arkansas Okla	Licensed in: s Missouri Oklahoma
www.gt	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	<b>20</b>			
PROJECT NAME:	C&H Hog Farm		DATE:	1/12/13	TESTED BY:	Mason Drummond	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:	NTATIVE:	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	-	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:				
t-a	Ferm. Barn, 30 ft. south.	Ferm. Barn, 30 ft. south and 15 ft. west of northeast corner	r					
2	Gestation Barn, 10 ft. no	Gestation Barn, 10 ft. north and 15 ft. east of southwest corner	ıner					
								-

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	22-21-21	NUCLEAN DEN	ENSILI KEPUKI ASIM D 6938-08	ASTM D 6938-0	x			
PROJECT NAME:	C&H Hog Farm		DATE:	1/17/13	TESTED BY:	Mason Drummond	START TIME:	11:00 AM
REPORT NO:	12-11216.002 Page 1		CLIENT	Jason Henson			END TIME:	4:30 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	VTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	id "T1	Maximin Dry Donsity		Ontimum Maichura Contant
F.	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2		
				• • • • • • • • • • • • • • • • • • •				
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	×	126.2	20.8	104.5	66.3%	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	ø	130.9	20.3	108.8	103.4%	95
4	łwi	6 ft. below Finish Subgrade	8	130.6	23.4	105.9	100.7%	95
م	1	2 ft. below Finish Subgrade	8	126.6	16.9	108.3	102.9%	95
6	ţmi	3 ft. below Finish Subgrade	~	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	9.9%	95
Test Number				Location:				
1	Farrowing Barn pad, 10	Farrowing Barn pad, 10 ft. south and 7 ft. west of northeast corner	st corner					
2	Farrowing Barn pad, 20	Farrowing Barn pad, 20 ft. south and 12 ft. east of northwest corner	est corner					
3	Farrowing Barn pad, 15	Farrowing Barn pad, 15 ft. north and 15 ft. cast of southwest corner	est corner					
4	Farrowing Barn pad, 30	Farrowing Barn pad, 30 ft. north and 11 ft. west of southeast corner	ast corner					
5.	N. Keyway, 25 ft. cast of start, Pond #2	f start, Pond #2						
6	N. Keyway, 50 ft. west of corner to E. Keyway	of corner to E. Keyway						
7	E. Keyway, 15 ft. south of corner ot N. Keyway	of corner ot N. Keyway						
8	E. Keyway, 90 ft. south of corner ot N. Keyway	of corner ot N. Keyway						

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Geotechnical & Testing Services	ng Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma	<i>(</i> 2)	OKIS	Oklahoma
www.d	www.gtsinc.cc	NUCLEAR DEV	ENSITY REPORT A STM D 5032 00	A STAA D 6028 0	a			
PROJECT NAME:	C&H Hoo Farm		DATE NELONI	10200 (1 M 10200-00				
	Courses and		DAIE	1/1//13	TESTED BY:	Mason Drummond	START TIME:	11:00 AM
REPORT NO:	12-11216.002 Page 2		CLIENT:	Jason Henson			END TIME:	4:30 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	UTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximun Drv Density		Ontimum Moísture Content
Led	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/N	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 (%)
6	1	1 ft. below Finish Subgrade	ø	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	terd.	4 ft. below Finish Subgrade	8	130.5	21.6	107.3	102.0%	95
13	1	4 ft. below Finish Subgrade	\$	129.4	20.2	107.7	102.4%	95
1 1 1 1	1	4 ft. below Finish Subgrade	ø	124.0	18.5	104.7	99.5%	95
15	1	4 ft. below Finish Subgrade	ø	127.8	17.2	109.1	103.7%	95
Test Number				Location:				
6	W. Keyway for Pond #2, south of Pond #2	south of Pond #2						
10	Farrowing Barn pad, 5 ft	Farrowing Barn pad, 5 ft. south and 40 ft. east of northwest corner	st corner					
11	Farrowing Barn pad, 20	Farrowing Barn pad, 20 ft. south and 15 ft. west of northeast corner	ast corner					
12	Farrowing Barn pad, 10	Farrowing Barn pad, 10 ft. south and 15 ft. east of northwest corner	est corner					
13	Farrowing Barn pad, 301	Farrowing Barn pad, 30 ft. north and 30 ft. east of southwest corner	est corner					
14	Farrowing Barn pad, 7 ft	Farrowing Barn pad, 7 ft. south and 15 ft. west of northeast corner	st corner					
15	Farrowing Barn pad, 201	Farrowing Barn pad, 20 ft. north and 20 ft. west of southeast corner	ast corner					

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<u>6.www</u>	www.gtsinc.cc	NUCLEAR DEN	ISITY REPORT	ENSITY REPORT ASTM D 6938-08	20			
PROJECT NAME:	C&H Hog Farm		DATE	1/18/13	TESTED BY:	Mason Drummond	START TIME:	9:30 / 12:00
REPORT NO:	12-11216.003		CLIENT:	Jason I-Ienson			END TIME	10-00 / 4-30
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	Id "T1	Maximum Drv Doneity		Ontinum Moisture Contact
	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, Ibs./cu.ft.	Field Moisture %	Dry Density, Ibs./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	I	4 ft. below Finish Subgrade	8	130.4	18.3	110.2	104.8%	95
4	1	4 ft. below Finish Subgrade	\$	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	\$	126.1	18.6	106.3	101.0%	95
∞	funt,	4 ft. below Finish Subgrade	8	126.9	19.1	106.6	101.3%	95
Test Number				Location:				
1	Farrowing Barn pad, 25	Farrowing Barn pad, 25 ft. south and 10 ft. east of northwest corner	est corner					
2	Farrowing Barn pad, 40	Farrowing Barn pad, 40 ft. north and 12 ft. east of southwest corner	est corner					
3	Farrowing Barn pad, 60	Farrowing Barn pad, 60 ft. north and 6 ft. west of southeast corner	st corner					
4	Farrowing Barn pad, 30	Farrowing Barn pad, 30 ft. south and 15 ft. west of northeast corner	ast corner					
S	Farrowing Barn pad, 25	Farrowing Barn pad, 25 ft. north and 5 ft. west of southeast corner	st corner					
6	Farrowing Barn pad, 70	Farrowing Barn pad, 70 ft. south and 25 ft. east of northwest corner	est corner					
7	Farrowing Barn pad, 10	Farrowing Barn pad, 10 ft. south and 25 ft. east of northwest corner	est corner					
8	Farrowing Barn pad, 30	Farrowing Barn pad, 30 ft. north and 11 ft. west of southeast corner	ast corner					





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<u>p.www</u>	www.gtsinc.cc	NUCLEAR DEN	ENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	30			
PROJECT NAME:	C&H Hog Farm		DATE:	1/19/13	TESTED BY:	Mason Drummond	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:	VTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Drv Densitv		Ontimum 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, Ibs./cu.ft.	In Place Compaction	Compaction Required (%)
1	L	3 ft. below Finish Subgrade	8	128.5	17.6	109.3	103.9%	95
2		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		Finish Subgrade	×	126.3	18.1	107.0	101.7%	95
S	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	Finísh Subgrade	8	126.3	19.6	105.6	100.4%	95
Test Number				Location:				
¢,	Farrowing Barn pad, 20	Farrowing Barn pad, 20 ft. south and 15 ft. west of northeast corner	ast corner					
2	Farrowing Barn pad, 30	Farrowing Barn pad, 30 ft. south and 10 ft. west of northeast corner	ast corner					
3	Farrowing Barn pad, 30	Farrowing Barn pad, 30 ft. north and 20 ft. west of southeast corner	ast corner					
4	Farrowing Barn pad, 40	Farrowing Barn pad, 40 ft. south and 20 ft. east of northwest corner	est corner			-		
ທ	Farrowing Barn pad, 20	Farrowing Barn pad, 20 ft. south and 15 ft. east of northwest corner	est corner					
6	Farrowing Barn pad, 20	Farrowing Barn pad, 20 ft. south and 20 ft. west of northeast corner	ast corner					
7	Farrowing Barn pad, 80	Farrowing Barn pad, 80 ft. south and 35 ft. west of northeast corner	ast corner					

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GIN, INC. Geotechnical & Testing Services	<b>JC.</b> ng Servicos	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
WWW.G	www.gtsinc.cc	NUCLEAR DEN	<b>USITY REPORT</b>	ENSITY REPORT ASTM D 6938-08	8			
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
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	uscs	LL, PI	Maximum Drv 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, Ibs./ 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	<b>6</b> 44	Finish Subgrade	8	124.8	17.2	106.5	101.2%	95
3	L	3 ft. below Finish Subgrade	8	128.9	17.4	109.8	104.4%	95
4	1	3 ft. below Finish Subgrade	∞	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, :	Pond #2, East Keyway, 25 ft. south of corner to North Keyway	yway					
2	Pond #2, East Keyway,	Pond #2, East Keyway, 90 ft. south of corner to North Ke	Keyway					
3	Pond #1, East Keyway,	Pond #1, East Keyway, 95 ft. north of corner to South Keyway	rway					
Ą	Pond #1, East Keyway,	Pond #1, East Keyway, 20 ft. north of corner to South Keyway	/way					
ũ	Pond #1, South Keyway	Pond #1, South Keyway, 30 ft. west of corner to East Keyway	way					
							z	

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Geotechnical & Testing Services	ng Services	Fax #: 479-521-6232			Tulsa, Oklahoma			2
WWW.G	www.gtsinc.cc	NUCLEAR DEN	ISITY REPORT	NUCLEAR DENSITY REPORT ASTM D 6938-08	8			
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:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	nscs	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, Ibs./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, 2	Pond #2, East Keyway, 25 ft: south of corner to North Keyway	/way					
2	Pond #2, East Keyway, (	Pond #2, East Keyway, 60 ft. south of corner to North Keyway	/way					
3	Pond #2, East Keyway, 7	Pond #2, East Keyway, 70 ft. south of corner to North Keyway	/way					
4	Pond #2, East Keyway, 5	Pond #2, East Keyway, 5 ft. south of corner to North Keyway	way					

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J								
0.WWW	www.gtsinc.cc	NUCLEAR DEN	ISITY REPORT	NUCLEAR DENSITY REPORT ASTM D 6938-08	80			
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:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Drv Densitv	L	Ontimum 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, 2	Pond #2, East Keyway, 25 ft. south of corner to North Keyway	/way					
2	Pond #2, East Keyway, 6	Pond #2, East Keyway, 60 ft. south of corner to North Keyway	/way					
3	Pond #2, East Keyway, 7	Pond #2, East Keyway, 70 ft. south of corner to North Keyway	/way					
4	Pond #2, East Keyway, 5	Pond #2, East Keyway, 5 ft. south of corner to North Keyway	way					

	ſ	1915 N. Shiloh Dr. Stuite 1			Office Locatione			
		Fayetteville, Arkansas 72704			Fayetteville, Arkansas	ø	Licen Arkansas	Licensea in: s Missouri
GIO, INC. Geotechnical & Testing Services	ng Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
<u>B.WWW</u>	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-00	80			
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:	VTATIVE:	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, Ibs./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	%0.66	95
4	1	Finish Subgrade	8	127.6	15.5	110.5	105.0%	95
ъ	1	Finish Subgrade	8	128.7	16.7	110.3	104.8%	95
Test Number				Location:				
1	Pond #2, East Keyway, 3	Pond #2, East Keyway, 30 ft. south of corner to North Keyway	/way					
2	Pond #1, East Keyway, 9	Pond #1, East Keyway, 90 ft. north of corner to South Key	Keyway					
3	Pond #1, East Keyway, 1	Pond #1, East Keyway, 10 ft. north of corner to South Keyway	way					
4	Farrowing Barn Pad, 7 fl	Farrowing Barn Pad, 7 ft. west of southeast corner, 15 ft. north of south side	orth of south side					
ы	Farrowing Barn Pad, 15	Farrowing Barn Pad, 15 ft. west of northeast corner, 35 ft. south of north side	south of north side					

NUCLEAR DENSITY REPORT ASTMD 6938-08       MIE: C4H H0g Firm.     J_211216.007 Fage1     CATION:     MI. Jason Henson       CATION:     M. Judica, Arkanass     CLIENT REPRESENTATIVE:     Jason Henson       CATION:     M. Judica, Arkanass     CLIENT REPRESENTATIVE:     Jason Henson       CATION:     M. Judica, Mathians     CLIENT REPRESENTATIVE:     Jason Henson       CATION:     M. Judica, Mathians     CLIENT REPRESENTATIVE:     Jason Henson       CATION:     M. Jason Henson     CH     Jason Henson       M. Judica, Mathians     CLIENT REPRESENTATIVE:     Jason Henson       Interval     Jason Henson     Jason Henson       Jason Henson     Jason Henson <t< th=""><th>GTS, Inc. Geotechnical &amp; Testing Services</th><th><b>1 C.</b> ng Services</th><th>1915 N. Shiloh Dr, Suite 1 Fayetteville, Arkansas 72704 office#: 479-521-7645 Fax #: 479-521-6232</th><th></th><th></th><th>Offrice Locations Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma</th><th>× ~</th><th>Licen Arkansas Okla</th><th>Licensed in: s Missouri Oklahoma</th></t<>	GTS, Inc. Geotechnical & Testing Services	<b>1 C.</b> ng Services	1915 N. Shiloh Dr, Suite 1 Fayetteville, Arkansas 72704 office#: 479-521-7645 Fax #: 479-521-6232			Offrice Locations Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma	× ~	Licen Arkansas Okla	Licensed in: s Missouri Oklahoma
CkH Hog Farm     DATE: $1/22/13$ TESTED BY:       12-11216.007     Page1     CLIENT:     Jason Henson       M. Judca, Arkanss     CLIENT REPRESENTATIVE:     Jason Henson       M. Judca, Arkanss     CLIENT REPRESENTATIVE:     Jason Henson       Description     Location     Test Method     USCS     LI, PI       Red/Gray Fat Clay with     Description     Location     ASTM D698     N/A     64,41       Red/Gray Fat Clay with     On-Site     ASTM D698     CH     64,35     54,10       Red/Gray Fat Clay with     On-Site     ASTM D698     CH     64,35     54,10       Red/Gray Fat Clay with     On-Site     ASTM D698     CH     64,35     54,11       Red/Gray Fat Clay with     On-Site     ASTM D698     CH     64,35     54,11     51,11     54,11     54,11     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14     54,14	<u>9.www</u>	tsinc.cc	NUCLEAR DEN	ISITY REPORT	ASTM D 6938-0	8			
IJ-11216.007 Page1   CLIBNT REPRESENTATIVE: jason Henson     Mr. Judea, Arkanass   CLIBNT REPRESENTATIVE: jason Henson     Description   Location   Test Method   USCS   LL, PI     Red/Gray Fat Clay with   B-2 Bulk Grab Sample   ASTM D698   N//A   64,31     Red/Gray Fat Clay with   On-Site   ASTM D698   N//A   64,35     Procently Fat Clay with   On-Site   ASTM D698   N//A   64,35     Procently Fat Clay with   On-Site   ASTM D698   N//A   64,35     Procent LD.   Elevation   Depth of Test (in)   Wet Density.   Field Moisture %     Procent LD.   9 ft. below Finish Subgrade   8   1130.9   24.0     1   9 ft. below Finish Subgrade   8   1127.1   214   18.2     1251   5 ft. below Finish Subgrade   8   1127.1   22.4     1251   5 ft. below Finish Subgrade   8   1127.9   24.0   24.0     1251   5 ft. below Finish Subgrade   8   1127.9   27.1   23.2     1251   5 ft. below Finish Subgrade   8   1127.9	PROJECT NAME:	C&H Hog Farm		DATE:	1/23/13	TESTED BY:	Mason Drummond	START TIME:	9:30 AM
Mf. Judea, Arkansas CLIENT REPRISENTATIVE: jason Henson   Description Location Test Method USCS LJ, PI   Red/Gray Fat Clay B-2 Bulk Grab Sample ASTM D6688 N/A 64,41   Sand Description Consults ASTM D6688 N/A 64,41   Freevelly Fat Clay with On-Site ASTM D6688 CH 64,35   Freevelly Fat Clay with On-Site ASTM D6688 CH 64,35   Proctor LD. Elevation Depth of Test (in) Wet Density, Field Moisture % 94,0   1 9 ft below Finish Subgrade 8 120,9 24,0 24,0   1 9 ft below Finish Subgrade 8 124,1 18,2 24,0   1 9 ft below Finish Subgrade 8 124,1 18,2 24,0   1 9 ft below Finish Subgrade 8 114,4 26,7 26,3   1 1251 5 ft below Finish Subgrade 8 117,9 27,1 21,4   1251 5 ft below Finish Subgrade 8 114,4 26,7 26,3   1251 5 ft below Finish Subgrade 8 112,9 27,1 21,4   1251 5 ft below Finish Subgrade 8 114,4 <t< td=""><td>REPORT NO:</td><td>12-11216.007 Page 1</td><td></td><td>CLIENT:</td><td>Jason Henson</td><td></td><td></td><td>END TIME:</td><td>4:15 PM</td></t<>	REPORT NO:	12-11216.007 Page 1		CLIENT:	Jason Henson			END TIME:	4:15 PM
DescriptionLocationTest MethodUSCSLl, PIRed/Gray Fat ClayB-2 Bulk Grab Sample $ASTM D698$ $N/A$ $64,41$ Gravely Fat Clay with SandDescriptionASTM D698 $CH$ $64,35$ Gravely Fat Clay with SandOn-Site $ASTM D698$ $CH$ $64,35$ Gravely Fat Clay with SandDepth of Test (in)Wet Density.Field Moisture %Proctor LD.ElevationDepth of Test (in)Wet Density. $64,35$ Proctor LD.Photor Finish Subgrade8124.1 $18.2$ 19 ft, below Finish Subgrade8124.1 $18.2$ 119 ft, below Finish Subgrade8119.4 $26.7$ 12515 ft, below Finish Subgrade8119.4 $26.7$ 12515 ft, below Finish Subgrade8119.4 $26.3$ 12515 ft, below Finish Subgrade8119.7 $26.3$ 12515 ft, below Finish Subgrade8125.1 $22.2$ 12515 ft, below Finish Subgrade8125.1 $22.2$ 12515 ft, below Finish Subgrade8125.1 $22.2$ 12515 ft, below Finish Subgrade8125.7 $26.3$ 12515 ft, below Finish Subgrade8125.7 $26.3$ 12515 ft,	PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESEI	NTATIVE:	Jason Henson		MILEAGE:	197
Red/Gray Fat Clay with Sand B-2 Bulk Grab Sample ASTM D698 N/A 64,41   Gravely Fat Clay with On-Site ASTM D698 CH 64,35   Gravely Fat Clay with On-Site ASTM D698 CH 64,35   Field Moisture % Elevation Depth of Test (in) Wet Density, Ibs./cu.ft. Field Moisture %   1 9 ft. below Finish Subgrade 8 130.9 24.0   1 9 ft. below Finish Subgrade 8 127.1 21.4   1251 5 ft. below Finish Subgrade 8 119.4 26.7   1251 5 ft. below Finish Subgrade 8 119.4 26.7   1251 5 ft. below Finish Subgrade 8 119.4 26.7   1251 5 ft. below Finish Subgrade 8 119.4 26.7   1251 5 ft. below Finish Subgrade 8 119.7 26.3   1251 5 ft. below Finish Subgrade 8 112.9 26.3   1251 5 ft. below Finish Subgrade 8 117.9 26.7   1251 5 ft. below Finish Subgrade 8 112.9 26.3   1251 5 ft. below Finish Subgrade 8 127.1 22.2   1251 5 ft. below Finish Subgrade 8	Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density		Optimum Moisture Content
Carvely Fat Clay with SandOn-SiteASTM D698CH $64,35$ Free LayFree LayElevationDepth of Test (in)Wet Density,Field Moisture %Proctor LD. $9$ ft, below Finish Subgrade8 $130,9$ $24,0$ $24,0$ 1 $9$ ft, below Finish Subgrade8 $127,1$ $21,4$ $21,4$ 1 $9$ ft, below Finish Subgrade8 $127,1$ $21,4$ $21,4$ 1 $11$ $9$ ft, below Finish Subgrade8 $112,4$ $26,7$ $21,4$ 1 $1251$ $5$ ft, below Finish Subgrade8 $114,4$ $26,4$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade8 $117,9$ $26,3$ $21,3$ 1 $1251$ $5$ ft, below Finish Subgrade8 $117,9$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $117,9$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $112,7$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $112,7$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $112,7$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $112,7$ $26,3$ $26,4$ 1 $1251$ $5$ ft, below Finish Subgrade $8$ $112,7$ $22,2$ $22,1$ 1 $1251$ $1251$ $1251$ $2251$ $2251$ 1 $1251$ $126,4$ $8$	1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2		20.7
Proctor I.D.ElevationDepth of Test (in)Wet Density, lbs/cu.ft.Field Moisture %19 ft. below Finish Subgrade8130.924.019 ft. below Finish Subgrade8127.121.419 ft. below Finish Subgrade8124.118.212515 ft. below Finish Subgrade8119.426.712515 ft. below Finish Subgrade8119.426.312515 ft. below Finish Subgrade8119.426.312515 ft. below Finish Subgrade8119.426.312515 ft. below Finish Subgrade8119.726.312515 ft. below Finish Subgrade8129.726.312515 ft. below Finish Subgrade8129.726.312515 ft. below Finish Subgrade8125.122.212515 ft. below Finish Subgrade8129.726.312515 ft. below Finish Subgrade8129.727.112515 ft. below Finish Subgrade8129.727.112515 ft. below Finish Subgrade8129.727.112515 ft. below Finish Subgrade8129.727.112	1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	5	26.4
Proctor I.D.ElevationDepth of Test (in)Wet Density, Ibs,/cuff.Field Moisture %Ib19 (t. below Finish Subgrade8130924.00219 (t. below Finish Subgrade8127.121.4219 (t. below Finish Subgrade8127.118.2219 (t. below Finish Subgrade8124.118.2212515 (t. below Finish Subgrade8119.426.4212515 (t. below Finish Subgrade8114.426.4212515 (t. below Finish Subgrade8119.726.3212515 (t. below Finish Subgrade8125.122.1212515 (t. below Finish Subgrade8125.122.2212515 (t. below Finish Subgrade8125.122.2212515 (t. below Finish Subgrade8125.122.2212515 (t. below Finish Subgrade8125.122.2212515 (t. below Finish Subgrade8125.122.221251									
19 ft. below Finish Subgrade8130.919 ft. below Finish Subgrade8127.119 ft. below Finish Subgrade8124.112515 ft. below Finish Subgrade8119.412515 ft. below Finish Subgrade8114.412515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.7125115 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8125.115 ft. below Finish Subgrade8125.11 <t< td=""><td>Test Number</td><td>Proctor I.D.</td><td>Elevation</td><td>Depth of Test (in)</td><td>Wet Density, Ibs./cu.ft.</td><td>Field Moisture %</td><td>Dry Density, lbs./cu.ft.</td><td>In Place Compaction</td><td>Compaction Required (%)</td></t<>	Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, Ibs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
19 ft. below Finish Subgrade8127.119 ft. below Finish Subgrade8124.112515 ft. below Finish Subgrade8119.412515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8125.112515 ft. below Finish Subgrade8125.1126015125.1125.1127555128Fond #1, South K	1	1	9 ft. below Finish Subgrade	8	130.9	24.0	105.5	100.3%	95
19 ft. below Finish Subgrade8124.112515 ft. below Finish Subgrade8119.412515 ft. below Finish Subgrade8114.412515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712517125.1Location:12647125.1Location:1277125.1Location:12847125.1Location:12847125.1Location:12847125.1Location:128477125.1128477125.1128477125.1128477125.1128477125.112847125.1128477125.1128477125.1128477125.1128477125.1128477125.1128477125.1128	7	1	9 ft. below Finish Subgrade	8	127.1	21.4	104.8	90.6%	95
12515 ft. below Finish Subgrade8119.412515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8119.715 ft. below Finish Subgrade8125.115 ft. below Finish Subgrade8125.115 ft. below Finish Subgrade8125.115 ft. below Finish Subgrade8125.115 ft. below Finish Subgrade8125.1Pond #1, East Keyway, 80 ft. north of corner to South Keyway1Location:Pond #1, East Keyway, 10 ft. west of corner to South Keyway1Location:Pond #2, East Keyway, 80 ft. south of corner to North KeywayPond #2, East Keyway, 40 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North Keyway	3	1	9 ft. below Finish Subgrade	8	124.1	18.2	104.9	99.7%	95
12515 ft. below Finish Subgrade8114.412515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8125.115 ft. bould #1, East Keyway, 80 ft. north of corner to South Keyway125.11Fond #1, South Keyway, 10 ft. west of corner to South Keyway125.11Fond #2, East Keyway, 40 ft. south of corner to North Keyway1011.ED1Fond #2, East Keyway, 10 ft. south of corner to North Keyway1011.ED1Fond #2, East Keyway, 10 ft. south of corner to North Keyway1011.ED1Fond #2, East Keyway, 10 ft. south of corner to North Keyway1011.ED	4	1251	5 ft. below Finish Subgrade	8	119.4	26.7	94.2	97.7%	95
12515 ft. below Finish Subgrade8117.912515 ft. below Finish Subgrade8119.712515 ft. below Finish Subgrade8125.1Pond #1, East Keyway, 80 ft. north of corner to South Keyway125.1Location:Pond #1, East Keyway, 15 ft. north of corner to South Keyway125.1Location:Pond #1, South Keyway, 15 ft. north of corner to South KeywayPond #1, South Keyway, 10 ft. west of corner to South KeywayPond #2, East Keyway, 40 ft. south of corner to North Keyway - FAILEDPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North Keyway - FAILEDPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North Keyway - FAILEDPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North Keyway	IJ	1251	5 ft. below Finish Subgrade	8	114.4	26.4	90.5	93.9%	95
12515 ft. below Finish Subgrade8119.715 ft. below Finish Subgrade8125.1Pond #1, East Keyway, 80 ft. north of corner to South KeywayLocation:Pond #1, East Keyway, 15 ft. north of corner to South KeywayLocation:Pond #1, East Keyway, 15 ft. north of corner to South KeywayPond #1, East Keyway, 10 ft. west of corner to South KeywayPond #1, South Keyway, 10 ft. west of corner to South KeywayPond #2, East Keyway, 40 ft. south of corner to North Keyway - FAILEDPond #2, East Keyway, 40 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North KeywayPond #2, East Keyway, 10 ft. south of corner to North Keyway	9	1251	5 ft. below Finish Subgrade	8	117.9	27.1	92.8	96.3%	95
1 5 ft. below Finish Subgrade 8 125.1   Pond #1, East Keyway, 80 ft. north of corner to South Keyway Location:   Pond #1, East Keyway, 15 ft. north of corner to South Keyway Location:   Pond #1, South Keyway, 10 ft. west of corner to East Keyway Pond #1, South Keyway, 10 ft. west of corner to East Keyway   Pond #2, East Keyway, 40 ft. south of corner to North Keyway Pond #2, East Keyway, 40 ft. south of corner to North Keyway   Pond #2, East Keyway, 10 ft. south of corner to North Keyway Pond #2, East Keyway, 40 ft. south of corner to North Keyway	7	1251	5 ft. below Finish Subgrade	8	119.7	26.3	94.8	98.3%	95
Pond #1, East Keyway, 80 ft. north of corner to South Keyway Pond #1, East Keyway, 15 ft. north of corner to South Keyway Pond #1, South Keyway, 10 ft. west of corner to East Keyway Pond #2, East Keyway, 80 ft. south of corner to North Keyway - FAILED Pond #2, East Keyway, 40 ft. south of corner to North Keyway - FAILED Pond #2, East Keyway, 10 ft. south of corner to North Keyway	8	1	5 ft. below Finish Subgrade	8	125.1	22.2	102.4	97.3%	95
Pond #1, East Keyway, 80 ft. north of corner to SouthPond #1, East Keyway, 15 ft. north of corner to SouthPond #1, South Keyway, 10 ft. west of corner to East IPond #2, East Keyway, 80 ft. south of corner to NorthPond #2, East Keyway, 40 ft. south of corner to NorthPond #2, East Keyway, 10 ft. south of corner to NorthPond #2, East Keyway, 10 ft. south of corner to North	Test Number				Location:				
Pond #1, East Keyway, 15 ft. north of corner to South Pond #1, South Keyway, 10 ft. west of corner to East I Pond #2, East Keyway, 80 ft. south of corner to North Pond #2, East Keyway, 40 ft. south of corner to North Pond #2, East Keyway, 10 ft. south of corner to North	1	Pond #1, East Keyway, 8	10 ft. north of corner to South Key	rway					
Pond #1, South Keyway, 10 ft. west of corner to East I Pond #2, East Keyway, 80 ft. south of corner to North Pond #2, East Keyway, 40 ft. south of corner to North Pond #2, East Keyway, 10 ft. south of corner to North	2	Pond #1, East Keyway, 1	15 ft. north of corner to South Key	rway					
Pond #2, East Keyway, 80 ft. south of corner to North Pond #2, East Keyway, 40 ft. south of corner to North Pond #2, East Keyway, 10 ft. south of corner to North	3	Pond #1, South Keyway,	. 10 ft. west of corner to East Key	way					
Pond #2, East Keyway, 40 ft. south of corner to North Pond #2, East Keyway, 10 ft. south of corner to North	4	Pond #2, East Keyway, 8	30 ft. south of corner to North Key	yway					
Pond #2, East Keyway, 10 ft. south of corner to North	Ω	Pond #2, East Keyway, 4	10 ft. south of corner to North Key	yway - FAILED					
	9	Pond #2, East Keyway, 1	10 ft. south of corner to North Key	yway					
7 Pond #2, East Keyway, 20 ft. south of corner to North Keyway	7	Pond #2, East Keyway, 2	20 ft. south of corner to North Key	yway					
8 Pond #2, North Keyway, 15 ft. west of corner to East Keyway	8	Pond #2, North Keyway,	, 15 ft. west of corner to East Key	way					

		1915 N. Shiloh Dr. Suite 1			Office Locations		licen	l icensed in:
CTS Inc		Fayetteville, Arkansas 72704			Fayetteville, Arkansas	S	Arkansas	Missouri
Geotechnical & Testing Services	ng Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okia	Oklahoma
WWW.G	www.gtsinc.cc	NUCLEAR DENSITY REPORT ASTM D 6938-08	SITY REPORT	ASTM D 6938-0	8			
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 2		CLIENT:	Jason Henson			END TIME:	4:15 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	VTATIVE:	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	5	26.4
Test Number	Proctor I.D.	Elevation	Depth of Test (in)	Wet Density, Ibs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
6	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:				
6	Pond #1, East Keyway, 3	Pond #1, East Keyway, 30 ft. north of corner to South Key	ı Keyway					
10	Pond #1, East Keyway, 8	Pond #1, East Keyway, 80 ft. north of corner to South Key	Keyway					
11	Pond #1, East Keyway, 1	Pond #1, East Keyway, 15 ft. south of corner to North Keyway	way					
12	Pond #1, North Keyway,	Pond #1, North Keyway, 15 ft. west of corner to East Key	Keyway - FAILED					

	ſ	1915 N. Shiloh Dr. Suite 1			Office Locations		lican	eod in:
		Favetteville Arkansas 72704			Critetterville Arbance			Licensea In:
GTS Inc.	-36					20	Arkansas	Missouri
Geotechnical & Testing Services	ing Services	onice#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
<u></u>	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	80			
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:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Drv Density	L	Ontimum 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	Pond #1, South Keyway, 40 ft. west of corner to East Keyway	way					
2	Pond #1, East Keyway, 7	Pond #1, East Keyway, 15 ft. north of corner to South Keyway	rway					
3	Pond #1, East Keyway, 8	Pond #1, East Keyway, 8 ft. north of corner to South Keyway	vay					
4	Pond #2, East Keyway, 7	Pond #2, East Keyway, 70 ft. south of corner to North Keyway	yway					
5	Pond #2, East Keyway, 5	Pond #2, East Keyway, 5 ft. south of corner to North Key	Keyway					
6	Pond #2, North Keyway	Pond #2, North Keyway, 25 ft. west of corner to East Key	Keyway					
7	Pond #1, East Keyway,	Pond #1, East Keyway, 15 ft. north of corner to South Key	Keyway					
8	Pond #1, South Keyway	Pond #1, South Keyway, 30 ft. west of corner to South Keyway	yway					

		1915 N. Shiloh Dr, Suite 1			Office Locations		Licer	Licensed in:
GTS, Inc.	<b>1C.</b> Ing Services	Fayetteville, Arkansas 72704 office#: 479-521-7645 Fax #: 479-521-6232			Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma	Ø (0	Arkansas Okla	Missouri Oklahoma
<u>6.www</u>	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	8			
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:	NTATIVE:	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, Ibs./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
S	1	5 ft. below Finish Subgrade	8	123.1	19.6	102.7	97.6%	95
9	1	5 ft. below Finish Subgrade	8	122.7	16.8	105.0	8.66	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	%6.66	95
Test Number				Location:				
1	Pond #2, North Keyway	Pond #2, North Keyway, 30 ft. west of corner to East Key	Keyway					
2	Pond #2, East Keyway,	Pond #2, East Keyway, 28 ft. south of corner to North Keyway	yway					
3	Pond #1, East Keyway,	Pond #1, East Keyway, 85 ft. north of corner to South Key	Keyway					
4	Pond #1, East Keyway,	Pond #1, East Keyway, 40 ft. north of corner to South Key	l Keyway					
IJ	Pond #1, East Keyway,	Pond #1, East Keyway, 10 ft. north of corner to South Key	l Keyway					
6	Pond #1, South Keyway	Pond #1, South Keyway, 35 ft. west of corner to East Key	Keyway					
7	Pond #1, South Keyway	Pond #1, South Keyway, 10 ft. west of corner to East Key	Keyway					
8	Pond #1, East Keyway,	Pond #1, East Keyway, 95 ft. north of corner to South Keyway	way					

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CTS Inc	~	Fayetteville, Arkansas 72704			Fayetteville, Arkansas	~	Arkansas	s Missouri
Geotechnical & Testing Services	ing Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
<u>9.www</u>	www.gtsinc.cc	NUCLEAR DEN	<b>VSITY REPORT</b>	NUCLEAR DENSITY REPORT ASTM D 6938-08	8			
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:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Drv Densitv		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, Ibs./cu.ft.	Field Moisture %	Dry Density, lbs./cu.ft.	In Place Compaction	Compaction Required (%)
6	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:				
6	Pond #1, East Keyway, (	Pond #1, East Keyway, 65 ft. north of corner to South Key	Keyway					
10	Pond #1, East Keyway, 8	Pond #1, East Keyway, 8 ft. south of corner to North Keyway	way					
11	Pond #1, East Keyway, 3	Pond #1, East Keyway, 30 ft. south of corner to North Key	Keyway					
12	Pond #1, North Keyway	Pond #1, North Keyway, 30 ft. west of corner to East Key	Keyway					

	٢	1915 N. Shiloh Dr, Suite 1			Office Locations		Licen	Licensed in:
GTS, Inc. Geotechnical & Testing Services	<b>PC.</b> ng Services	Fayeuevnie, Arkansas 72/04 office#: 479-521-7645 Fax #: 479-521-6232			Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma	(0	Arkansas Okla	Missouri Oklahoma
<u>B.www</u>	www.gtsinc.cc	NUCLEAR DEN	ISITY REPORT	NUCLEAR DENSITY REPORT ASTM D 6938-08	8			
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:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	nscs	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	Pond #1, South Keyway, 30 ft. west of corner to East Keyway	way					
2	Pond #1, East Keyway, 3	Pond #1, East Keyway, 30 ft. north of corner to South Key	Keyway					
3	Pond #1, East Keyway, 9	Pond #1, East Keyway, 95 ft. north of corner to South Keyway	way					
4	Pond #2, East Keyway, 8	Pond #2, East Keyway, 80 ft. south of corner to North Keyway	way					
5	Pond #2, East Keyway, 1	Pond #2, East Keyway, 10 ft. south of corner to North Keyway	/way					

		1015 N Shiloh Dr Shite 1			Office Locatione			ioouood in:
GTS, Inc.	ıc.	Fayetteville, Arkansas 72704 office#: 479-521-7645			Fayetteville, Arkansas Fort Smith, Arkansas		Arkansas Okla	Missouri Oklahoma
Geotechnical & Testing Services	1g Services	rax #: 4/9-521-0232			I ulsa, Oklahoma			
0.WWW	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	8			
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:	VTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Dry Density	Optimum Mc	Optimum Moisture Content
1	Red/Gray Fat Clay with Sand	B-2 Bulk Grab Sample	ASTM D698	N/A	64,41	105.2	5	20.7
1251	Gravelly Fat Clay with Sand	On-Site	ASTM D698	CH	64,35	96.4	Ñ	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, 2	Pond #2, East Keyway, 25 ft. south of corner to North Key	ı Keyway					
2	Pond #2, East Keyway, 8(	Pond #2, East Keyway, 80 ft. south of corner to North Key	ı Keyway					
3	Pond #1, East Keyway, 7	Pond #1, East Keyway, 70 ft. north of corner to South Key	Keyway					
4	Pond #1, East Keyway, 1	Pond #1, East Keyway, 15 ft. north of corner to South Keyway	/way					
5	Pond #1, South Keyway,	Pond #1, South Keyway, 30 ft. west of corner to East Keyway	way					

	ſ	1915 N. Shiloh Dr. Suite 1			Office Locations		nooi 1	liconcod in:
		Fayetteville, Arkansas 72704			Fayetteville, Arkansas	0	Arkansas	Missouri
GOLOGIA INC. Geotechnical & Testing Services	<b>1C.</b> Ing Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
<u>B.www</u>	www.gtsinc.cc	NUCLEAR DEN	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	8			
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:	NTATIVE:	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, Ibs./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,	Pond #2, East Keyway, 25 ft. south of corner to North Keyway	yway					
2	Pond #2, East Keyway,	Pond #2, East Keyway, 90 ft. south of corner to North Keyway	yway					
3	East Keyway, 10 ft. sout	East Keyway, 10 ft. south of South Keyway, runs between Pond #1 and Pond #2	n Pond #1 and Pond	#2				
4	East Keyway, 20 ft. nort	East Keyway, 20 ft. north of corner to South Keyway						
5	South Keyway, 30 ft. we	South Keyway, 30 ft. west of corner to East Keyway						
9	East Keyway, 65 ft. nort	East Keyway, 65 ft. north of corner to South Keyway						
7	East Keyway, 10 ft. nort	East Keyway, 10 ft. north of corner to South Keyway						

		1915 N. Shiloh Dr. Suite 1			Office   orations			
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Fayetteville, Arkansas 72704			Fayetteville, Arkansas	(0)	Arkansas	cicerseu m: s Missouri
Geotechnical & Tosting Services	ng Servicos	office#:  479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		OKIS	Oklahoma
<u>B.www</u>	www.gtsinc.cc	NUCLEAR DE	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	8			
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 1		CLIENT:	Jason I-lenson			END TIME:	3:15 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	nscs	IT. PI	Maximum Drv Density		Ontimum Molieture 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	9 in. below Finish Grade	8	127.4	19.4	106.7	101.4%	98
2	1	9 in. below Finish Grade	~	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	ø	127.9	21.1	105.6	100.4%	98
8	r~4	Finish Grade	8	124.9	20.5	103.6	98.5%	98
Test Number				Location:				
t	Pond #1 Basin, south							
2	Pond #1 Basin, north							
¢	Pond #1, East bank inline, center	ie, center						
4	Pond #1, North bank incline, center	cline, center						
ۍ ا	Pond #1, West bank incline, center	line, center						
6	Pond #1, South bank inc	Pond #1, South bank incline near keyway, center						
7	Pond #1, East Keyway, 3	Pond #1, East Keyway, 30 ft. north of corner to South Keyway	yway					
ø	Pond #1, East Keyway, 9	Pond #1, East Keyway, 90 ft. north of corner to South Keyway	yway					

		1915 N. Shiloh Dr. Suite 1			Office Locatione			
   (		Favetteville Arkansas 72704			Equationilla Arbanaca		r-licen	Licensed in:
GTS, Inc.	1C.				rayetteville, Arkarisa	20	Arkansas	Missouri
Geotechnical & Testing Services	ng Services	Fax #: 479-521-6232			гоп Smith, Arkansas Tulsa, Oklahoma		OK	Oklahoma
<u>6.www</u>	www.gtsinc.cc	NUCLEAR DEI	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-00	~			
PROJECT NAME:	C&H Hog Farm		DATE:	2/12/13	TESTED BY:	Mason Drummond	START TIMF-	10-30 AM
REPORT NO:	12-11216.015 Page 2		CLIENT:	Jason Henson			END TIME	3:15 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	uscs	TT. PI	Maximum Drv Density		Ontimum Maisture 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 (%)
6	1	Finish Grade	8	127.1	22.4	103.8	98.7%	98
10	<b>P</b> -r4	Finish Grade	s	128.4	22.4	104.9	99.7%	98
ΙΙ	pre.	Finish Grade	8	126.3	18.7	106.4	101.1%	98
12	1	Finísh Grade	ø	135.4	24.7	108.6	103.2%	98
13	1	Finish Grade	\$	126.1	21.0	105.1	%6.66	98
14		Finish Grade	×	127.6	21.8	104.8	99.6%	98
15	1	Finish Grade	~	128.5	20.9	106.3	101.0%	98
Test Number				Location:				
6	Pond #1, East Keyway, 3	Pond #1, East Keyway, 30 ft. north of corner to South Keyway	yway					
10	Pond #1, east pond bank incline, center	incline, center						
11	Pond #1, south pond bank incline, center	ık incline, center						
12	Pond #1, west pond bank incline, center	s incline, center						
13	Pond #1, north pond bank incline, center	lk incline, center						
14	Pond #1 basin, north side	0			-			
15	Pond #1 basin, south side							

	ſ	1915 N. Shiloh Dr, Suite 1			Office Locations		Licer	Licensed in:
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Geotachnicul & Tasting Servicas	ng Services	omce#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Ŏ	Okiahoma
<u>WWW.</u>	<u>www.gtsinc.cc</u>	NUCLEAR DEN	ISITY REPORT	ENSITY REPORT ASTM D 6938-08	œ			
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 1		CLIENT:	Jason Henson			END TIME:	11:45 AM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE	197
Proctor ID	Description	Location	Test Method	USCS	TL. PI	Maximim Drv Densih		Ontimum Moieture 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, Ibs./cu.ft.	Field Moisture %	Dry Density, Ibs./cu.ft.	In Place Compaction	Compaction Required (%)
1	1251	9 in. below Finish Subgrade	8	125.6	25.9	2.66	103.4%	86
2	1251	9 in. below Finish Subgrade	×	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
-at	1251	9 in. below Finish Subgrade	8	121.6	26.2	96.3	%6.66	98
S	1251	9 in. below Finish Subgrade	8	121.5	25.1	1.79	100.7%	98
é	1251	9 in. below Finish Subgrade	8	121.0	25.7	96.3	%6`66	98
4	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	%6.66	98
Test Number				Location:				
1	Pond #2, south pond bank	nk						
2	Pond #2, east pond bank on south side	k on south side						
Э	Pond #2, east pond bank on north side	k on north side						
4	Pond #2, north pond bank	nk						
IJ.	Pond #2, west pond bank on north side	ık on north side						
6	Pond #2, pond base, northwest section	rthwest section						
2	Pond #2, pond base, middle section, east side	ddle section, east side						
8	Pond #2, pond base, south section, east side	tth section, east side						

GTS, Inc. Geotechnical & Tosting Services	I C. 19 Services	1915 N. Shiloh Dr, Suite 1 Fayetteville, Arkansas 72704 office#: 479-521-7645 Fax #: 479-521-6232			Office Locations Fayetteville, Arkansas Fort Smith, Arkansas Tulsa, Oklahoma	8 0	Licen Arkansas Okla	Licensed in: s Missouri Oklahoma
<u>D.WWW</u>	www.gtsinc.cc	NUCLEAR DENSITY REPORT ASTM D 6938-08	<b>ISITY REPORT</b>	ASTM D 6938-0	8			
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:	NTATIVE:	Jason Henson		MILEAGE	197
Proctor ID	Description	Location	Test Method	USCS	LL, PI	Maximum Drv Densitv		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, Ibs./cu.ft.	In Place Compaction	Compaction Required (%)
6	1251	9 in. below Finish Subgrade	8	125.1	26.5	98.86	102.5%	98
Test Number				Location:				
6	Pond #2, west pond bank, south section	k, south section						

	ſ	1915 N. Shiloh Dr, Suite 1			Office Locations		Licen	Licensed in:
CTS Inc	~	Fayetteville, Arkansas 72704			Fayetteville, Arkansas	S	Arkansas	Missouri
Geotechnical & Testing Services	ng Services	office#:  479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma	<i>(</i> 0	Okla	Oklahoma
<u>p.www</u>	www.gtsinc.cc	NUCLEAR DE	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-0	80			
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:	NTATIVE:	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, Ibs./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
S	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	on south side						
2	Pond #2, east pond bank on north side	on north side						
3	Pond #2, pond base, northwest section	hwest section						
4	Pond #2, north pond bank	k						
5	Pond #2, east pond bank on north side	on north side						
9	Pond #2, pond base, middle section, east side	dle section, east side						
7	Pond #2, east pond bank on south side	on south side						
8	Pond #2, south pond bank	k						

1		1915 N. Shiloh Dr, Suite 1 Fayetteville, Arkansas 72704			Office Locations Fayetteville, Arkansas		Licen	Licensed in: s Missouri
GIS, INC. Geotechnical & Testing Services	1 C. 19 Services	office#: 479-521-7645 Fax #: 479-521-6232			Fort Smith, Arkansas Tulsa, Oklahoma		Okla	Oklahoma
D.WWW	www.gtsinc.cc	NUCLEAR DEI	NUCLEAR DENSITY REPORT ASTM D 6938-08	ASTM D 6938-08	8			
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 2		CLIENT:	Jason Henson			END TIME:	2:00 PM
PROJECT LOCATION:	Mt. Judea, Arkansas		CLIENT REPRESENTATIVE:	NTATIVE:	Jason Henson		MILEAGE:	197
Proctor ID	Description	Location	Test Method	nscs	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 (%)
6	1251	Finish Subgrade	8	124.8	27.5	97.9	101.6%	98
Test Number				Location:				
6	Pond #2, pond base, southwest section	hwest section						

## 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. 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