

Asbestos in Soil Survey Report

Davidson Depot
301 Depot Street
Davidson, North Carolina

June 17, 2016

Terracon Project No. 71155040



Prepared for:

Miller-Valentine Residential Development LLC
Davidson Depot LLC
Cincinnati, OH

Prepared by:

Terracon Consultants, Inc.
Charlotte, North Carolina

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials

received 8/11/2016

June 17, 2016

Terracon

Miller-Valentine Residential Development LLC
Davidson Depot LLC
9349 Waterstone Boulevard
Cincinnati, Ohio 45249

Attn: Charles Rulick
P: [980] 613-8109

Re: Asbestos in Soil Survey Report
Davidson Depot
301 Depot Street
Davidson, North Carolina
Terracon Project No. 71155040

Dear Mr. Rulick:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the above referenced site to Miller-Valentine Residential Development LLC and Davidson Depot LLC. The purpose of this report is to present the results of an asbestos in soil survey performed between July 27-29, 2015 and September 9-10, 2015. This survey was conducted in general accordance with our proposal number P71150239 July 17, 2015. We understand that this survey was requested due to planned development on the above referenced property.

Asbestos was identified in samples of soil at various depths throughout the project site. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide this service to Miller-Valentine Residential Development LLC and Davidson Depot LLC. If you have any questions regarding this report please contact the undersigned at 704-509-1777.

Sincerely,
Terracon Consultants, Inc.


Alex Manzanarez
Project Manager, EH&S


Michael W. Schrum, P.E.
Authorized Project Reviewer

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Materials

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ASBESTOS IN SOIL SURVEY REPORT

Davidson Depot

301 Depot Street

Davidson, North Carolina

Terracon Project No. 71155040

June 17, 2016

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos in soil survey of the above referenced site in Davidson, North Carolina. The survey was conducted between July 27-29, 2015 and September 9-10, 2015 by a North Carolina accredited asbestos inspector in general accordance with Terracon Proposal No. P71150239 dated July 30, 2015 and supplemental proposal numbers P71150239r1a and P71150239r2 dated August 20, 2015 and September 25, 2015 and asbestos sampling necessary to characterize the extent of asbestos contamination present at the Davidson Depot site.

We understand this asbestos survey was requested due to the planned development of the above referenced site to address potential asbestos soil contamination.

1.1 Reliance

This report is for the exclusive use of Miller-Valentine Residential Development LLC and Davidson Depot LLC for the project being discussed. Reliance by any other party on this report is prohibited without written authorization of Terracon and Miller-Valentine Residential Development LLC and Davidson Depot LLC. Reliance on this report by Miller-Valentine Residential Development LLC and Davidson Depot LLC and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, this report and Terracon's Agreement for Services. The limitations of liability defined in Terracon's Agreement for Services is the aggregate limit of Terracon's liability to Miller-Valentine Residential Development LLC and Davidson Depot LLC.

2.0 LAND DESCRIPTION

This site is located at 301 Depot Street in Davidson, North Carolina. This property includes the existing buildings, parking areas, abandoned building foundations, and a capped landfill area previous reported to contain asbestos debris. Manicured grass and asphalt parking and drive way areas also are located on the site. The site is bound by Depot Street, Sloan Street and Eden Street with a railroad right of way on the east side of the property. The site generally slopes from a high of 814 feet on the eastern portion of the site to a low of 780 feet on the western portion of the site. The landfill area is an approximate elevation of 800 feet.

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3.0 FIELD ACTIVITIES

The survey was conducted by North Carolina accredited asbestos inspector Alex Manzanarez (Accreditation No. 12617). The survey was conducted in general accordance with the sample collection protocols established in USEPA 40 CFR Part 763 Subpart E 763.86, AHERA and industry practices. A summary of survey activities is provided below.

3.1 Visual Assessment

Survey activities were initiated with visual observation of the property to identify areas suspected of having deposits of asbestos debris. Terracon picked different locations to test the soil inside of the area that will be developed. Areas currently planned for significant undercut by the current development plan were specifically targeted. Terracon also chose locations that were not expected to have deposits of asbestos debris for comparison.

3.2 Physical Assessment

A physical assessment of each sample location of suspect asbestos-containing materials (ACM) was conducted to assess the friability and condition of the materials. A friable material is defined by the USEPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.3 Sample Collection

Based on results of the visual observation of the soil borings, bulk soil samples of suspect ACM were collected in general accordance with USEPA AHERA and industry accepted sampling protocols. Please refer to the attached drawing (A-2A) in Appendix C for sample locations.

The selection of sample locations and frequency of sampling were based on Terracon's observations and the assumption that like materials in the same area are homogeneous in content.

Terracon collected forty-four (44) soil samples from nineteen (19) areas of suspect ACM on the site. A summary of suspect ACM samples collected during the survey is included as Appendix B.

3.4 Sample Analysis

Soil samples were submitted under chain of custody to EMSL Analytical, Inc. (EMSL) of Cinnaminson, New Jersey for analysis by ASTM D7521: Standard Test Method for the

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Determination of Asbestos in Soil. The percentage of asbestos, where applicable, was determined by weighted asbestos concentration.

4.0 REGULATORY OVERVIEW

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. The asbestos NESHAP regulation also requires the identification and classification of existing ACM according to friability prior to demolition or renovation activity. Friable ACM is a material containing more than 1% asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. All friable ACM is considered regulated asbestos containing material (RACM).

The asbestos NESHAP regulation classifies ACM as either RACM, Category I non-friable ACM or Category II non-friable ACM. RACM includes all friable ACM, along with Category I and Category II non-friable ACM that has become friable, will be or has been subjected to sanding, grinding, cutting or abrading, or ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder in the course of renovation or demolition activity. Category I non-friable ACM are exclusively asbestos-containing packings, gaskets, resilient floor coverings, resilient floor covering mastics and asphalt roofing products that contain more than 1% asbestos. Category II non-friable ACM are all other non-friable materials other than Category I non-friable ACM that contain more than 1% asbestos. Category II non-friable ACM generally includes but is not limited to cementitious material such as: cement pipes, cement siding, cement panels, glazing, mortar and grouts.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. States which administer their own federally-approved state OSHA programs may require additional precautions.

In the state of North Carolina, the Health Hazards Control Unit (HHCUC) regulates asbestos activities. The NC HHCUC requires that any asbestos-related activity conducted in a public building be performed by personnel licensed by NC HHCUC. RACM must be removed prior to renovation or demolition activities which will disturb the materials. The owner or operator must provide the NC HHCUC with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by a State of North Carolina licensed asbestos abatement contractor. In addition, third party air monitoring must be performed following the abatement.

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5.0 FINDINGS

Asbestos was identified in soil samples of varying depths throughout the site. Please refer to Appendix A for specific borings, sample depths and sample locations. Boring logs are included in Appendix D.

Based on the results of the asbestos sampling at this site, Terracon recommends that soil contaminated with asbestos, if excavated, be removed and disposed as an asbestos-containing material. Excavation and grading on the site should be performed by an experienced asbestos abatement contractor using North Carolina accredited asbestos workers and supervisors. Specific technical work procedures and an asbestos monitoring plan should be developed for this work. Terracon also recommends that once the asbestos soil removal is complete, a geotextile liner could be installed with a minimum 12" cap of clean soil. The geotextile liner would serve as a demarcation point between clean and potentially asbestos-contaminated soil.

6.0 LIMITATIONS/GENERAL COMMENTS

This asbestos soil survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the land for development. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by Miller-Valentine Residential Development LLC and Davidson Depot LLC for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied, is made.

APPENDIX A

SOIL BORING AND ASBESTOS SOIL SAMPLING RESULTS

Soil Boring and Asbestos Soil Sampling Results

AUGUST 4, 2015 and AUGUST 5, 2016

Boring Locations	Asbestos Sample Number	Asbestos Sample Depth	Analytical Results (Weighted Concentration)
B1	1-1	1 – 2 ^{1/2}	37% Chrysotile
B1	1-2	3 ^{1/2} – 5	21% Chrysotile
B2	2-1	1 – 2 ^{1/2}	19% Chrysotile
B2	2-2	6 – 7 ^{1/2}	21% Chrysotile
B7	3-1	1 – 2 ^{1/2}	0.68% Chrysotile
B7	3-2	8 ^{1/2} - 10	None Detected
B5	4-1	3 ^{1/2} - 5	None Detected
B5	4-2	18 ^{1/2} – 20	None Detected
B6	5-1	1 – 2 ^{1/2}	14% Chrysotile
B6	5-2	13 ^{1/2} – 15	None Detected
B8	6-1	6 - 7 ^{1/2}	<0.25% Chrysotile
B8	6-2	18 ^{1/2} – 20	None Detected
B4	7-1	3 ^{1/2} – 5	None Detected
B4	7-2	13 ^{1/2} - 15	None Detected
B7	8-1	13 ^{1/2} – 15	<0.25% Chrysotile
B7	8-2	23 ^{1/2} – 25	None Detected
B3	9-1	1 – 2 ^{1/2}	72% Chrysotile
B3	9-2	3 ^{1/2} – 5	72% Chrysotile
B3	9-3	8 ^{1/2} – 10	52% Chrysotile
B3	9-4	28 ^{1/2} – 30	<0.25% Chrysotile
B3	9-5	18 ^{1/2} – 20	1% Chrysotile

Soil Boring and Asbestos Soil Sampling Results

SEPTEMBER 15, 2015 THROUGH SEPTEMBER 18, 2015

Boring Locations	Asbestos Sample Number	Asbestos Sample Depth	Analytical Results (Weighted Concentration)
B15	1-1	1 – 2 ^{1/2}	2% Chrysotile
B15	1-2	3 ^{1/2} – 5	None Detected
B16	2-1	1 – 2 ^{1/2}	32% Chrysotile
B16	2-2	3 ^{1/2} – 5	69% Chrysotile
B16	2-3	8 ^{1/2} – 10	53% Chrysotile
B14	3-1	3 ^{1/2} – 5	42% Chrysotile
B14	3-2	8 ^{1/2} – 10	82% Chrysotile
B17	4-1	1 – 2 ^{1/2}	66% Chrysotile
B17	4-2	8 ^{1/2} – 10	5% Chrysotile
B18	5-1	1 – 2 ^{1/2}	4% Chrysotile
B18	5-2	3 ^{1/2} – 5	57% Chrysotile
B13	6-1	1 – 2 ^{1/2}	69% Chrysotile
B13	6-2	6 – 7 ^{1/2}	None Detected
B12	7-1	1 – 2 ^{1/2}	56% Chrysotile
B12	7-2	13 ^{1/2} – 15	5% Chrysotile
B11	8-1	1 – 2 ^{1/2}	48% Chrysotile
B-11	8-2	6 – 7 ^{1/2}	7% Chrysotile
B19	9-1	1 – 2 ^{1/2}	1% Chrysotile
B19	9-2	3 ^{1/2} – 5	<0.25% Chrysotile
B10	11-1	1 – 2 ^{1/2}	21% Chrysotile
B10	11-2	8 ^{1/2} – 10	None Detected
B9	12-1	1 – 2 ^{1/2}	None Detected
B9	12-2	3 ^{1/2} - 5	None Detected

APPENDIX B

ASBESTOS LABORATORY ANALYTICAL DATA

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone: (800) 220-3675 Fax: (856) 858-1292
 Email: WestmontAsbLab@emsl.com

EMSL Reference: 041522986
 Customer ID: TITA52
 Customer PO:
 Project ID: Davidson Soil Sampling

Attn: ALEX MANZANAREZ
 TERRACON CONSULTANTS, INC.
 2020 STARITA ROAD
 SUITE E
 CHARLOTTE, NC 28206

Phone : 704-264-9287
Fax : 704-594-8910
Date Received : 8/3/2015
Date Analyzed : 8/4/2015-08/5/2015
Date Reported : 8/12/2015

Project: DAVIDSON SOIL SAMPLING

ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil Summary Report

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	TEM Qualitative Fine	TEM Quantitative Fine Str/ μ g
		Coarse	Medium	Fine			
1-1 041522986-0001 B1 1-2 1/2	Chrysotile	80%	25%	0.75%	37%	N/A	N/A
1-2 041522986-0002 B1 3 1/2-5	Chrysotile	25%	20%	1.5%	21%	N/A	N/A
2-1 041522986-0003 B2 1-2 1/2	Chrysotile	30%	35%	1.25%	19%	N/A	N/A
2-2 041522986-0004 B2 6-7 1/2	Chrysotile	30%	20%	0.75%	21%	N/A	N/A
3-1 041522986-0005 B7 1-2 1/2	Chrysotile	<1%	2%	ND	0.68%	N/A	N/A
3-2 041522986-0006 B7 8 1/2-10		ND	ND	ND	None Detected	None Detected	N/A
4-1 041522986-0007 B5 3 1/2-5		ND	ND	ND	None Detected	None Detected	N/A
4-2 041522986-0008 B5 18 1/2-20		ND	ND	ND	None Detected	None Detected	N/A
5-1 041522986-0009 B6 1-2 1/2	Chrysotile	15%	15%	1.25%	14%	N/A	N/A
5-2 041522986-0010 B6 13 1/2-15		ND	ND	ND	None Detected	None Detected	N/A

Comment: Vermiculite Present in Sample

Analyst(s)

Will DiBella Jill Yurick
 Andrew Castellano Nancy Stalter
 Peter Harrison

Benjamin Ellis, Laboratory Manager
 or other approved signatory

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Date Received : 8/3/2015
Date Analyzed : 8/4/2015-08/5/2015
Date Reported : 8/12/2015

Project: DAVIDSON SOIL SAMPLING

ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil Summary Report

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	TEM Qualitative Fine	TEM Quantitative Fine Str/ μ g
		Coarse	Medium	Fine			
6-1 041522986-0011 B8 6-7 1/2	Chrysotile	<1%	<1%	ND	<0.25%	None Detected	N/A
6-2 041522986-0012 B8 18 1/2-20		ND	ND	ND	None Detected	None Detected	N/A
7-1 041522986-0013 B4 3 1/2-5		ND	ND	ND	None Detected	None Detected	N/A
7-2 041522986-0014 B4 13 1/2-15		ND	ND	ND	None Detected	None Detected	N/A
8-1 041522986-0015 B7 13 1/2-15	Chrysotile	2%	ND	ND	<0.25%	N/A	N/A
8-2 041522986-0016 B7 23 1/2-25		ND	ND	ND	None Detected	None Detected	N/A
9-1 041522986-0017 B3 1- 2 1/2	Chrysotile	75%	80%	1.25%	72%	N/A	N/A
9-2 041522986-0018 B3 3 1/2-5	Chrysotile	80%	45%	1.75%	72%	N/A	N/A
9-3 041522986-0019 B3 8 1/2-10	Chrysotile	60%	50%	0.75%	52%	N/A	N/A
9-4 041522986-0020 B3 28 1/2-30	Chrysotile	<1%	<1%	ND%	<0.25%	None Detected	N/A

Analyst(s)
 Will DiBella Jill Yurick
 Andrew Castellano Nancy Stalter
 Peter Harrison

Benjamin Ellis, Laboratory Manager
 or other approved signatory

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Phone : 704-264-9287
Fax : 704-594-8910
Date Received : 8/3/2015
Date Analyzed : 8/4/2015-08/5/2015
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Project: DAVIDSON SOIL SAMPLING

**ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil
Summary Report**

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	TEM Qualitative Fine	TEM Quantitative Fine Str/ μ g
		Coarse	Medium	Fine			
9-5 041522986-0021 B3 18 1/2-20	Chrysotile	<1%	2%	<0.25%	1%	N/A	N/A

Analyst(s)

Will DiBella Jill Yurick
Andrew Castellano Nancy Stalter
Peter Harrison

Benjamin Ellis, Laboratory Manager
or other approved signatory

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Fax : 704-594-8910
Date Received : 09/11/2015 09:40am
Date Analyzed : 9/15/2015-09/18/2015
Date Reported : 10/2/2015

Project: 301 Depot Street

ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil Summary Report

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	*PLM Asbestos Concentration >19mm Fraction	TEM Qualitative Fine
		Coarse	Medium	Fine			
1-1 041527465-0001 B15 1 - 2 1/2	Chrysotile	3%	2%	<0.25%	2%	N/A	N/A
1-2 041527465-0002 B15 3 1/2 - 5	None Detected	ND	ND	ND	None Detected	N/A	Chrysotile
2-1 041527465-0003 B16 1 - 2 1/2	Chrysotile	25%	55%	2.25%	32%	N/A	N/A
2-2 041527465-0004 B16 3 1/2 - 5	Chrysotile	75%	80%	9.25%	69%	N/A	N/A
2-3 041527465-0005 B16 8 1/2 - 10	Chrysotile	55%	60%	3.25%	53%	100%	N/A
3-1 041527465-0006 B14 3 1/2 - 5	Chrysotile	40%	60%	0.75%	42%	3%	N/A
3-2 041527465-0007 B14 8 1/2 - 10	Chrysotile	90%	60%	2.5%	82%	80%	N/A
4-1 041527465-0008 B17 1 - 2 1/2	Chrysotile	80%	50%	3%	66%	85%	N/A
4-2 041527465-0009 B17 8 1/2 - 10	Chrysotile	15%	5%	ND	5%	N/A	N/A
5-1 041527465-0010 B18 1 - 2 1/2	Chrysotile	3%	5%	<0.25%	4%	N/A	N/A

Vermiculite Present in Sample

Vermiculite Present in Sample

Vermiculite Present in Sample

Analyst(s)

Nancy Stalter (PLM Analyst)

Ted Young (TEM Analyst)


 Benjamin Ellis, Laboratory Manager
 or other approved signatory

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**EMSL Analytical, Inc.**

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Date Received : 09/11/2015 09:40am
Date Analyzed : 9/15/2015-09/18/2015
Date Reported : 10/2/2015

Project: 301 Depot Street

ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil Summary Report

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	*PLM Asbestos Concentration >19mm Fraction	TEM Qualitative Fine
		Coarse	Medium	Fine			
5-2 041527465-0011 B18 3 1/2 - 5	Chrysotile	60%	60%	1.5%	57%	N/A	N/A
6-1 041527465-0012 B13 - 1 - 2 1/2	Chrysotile	70%	75%	3.5%	69%	N/A	N/A
6-2 041527465-0013 B13 6 - 7 1/2	None Detected	ND	ND	ND	None Detected	N/A	None Detected
7-1 041527465-0014 B12 1 - 2 1/2	Chrysotile	50%	70%	4.25%	56%	N/A	N/A
7-2 041527465-0015 B12 13 1/2 - 15	Chrysotile	5%	4%	0.75%	5%	N/A	N/A
8-1 041527465-0016 B11 1 - 2 1/2	Chrysotile	40%	60%	5%	48%	N/A	N/A
8-2 041527465-0017 B11 6 - 7 1/2	Chrysotile	5%	10%	<0.25%	7%	N/A	N/A
9-1 041527465-0018 B19 1 - 2 1/2	Chrysotile	ND	2%	ND	1%	N/A	N/A
9-2 041527465-0019 B19 3 1/2 - 5	Chrysotile	<1%	0%	ND	<0.25%	N/A	N/A

Vermiculite Present in Sample

Vermiculite Present in Sample

Vermiculite Present in Sample

Vermiculite Present in Sample

Analyst(s)

Nancy Stalter (PLM Analyst)
 Ted Young (TEM Analyst)

Benjamin Ellis, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL is not responsible for data reported in structures/cc, which is dependent on volumes collected by non-laboratory personnel. Samples received in good condition unless otherwise noted.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone: (800) 220-3675 Fax: (856) 858-1292
 Email: WestmontAsbLab@emsl.com

EMSL Reference: 041527465
 Customer ID: TITA52
 Customer PO:
 Project ID: Davidson Soil Sampling

Attn: ALEX MANZANAREZ
 TERRACON CONSULTANTS, INC.
 2020 STARITA ROAD
 SUITE E
 CHARLOTTE, NC 28206

Phone : 704-264-9287
Fax : 704-594-8910
Date Received : 09/11/2015 09:40am
Date Analyzed : 9/15/2015-09/18/2015
Date Reported : 10/2/2015

Project: 301 Depot Street

ASTM D7521: Standard Test Method for the Determination of Asbestos in Soil Summary Report

Sample ID Client / EMSL	Asbestos Type(s)	PLM Asbestos Concentration by Sieve Fraction			PLM Weighted Asbestos Concentration	*PLM Asbestos Concentration >19mm Fraction	TEM Qualitative Fine
		Coarse	Medium	Fine			
11-1 041527465-0022 B10 1 - 2 1/2	Chrysotile	20%	30%	0.75%	21%	3%	N/A
11-2 041527465-0023 B10 8 1/2 - 10	None Detected	ND	ND	ND	None Detected	N/A	Chrysotile
12-1 041527465-0024 B9 1 - 2 1/2	None Detected	ND	ND	ND	None Detected	N/A	Chrysotile
12-2 041527465-0025 B9 3 1/2 - 5	None Detected	ND	ND	ND	None Detected	N/A	None Detected

* As required by the ASTM D7521 method the >19mm fraction is reported seperately and is not included in the PLM Weighted Asbestos Concentration for each sample.

Analyst(s)

Nancy Stalter (PLM Analyst)
 Ted Young (TEM Analyst)


 Benjamin Ellis, Laboratory Manager
 or other approved signatory

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EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> cinnaslab@EMSL.com

EMSL Order: 041527465
CustomerID: TITA52
CustomerPO:
ProjectID:

Attn: **Alex Manzanarez**
Terracon Consultants, Inc.
2020 Starita Road
Suite E
Charlotte, NC 28206

Phone: (704) 509-1777
Fax: (704) 509-1888
Received: 09/11/15 9:40 AM
Analysis Date: 9/28/2015
Collected: 9/10/2015

Project: 301 Depot Street

Test Report: Qualitative Asbestos Analysis by Transmission Electron Microscopy (TEM) and Filtration Technique

Sample	Description	TEM Result	Notes
4-1 041527465-0008	B17 1 - 2 1/2	Chrysotile	
4-2 041527465-0009	B17 8 1/2 - 10	Chrysotile	
5-1 041527465-0010	B18 1 - 2 1/2	Chrysotile	
6-2 041527465-0013	B13 6 - 7 1/2	None Detected	
7-1 041527465-0014	B12 1 - 2 1/2	Chrysotile	
9-1 041527465-0018	B19 1 - 2 1/2	None Detected	
9-2 041527465-0019	B19 3 1/2 - 5	None Detected	
11-1 041527465-0022	B10 1 - 2 1/2	Chrysotile	
11-2 041527465-0023	B10 8 1/2 - 10	None Detected	
12-1 041527465-0024	B9 1 - 2 1/2	Chrysotile	

Analyst(s)

Wayne Froehlich (10)

Benjamin Ellis, Laboratory Manager
or other approved signatory

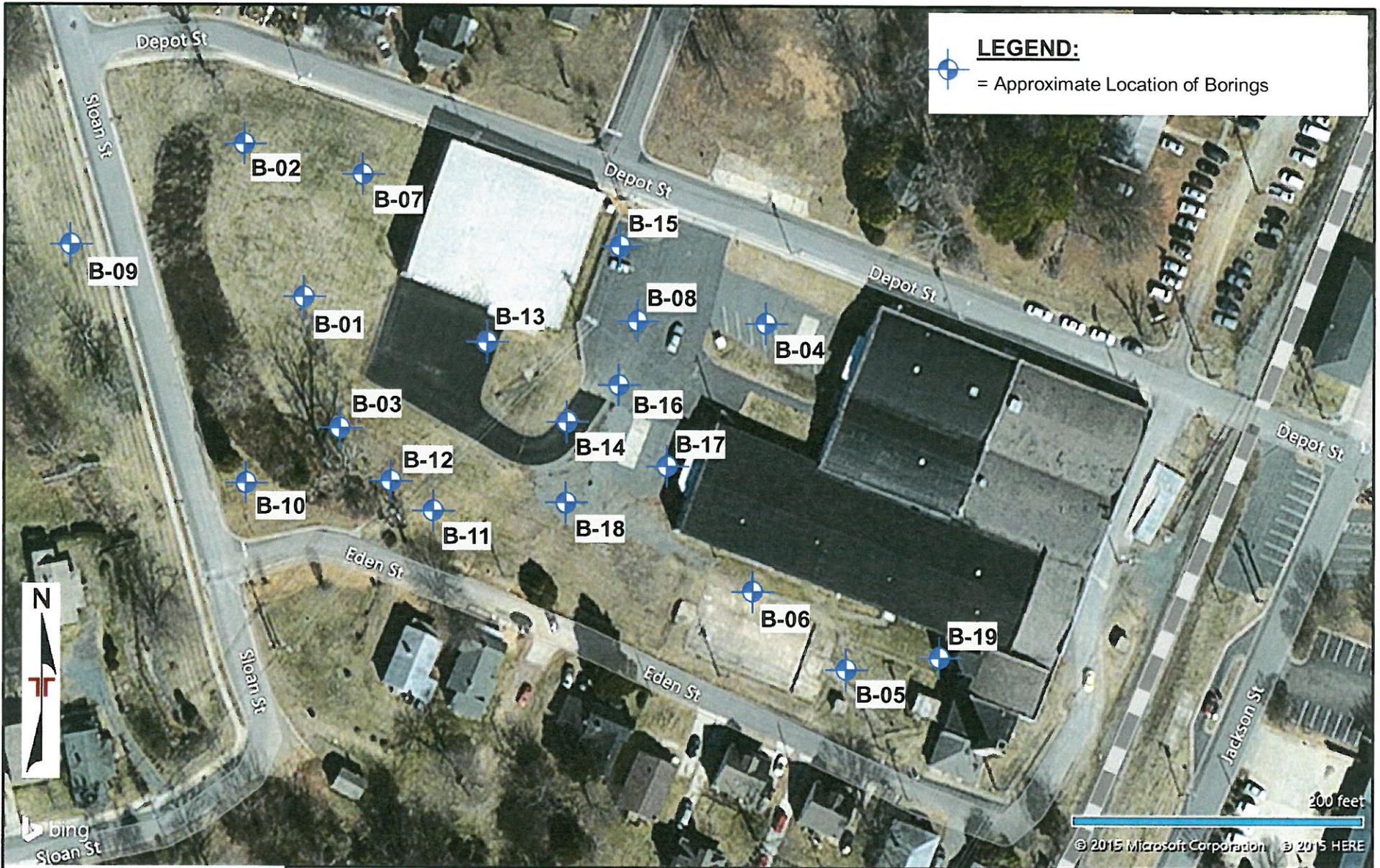
EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This is a qualitative screen only. There is a chance for false negatives with this method. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ

Report Amended: 10/08/2015 15:00:18 Replaces the Initial Report 09/23/2015 17:20:13. Reason Code: Client-Change to Sample ID

APPENDIX C

DRAWINGS



LEGEND:
 = Approximate Location of Borings



200 feet
 © 2015 Microsoft Corporation © 2015 HERE

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: JMP
 Drawn by: JMP
 Checked by: CRB
 Approved by: DJC

Project No. 71155040
 Scale: AS SHOWN
 File Name: A-1
 Date: 10.13.2015

Terracon

2020-E Starita Road
 Charlotte, NC 28206

EXPLORATION PLAN

Davidson Depot
 301 Depot Street
 Davidson, NC

Exhibit
 A-2A

APPENDIX D

BORING LOGS

BORING LOG NO. B-01

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 799 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
1.5	FILL - SILT (ML) , brownish red, soft	797.5			2-2-2 N=4
	FILL - CONSTRUCTION DEBRIS , pink to gray, green and white, very soft to soft				1-1-2 N=3
		5			0-0-0 N=0
					1-0-0 N=0
		10	▽		
					50/3"
		15			
					17-18-19 N=37
		20			
					18-23-22 N=45
		25			
					10-14-28 N=42
		30	▽		
					26-47-48 N=95
		35			
					21-29-37 N=66
		40			
	Boring Terminated at 40 Feet	759			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS

- ▽ While drilling
- ▽ At completion of drilling

☒ Cave in depth measured at 36.2 feet



Boring Started: 7/27/2015

Boring Completed: 7/27/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-02

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 797.5 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
1.0	FILL - SILT (ML) , brownish red	796.5			
	FILL - CONSTRUCTION DEBRIS , white, soft		X		1-1-0 N=1
	brown, sandy silt		X		2-2-2 N=4
8.0		789.5			
	SANDY SILT (ML) , olive brown, stiff, residuum		X		1-0-1 N=1
			X		2-2-6 N=8
12.0		785.5			
	SANDY SILT/SILTY SAND (ML) , brown, hard, residuum		X		9-15-26 N=41
			X		10-14-21 N=35
			X		14-16-26 N=42
30.0		767.5			
	Boring Terminated at 30 Feet		X		12-18-24 N=42

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/27/2015

Boring Completed: 7/27/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-3

Cave in depth measured at 26.5 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-03

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 797 (Ft.) ELEVATION (Ft.)				
DEPTH					
1.5	FILL - SILT (ML) , brownish red, very soft	795.5		X	1-0-1 N=1
5	FILL - CONSTRUCTION DEBRIS , pink to green, and white, soft, sandy silt mixed throughout		▽	X	1-0-2 N=2
10	solid debris fragments, dark gray and green		▽	X	2-4-5 N=9
12.5		784.5		X	6-5-5 N=10
15	SANDY SILT (ML) , white and olive brown, stiff, residuum			X	3-4-6 N=10
18.0		779			
20	SILTY SAND (SM) , fine to coarse grained, bluish green, medium dense, residuum			X	4-7-12 N=19
24.0		773		X	16-21-19 N=40
25	SILTY SAND (SM) , fine to coarse grained, white and brown, medium dense to dense, residuum			X	
30.0		767		X	29-33-37 N=70
	Boring Terminated at 30 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS

- ▽ While drilling
- ▽ At completion of drilling

☒ Cave in depth measured at 24 feet



Boring Started: 7/29/2015

Boring Completed: 7/29/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-04

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 811.5 (Ft.)				
	ELEVATION (Ft.)				
0.4	4.5" ASPHALT	811			
1.1	8.5" AGGREGATE BASE COURSE	810.5			
	SILTY SAND (SM) , trace mica, fine to coarse grained, white and brown, medium dense, residuum				
		5			4-7-9 N=16
		5			5-7-8 N=15
		10			3-5-6 N=11
		10			5-7-8 N=15
		15			6-7-9 N=16
		20			8-11-14 N=25
	Boring Terminated at 20 Feet	20			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/29/2015

Boring Completed: 7/29/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-5

Cave in depth measured at 16.6 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-05

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 811 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0	FILL - SANDY SILT (ML) , brown to reddish brown, soft to very stiff			X	2-2-1 N=3
5.5		805.5	5	X	6-7-7 N=14
8.5	SANDY SILT (ML) , trace gravel, brown, very stiff, residuum	802.5		X	5-5-7 N=12
16.0	SANDY SILT (ML) , with mica, brown, medium stiff to stiff, residuum	795	10	X	3-4-5 N=9
29.5	SANDY SILT (ML) , micaceous, white and brown, stiff, some sand, residuum	781.5	15	X	2-3-3 N=6
30.0	SANDY SILT (ML) , olive brown, very stiff, residuum	781	20	X	2-3-4 N=7
	Boring Terminated at 30 Feet		25	X	2-3-4 N=7
			30	X	5-6-7 N=13

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/28/2015

Boring Completed: 7/28/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-6

Cave in depth measured at 26.8 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-06

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 810 (Ft.)				
	ELEVATION (Ft.)				
	0.7 WELL GRADED GRAVEL (GW)	809.5			
	FILL - CONSTRUCTION DEBRIS , white, very stiff, reddish brown, sandy silt intermixxed	807	X		6-13-4 N=17
	SANDY SILT (ML) , trace mica, reddish brown, stiff, residuum	5	X		2-4-6 N=10
	SILT (ML) , some sand, brown, stiff, some sand, residuum	8.0	X		2-3-5 N=8
	SILT (ML) , some sand, brown, stiff, some sand, residuum	10	X		1-3-4 N=7
	SANDY SILT/SILTY SAND (ML) , with mica, white and olive brown, medium stiff to stiff, residuum	13.0	X		1-2-3 N=5
	SANDY SILT/SILTY SAND (ML) , with mica, white and olive brown, medium stiff to stiff, residuum	15	X		3-4-5 N=9
	SANDY SILT/SILTY SAND (ML) , with mica, white and olive brown, medium stiff to stiff, residuum	20	X		3-5-5 N=10
	SANDY SILT/SILTY SAND (ML) , with mica, white and olive brown, medium stiff to stiff, residuum	25.0	X		3-5-5 N=10
	Boring Terminated at 25 Feet	785			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/28/2015

Boring Completed: 7/28/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-7

 **Cave in depth measured at 22 feet**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-07

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 801 (Ft.) ELEVATION (Ft.)				
DEPTH					
5.5	FILL - SANDY SILT (ML) , reddish brown, medium stiff to very stiff	795.5		X	2-3-3 N=6
				X	5-8-10 N=18
12.0	SILT (ML) , trace sand, reddish brown, very stiff, residuum	789		X	5-7-11 N=18
				X	4-7-7 N=14
30.0	SANDY SILT/SILTY SAND (ML) , trace mica, white and olive brown, very stiff to hard, residuum	771		X	6-8-9 N=17
				X	10-14-17 N=31
				X	9-13-15 N=28
				X	9-14-18 N=32
	Boring Terminated at 30 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/28/2015

Boring Completed: 7/29/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-8

Cave in depth measured at 26.2 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-08

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 811.5 (Ft.)				
	ELEVATION (Ft.)				
	DEPTH				
0.3	3" ASPHALT	811.5			
1.0	9" AGGREGATE BASE COURSE	810.5			3-3-3 N=6
	FILL - SANDY SILT (ML) , brown to reddish brown, medium stiff				
4.0		807.5			3-5-9 N=14
	SANDY SILT/SILTY SAND (ML) , fine to coarse grained, white and olive brown, very stiff, residuum				3-7-8 N=15
10.0		801.5			7-8-12 N=20
	SANDY SILT/SILTY SAND (ML) , some mica, fine to coarse grained, brownish green to white and brown, very stiff to hard, residuum				13-18-22 N=40
20.0		791.5			10-12-13 N=25
	Boring Terminated at 20 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 7/29/2015

Boring Completed: 7/29/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-9

Cave in depth measured at 17 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-09

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 779 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.1	TOPSOIL , approximately 0.1 inches	779	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4-5-18 N=23
3.0	FILL - SANDY SILT (ML) , reddish brown, very stiff asphalt encountered	776	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5-4-7 N=11
5.0	SILTY SAND (SM) , fine grained, gray, medium dense, residuum	774	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Boring Terminated at 5 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/10/2015

Boring Completed: 9/10/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-10

Cave in depth measured at 1.4 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-10

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 781 (Ft.)				
	ELEVATION (Ft.)				
	DEPTH				
0.1	TOPSOIL , approximately 0.1 inches	781			
3.0	FILL - CONSTRUCTION DEBRIS , brown, fine grained silty sand	778	X		2-2-2 N=4
5.0	SILTY SAND (SM) , fine to coarse grained, reddish brown and white with brown, medium dense to dense, residuum	5	X		5-10-12 N=22
7.5		7.5	X		7-12-15 N=27
10.0		10	X		8-14-17 N=31
	Boring Terminated at 10 Feet	771			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/10/2015

Boring Completed: 9/10/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-11

Cave in depth measured at 4.8 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-11

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 797 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.1	TOPSOIL , approximately 0.1 inches	797			
0.5	FILL - SILT (ML) , dark brown, dense	796.5		X	10-14-16 N=30
	FILL - CONSTRUCTION DEBRIS , white, stiff to very stiff			X	3-3-22 N=25
	wood debris encountered		X		
6.5		790.5		X	2-3-6 N=9
8.0	SANDY SILT (ML) , grayish brown, stiff, residuum	789		X	5-6-8 N=14
10.0	SILTY SAND (SM) , fine to coarse grained, brown to white, medium dense	787		X	
	Boring Terminated at 10 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:

Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-12

Cave in depth measured at 5.0 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-12

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 797 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.1	TOPSOIL , approximately 0.1 inches	797			
0.3	FILL - SANDY SILT (ML) , reddish brown, soft	796.5		X	1-0-2 N=2
	FILL - CONSTRUCTION DEBRIS , white, soft			X	1-3-3 N=6
5.5	SILTY SAND (SM) , fine to coarse grained, dark gray, very loose, residuum	791.5		X	1-1-2 N=3
8.5	no recovery	788.5		X	1-3-3 N=6
10.0	SILTY SAND (SM) , fine to coarse grained, gray, medium dense, residuum	787	[Water Level Symbol]	X	3-4-6 N=10
15.0	Boring Terminated at 15 Feet	782		X	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS

At completion of drilling

Cave in depth measured at 11.2 feet



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-13

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-13

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 802 (Ft.)				
	ELEVATION (Ft.)				
	0.2' 2" ASPHALT	802			
	1.2' 12" AGGREGATE BASE COURSE	801			
	3.0' FILL - CONSTRUCTION DEBRIS , white, soft	799	X		5-3-1 N=4
	FILL - SANDY SILT (ML) , brown, medium stiff		X		2-2-3 N=5
	5.5' SANDY SILT (ML) , brown, stiff to very stiff, residuum	796.5	X		2-4-8 N=12
			X		6-8-10 N=18
	12.0' SILTY SAND (SM) , with mica, brown to white, medium dense, residuum	790			
	15.0' Boring Terminated at 15 Feet	787			11-14-15 N=29

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-14

Cave in depth measured at 8.3 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-14

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 808 (Ft.)				
	ELEVATION (Ft.)				
0.3	3" ASPHALT	807.5			
0.8	4" AGGREGATE BASE COURSE	807			
	FILL - CONSTRUCTION DEBRIS , white, soft to stiff, silt soil layers intermixed				2-2-1 N=3
					3-8-7 N=15
					4-3-2 N=5
	wood debris encountered				7-4-3 N=7
12.0	SANDY SILT (ML) , brown, stiff, residuum	796			
15.0		793			2-4-6 N=10
	Boring Terminated at 15 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS

Cave in depth measured at 10.5 feet



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-15

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-15

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 811 (Ft.)				
	ELEVATION (Ft.)				
	DEPTH				
0.2	2" ASPHALT	811			
0.7	6" AGGREGATE BASE COURSE	810.5			
3.0	FILL - SANDY SILT (ML) , with sand, reddish brown, medium stiff, mica asphalt encountered	808		X	2-2-5 N=7
5.0	SILT (ML) , with coarse sand, reddish brown, stiff, residuum	806		X	2-5-6 N=11
	Boring Terminated at 5 Feet		5		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-16

Cave in depth measured at 5.0 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-16

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 809 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.2	3" ASPHALT	809			
0.6	4" AGGREGATE BASE COURSE	808.5			
	FILL - CONSTRUCTION DEBRIS , white, very soft to stiff				2-1-9 N=10
	wood debris				1-2-1 N=3
8.5		800.5			1-0-1 N=1
	SILT (ML) , with sand, dark brown and gray, medium stiff, residuum				1-2-2 N=4
12.0		797			
	SANDY SILT (ML) , gray, brown and white, very stiff, residuum				
15.0		794			4-6-10 N=16
	Boring Terminated at 15 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:

Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-17

Cave in depth measured at 8.8 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-17

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 809 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.2	3" ASPHALT	809			
1.1	11" AGGREGATE BASE COURSE	808			
4.0	FILL - SANDY SILT , grayish brown and brown, sftiff, black/solid construction debris & wood debris at 1.5 feet	805	X		6-6-5 N=11
8.0	SANDY SILT (ML) , brown, stiff to very stiff, residuum	801	X		2-2-6 N=8
15.0	SANDY SILT (ML) , gray, brown and white, stiff, residuum	794	X		6-7-12 N=19
			X		5-6-8 N=14
			X		5-5-9 N=14
	Boring Terminated at 15 Feet	15			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-18

Cave in depth measured at 9.2 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_ 71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-18

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 805 (Ft.)				
	ELEVATION (Ft.)				
0.2	3" ASPHALT	803			
1.0	9" AGGREGATE BASE COURSE	804			
3.0	FILL - SANDY SILT (ML) , brown, soft	802		X	1-2-1 N=3
6.0	FILL - CONSTRUCTION DEBRIS , white, soft, small glass fragment wood debris	799		X	5-2-1 N=3
7.5	no recovery	797.5		X	2-2-2 N=4
10.0	SANDY SILT (ML) , brown, stiff, residuum	795		X	4-5-9 N=14
	Boring Terminated at 10 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-19

Cave in depth measured at 6.3 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16

BORING LOG NO. B-19

PROJECT: Davidson Depot

CLIENT: Miller-Valentine Residential Development LLC

SITE: 301 Depot Street
Davidson, NC

Davidson Depot LLC

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS
	Surface Elev.: 812 (Ft.)				
	ELEVATION (Ft.)				
DEPTH					
0.1	TOPSOIL , approximately 0.1 inches	812	812	X	1-1-1 N=2
	FILL - SANDY SILT (ML) , reddish brown, soft			X	1-1-2 N=3
5.0		807			
	Boring Terminated at 5 Feet				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See Exhibit B-1 for description of field procedures
See Appendix C for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Appendix D for explanation of symbols and abbreviations.
Elevation based on plans provided by client.

WATER LEVEL OBSERVATIONS



Boring Started: 9/9/2015

Boring Completed: 9/9/2015

Drill Rig: CME-75

Driller: J. Turnage

Project No.: 71155040

Exhibit: B-20

Cave in depth measured at 1.5 feet

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_71155040 - DAVIDSON DEPOT.GPJ TERRACON2015.GDT 6/17/16