



November 13, 2013

Mr. Bart Robinson, P.E.  
City of Oxford  
107 Courthouse Square  
Oxford, MS 38655

Re: Change Order No. 2  
Biosolids Land Farming Project  
Contract No. 2 – Lime Soil Treatment  
Briscoe & Sons Farm  
Lafayette County, MS

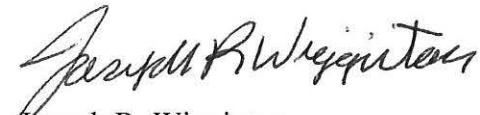
Dear Mr. Robinson:

The results for the 2013 pre-soil sampling activities, conducted by W.L. Burle, Engineers, P.A. (BURLE), for farm numbers 3, 5, 6, and 9 were determined to have a pH ranging from 5.0 to 5.7. The Land application permit (MDEQ Permit Number SW0360030558) requires the pH of each receiving field to be maintained at or above a pH of 6.5. Lime shall only be applied and incorporated on a field-by-field/as needed basis prior to the application of biosolids. Attached please find a CHANGE ORDER and associated data for the City's approval.

If you have any questions, please feel free to call.

Sincerely,

W. L. BURLE, ENGINEERS, P.A.

  
Joseph R. Wigginton

Enclosures

pc. Mr. William L. Burle, Jr., Ph.D., P.E., P.G.

**CHANGE ORDER**

Order No. 2

Date: 11-13-2013

Agreement Date: June 14, 2012

NAME OF PROJECT: Biosolids Land Farming Project, Contract No. 2 - Lime Soil Treatment

OWNER: City of Oxford, MS

CONTRACTOR: Sludge Technology, Inc.

The following changes are hereby made to the CONTRACT DOCUMENTS:

An additional 210 tons of lime is needed to raise pH levels to the required MDEQ regulations (See Lime Soil Treatment Map 2013 Attached). The fields requiring lime are as follows: Farm Field No. 3 (7.9 acres / pH5.5 / ~1 ton/acre), Farm Field No. 5 (88.6 acres / pH 5.4 / ~1 ton/acre), Farm Field No. 6 (19.7 acres / pH 5.0 / ~2 ton/acre), and Farm Field No. 9 (71.1 acres / pH 5.7 / ~1 ton/acre). Lime shall only be applied and incorporated to the above fields on a field-by-field/as-needed basis and ahead of the application of biosolids. The above fields which do not receive biosolids this application period, will not receive lime treatment.

Justification:

The results during the 2013 pre-soil sampling activities for farm numbers 3, 5, 6, and 9 were determined to have a pH ranging from 5.0 to 5.7 (See Lab Analysis Attached). The land application permit (MDEQ Permit Number SW0360030558) requires the pH of each receiving field to be maintained at or above a pH of 6.5.

Change to CONTRACT PRICE:

Original CONTRACT PRICE \$ 25,000.00 (500 tons at contract rate of \$50.00/ton)

Current CONTRACT PRICE adjusted by previous CHANGE ORDER(S) \$ 27,750.00

The CONTRACT PRICE due to this CHANGE ORDER will be [ increased] [ decreased] by \$ 10,500.00 (210 tons at contract rate of \$50.00/ton)

The CONTRACT PRICE including this change order will be \$ 38,250.00


Change to CONTRACT TIME:


The CONTRACT TIME will be [ increased] [ decreased] by N/A calendar days.

The date for completion of all work will be on or before 2/28/2013 for Contract No. 2 [Date].

Approvals Required:

To be effective this Order must be approved by the OWNER if it changes the scope or objective of the PROJECT, or as may otherwise be required to by the SUPPLEMENTAL GENERAL CONDITIONS.

Recommended by:  W.L. Burle, Engineers, P.A.

Accepted by:  Sludge Technology, Inc.

OWNER Approval: \_\_\_\_\_ City of Oxford, MS



235 Highpoint Drive, Ridgeland, MS 39157 Phone: 601.957.2676 Fax: 601.957.1887

10/29/2013

W.L. Burle Engineers, P.A.  
Mr. William Burle, Jr.  
111 South Walnut Street  
Greenville, MS, 38701

Ref: Analytical Testing  
Argus Report Number: 13-291-0201  
Client Project Description: City of Oxford  
Biosolids Land Farm Project

Dear Mr. William Burle, Jr.:

Argus Analytical Laboratories, Inc. received sample(s) on 10/18/2013 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Zhongxin Ma, Ph.D.  
Technical Director

*Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.*



235 Highpoint Drive, Ridgeland, MS 39157 Phone: 601.957.2676 Fax: 601.957.1887

00114

W.L. Burle Engineers, P.A.  
Mr. William Burle, Jr.  
111 South Walnut Street  
Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date: 10/29/2013  
Received: 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number: 13-291-0201

**REPORT OF ANALYSIS**

Lab No: 88217  
Sample ID: Farm #1 CS-1 @ 6"

Matrix: Solids  
Sampled: 10/14/2013 11:33

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	6.7	s.u.		1	10/28/13 16:05	DBM	SW-9045C

**Qualifiers/Definitions** \* Outside QC limit DF Dilution Factor  
 MQL Method Quantitation Limit



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Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date : 10/29/2013  
Received : 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number : **13-291-0201**

**REPORT OF ANALYSIS**

Lab No : **88218**  
Sample ID : **Farm #2 CS-2 @ 6"**

Matrix: **Solids**  
Sampled: **10/14/2013 12:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
pH	6.4	s.u.		1	10/28/13 16:05	DBM	SW-9045C

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**Qualifiers/ Definitions**      \*      Outside QC limit      DF      Dilution Factor  
    MQL      Method Quantitation Limit



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Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date: 10/29/2013  
Received: 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number: 13-291-0201

**REPORT OF ANALYSIS**

Lab No: 88219  
Sample ID: Farm #3 CS-3 @ 6"

Matrix: Solids  
Sampled: 10/14/2013 13:27

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	5.5	s.u.		1	10/28/13 16:05	DBM	SW-9045C

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**Qualifiers/Definitions** \* Outside QC limit DF Dilution Factor  
 MQL Method Quantitation Limit



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Mr. William Burle, Jr.  
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Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date: 10/29/2013  
Received: 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number: **13-291-0201**

**REPORT OF ANALYSIS**

Lab No: **88220**  
Sample ID: **Farm #4 CS-4 @ 6"**

Matrix: **Solids**  
Sampled: **10/14/2013 13:59**

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	6.6	s.u.		1	10/28/13 16:05	DBM	SW-9045C

**Qualifiers/  
Definitions**

\*  
MQL Outside QC limit  
Method Quantitation Limit

DF Dilution Factor



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Mr. William Burle, Jr.  
111 South Walnut Street  
Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date : 10/29/2013  
Received : 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number : **13-291-0201**

**REPORT OF ANALYSIS**

Lab No : **88221**  
Sample ID : **Farm #5 CS-5 @ 6"**

Matrix: **Solids**  
Sampled: **10/14/2013 16:45**

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	5.4	s.u.		1	10/28/13 16:05	DBM	SW-9045C

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**Qualifiers/** \* Outside QC limit DF Dilution Factor  
**Definitions** MQL Method Quantitation Limit





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00114

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Mr. William Burle, Jr.  
111 South Walnut Street  
Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date: 10/29/2013  
Received: 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number: 13-291-0201

**REPORT OF ANALYSIS**

Lab No: 88222  
Sample ID: Farm #6 CS-6 @ 6"

Matrix: Solids  
Sampled: 10/14/2013 16:52

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	5.0	s.u.		1	10/28/13 16:05	DBM	SW-9045C

**Qualifiers/Definitions** \* Outside QC limit DF Dilution Factor  
 MQL Method Quantitation Limit



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00114

W.L. Burle Engineers, P.A.  
Mr. William Burle, Jr.  
111 South Walnut Street  
Greenville, MS 38701

Project City of Oxford  
Information: Biosolids Land Farm Project

Report Date: 10/29/2013  
Received: 10/18/2013

Zhongxin Ma, Ph.D.  
Technical Director

Report Number: 13-291-0201

**REPORT OF ANALYSIS**

Lab No: 88223  
Sample ID: Farm #9 CS-9 @ 6"

Matrix: Solids  
Sampled: 10/14/2013 15:05

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
pH	5.7	s.u.		1	10/28/13 16:05	DBM	SW-9045C

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**Qualifiers/Definitions** \* Outside QC limit DF Dilution Factor  
 MQL Method Quantitation Limit



235 Highpoint Drive, Ridgeland, MS 39157 Phone: 601.957.2676 Fax: 601.957.1867

### Cooler Receipt Form

Customer Number: **00114**

Customer Name: **W.L. Burle Engineers, P.A.**

Report Number: **13-291-0201**

#### Shipping Method

Fed Ex    UPS    US Postal    Client    Lab    Courier    Other :

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)		<input type="checkbox"/> Low concentration EnCore samplers (48 hr)	
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)		<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)	
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Any regulatory non-compliance issues will be recorded on non-compliance report.

Signature:

Date & Time:

**SAMPLE CHAIN OF CUSTODY RECORD**

**W. L. BURLE ENGINEERS, P.A.**

111 South Walnut Street  
GREENVILLE, MS 38701

Client: CITY OF OXFORD  
OXFORD, MS

Project Description: BIO SOLIDS LAND FARMING PROJECT ATTN: ARGUS



W.L. Burle Engineers, P.A.  
City of Oxford

13-291-0201  
00114  
10-18-2013  
08:50:32

Joseph R. Wigginton / Joseph R. Wigginton  
Sampler (Signature)

PH

Page 1 of 1

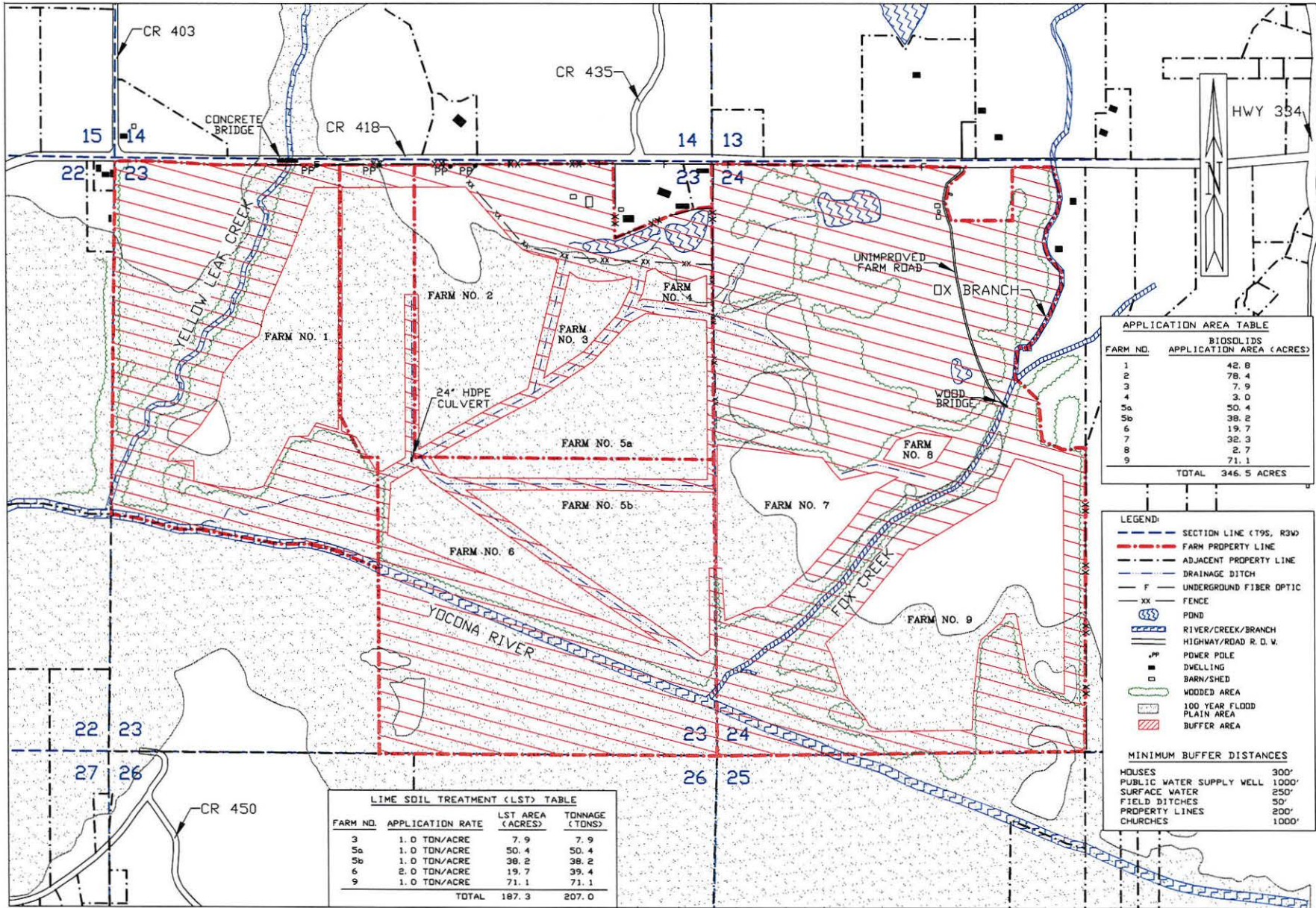
STATION	DATE	TIME (Military)	SAMPLE DESCRIPTION	REMARKS:
FARM No. 1 CS-1 @ 6"	10/14/13	11:33	1-4oz. soil (glass)	
FARM No. 2 CS-2 @ 6"		12:45		
FARM No. 3 CS-3 @ 6"		13:27		
FARM No. 4 CS-4 @ 6"		13:59		
FARM No. 5 CS-5 @ 6"		16:45		
FARM No. 6 CS-6 @ 6"		16:52		
FARM No. 9 CS-9 @ 6"		15:05		

Relinquished by (Signature): <u>Joseph R. Wigginton</u>	Date (Military): <u>10/15/13</u>	Time (Military): <u>9:42</u>	Received by (Signature): <u>[Signature]</u>	Date (Military): <u>10/15/13</u>	Time (Military): <u>9:42</u>	Relinquished by (Signature): <u>[Signature]</u>	Date (Military): <u>10/18/13</u>	Time (Military): <u>8:13</u>	Received by (Signature): <u>KAREN DENNEY</u>	Date (Military): <u>10/18/13</u>	Time (Military): <u>8:13</u>
Relinquished by (Signature):	Date (Military):	Time (Military):	Received by (Signature):	Date (Military):	Time (Military):	REMARKS:					

ORIGINAL WHITE - REPORT  
YELLOW COPY - LABORATORY  
PINK COPY - ENGINEER

4400

Page 10 of 10



**APPLICATION AREA TABLE**

FARM NO.	BIOSOLIDS APPLICATION AREA (ACRES)
1	42.8
2	78.4
3	7.9
4	3.0
5a	50.4
5b	38.2
6	19.7
7	32.3
8	2.7
9	71.1
<b>TOTAL</b>	<b>346.5 ACRES</b>

**LEGEND:**

- SECTION LINE (T9S, R3W)
- FARM PROPERTY LINE
- ADJACENT PROPERTY LINE
- DRAINAGE DITCH
- F- UNDERGROUND FIBER OPTIC
- XX- FENCE
- POND
- RIVER/CREEK/BRANCH
- HIGHWAY/ROAD R. D. V.
- PP POWER POLE
- DWELLING
- BARN/SHED
- WOODED AREA
- 100 YEAR FLOOD PLAIN AREA
- BUFFER AREA

**MINIMUM BUFFER DISTANCES**

HOUSES	300'
PUBLIC WATER SUPPLY WELL	1000'
SURFACE WATER	250'
FIELD DITCHES	50'
PROPERTY LINES	200'
CHURCHES	1000'

**LIME SOIL TREATMENT (LST) TABLE**

FARM NO.	APPLICATION RATE	LST AREA (ACRES)	TONNAGE (TONS)
3	1.0 TDN/ACRE	7.9	7.9
5a	1.0 TDN/ACRE	50.4	50.4
5b	1.0 TDN/ACRE	38.2	38.2
6	2.0 TDN/ACRE	19.7	39.4
9	1.0 TDN/ACRE	71.1	71.1
<b>TOTAL</b>		<b>187.3</b>	<b>207.0</b>

**W. L. BURLE**  
**ENGINEERS, P. A.**  
 100 Commerce Drive, Suite A  
 Oxford, MS 38655

BIOSOLIDS LANDFARMING PROJECT  
 BRISCOE AND SONS FARMS  
 CITY OF OXFORD  
 LAFAYETTE COUNTY, MISSISSIPPI

Burle Proj. No.:  
 06960-2-0111  
 File Name:  
 oxfordlandapp.dwg  
 Date: 11-4-2013  
 Drawn by: JRW  
 Checked: WLBUR  
 Scale: 1" = 800'

LIME SOIL TREATMENT MAP  
 2013

1  
 Drawing Number