



10-Apr-2019

Zack McCoy
Greater Cincinnati Water Works
4747 Spring Grove Ave
Cincinnati, OH 45232

Tel: (513) 439-2483
Fax:

Re: Beechmont Levy/Beechmont Ave

Work Order: **1904367**

Dear Zack,

ALS Environmental received 2 samples on 04-Apr-2019 03:40 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 7.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

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Client: Greater Cincinnati Water Works
Project: Beechmont Levy/Beechmont Ave
Work Order: 1904367

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1904367-01	#1 GCWW Beachmont Levy	Bulk		4/4/2019	4/4/2019 15:40	<input type="checkbox"/>
1904367-02	#2 GCWW Beachmont Levy	Bulk		4/4/2019	4/4/2019 15:40	<input type="checkbox"/>

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Case Narrative

It is the responsibility of the client to notify the lab of any certification requirements in writing via the chain of custody as this may determine the preparation and analytical procedures employed.

Laboratory accreditation does not in any way constitute approval or endorsement by any accrediting body or agency of the federal government. Please contact ALS Cincinnati QA/QC Manager for accreditation identifications and certifications.

All sample collection is performed outside of ALS and is the sole responsibility of the client. Sample condition acceptable upon receipt except where noted. Estimates of concentration are semi-quantitative and are made on an area basis. Results apply only to portions of samples analyzed. Samples disposed after 60 days. Cover letter signatory indicates report generation only. Raw data validated by peer analyst. Analyst responsible for technical content of report.

The reporting limit (RL) for asbestos in bulk materials is 1% and is a function of the quantity of sample analyzed, the nature of any matrix interferences, sample preparation, and fiber size and distribution.

Results reported as ND indicate that no asbestos was detected.

Results reported as "Trace" indicate that asbestos was detected at some level confidently determined to be <1% which is considered inconclusive according to New York ELAP.

Results reported as "Near 1%" indicate that while asbestos was detected at a level confidently determined to be <1% as prepared, the inherent uncertainty of the quantification technique(s) employed and the concentration nearing the 1% mark necessitate the recommendation that verification of these results by a more accurate and precise method be made.

ALS performs variety of PLM methods for asbestos in bulk building materials including EPA 600/R-93/116, NIOSH 9002, ELAP 198.1, and ELAP 198.6. In addition, we perform a modified uncertified version of EPA 600/R-04/004 for asbestos in vermiculite which reports asbestos as present or absent only, an in-house developed uncertified method ALS SOP ENV 004 for asbestos in soil, and asbestos in soil by ASTM D7521.

Regardless of the method requested, all samples are examined according to mandatory method protocol. Any optional method protocol are eliminated from the initial analysis but may be performed upon client request. These may include; insufficient sample volume rejection*, phase separation of layered or heterogeneous samples, ashing to remove organic interferences, acid dissolution to remove mineral carbonate interferences, point counting**, and analysis by transmission electron microscopy (TEM) to verify ND results.

All samples are examined by stereomicroscope for the determination of homogeneity, texture, friability, color, and extent of fibrous components. Non-asbestos materials such as foil, paper, metal, plastic, pebbles, or organic debris are ignored and a subsample of the remaining material homogenized by some means for examination by polarized light microscope (PLM). Information obtained via both stereomicroscope and PLM are used in the final qualitative and

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Case Narrative

quantitative analysis of fibrous components.

NOTE: Any visible building debris in soil samples such as pieces of drywall, roofing material, insulation, concrete, etc., are not included in the soil analysis. If present, these are considered possible asbestos containing materials (ACM) and may be analyzed as separate samples upon client request.

*Sufficient sample volume is material dependent. For samples such as floor tiles, roofing felts, sheet insulation, etc., three to four square inches of the layered material is preferred. For materials such as ceiling tiles, loose fill insulation, pipe insulation, etc., one cubic inch (~15cc) is preferred. For samples of thin coating materials such as paints, mastics, spray plasters, etc., a smaller sample size may be suitable. For vermiculite analysis, a one gallon ziploc bag full of dry, loose material is acceptable. For ENV 004 soil samples, a 4oz jar is recommended. The ASTM D7521 Soil method requires a minimum of 8oz and a maximum of 16oz of homogeneous soil.

**PLM samples at or near the 1% detection limit may be analyzed by the 400 point count analysis which refers to method EPA 600/M4/82/020, or AHERA method EPA 40 CFR Part 763, Sub. E, App. E as these are synonymous.

ALS Environmental

Date: 10-Apr-19

Client: Greater Cincinnati Water Works
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Lab ID: 1904367-01A
Client Sample ID: #1 GCWW Beachmont Levy

Collection Date: 4/4/2019
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM with Ashing			Date Analyzed 4/10/2019
Macroscopic Examination	Prep Date: 4/10/2019	E600/R-93/116	Analyst: MRS
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Resinous		
Asbestiform Minerals			E600/R-93/116
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	29.26	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	29.26	%	

Lab ID: 1904367-02A
Client Sample ID: #2 GCWW Beachmont Levy

Collection Date: 4/4/2019
Matrix: BULK

Analyses	Result	Units	Analytical Results
Asbestos by PLM with Ashing			Date Analyzed 4/10/2019
Macroscopic Examination	Prep Date: 4/10/2019	E600/R-93/116	Analyst: MRS
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Resinous		
Asbestiform Minerals			E600/R-93/116
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	16.67	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	16.67	%	

Note:

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**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
%	

Sample Receipt Checklist

Client Name: CINCINNATI WATERWORKS-SP

Date/Time Received: 04-Apr-19 15:40

Work Order: 1904367

Received by: SNH

Checklist completed by: Stephanie Harrington 05-Apr-19
eSignature Date

Reviewed by: Shawn Smythe 08-Apr-19
eSignature Date

Matrices:

Carrier name: Client

Shipping container/cooler in good condition? Yes [checked] No [] Not Present []

Custody seals intact on shipping container/cooler? Yes [] No [] Not Present [checked]

Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]

Chain of custody present? Yes [checked] No []

Chain of custody signed when relinquished and received? Yes [checked] No []

Chain of custody agrees with sample labels? Yes [checked] No []

Samples in proper container/bottle? Yes [checked] No []

Sample containers intact? Yes [checked] No []

Sufficient sample volume for indicated test? Yes [checked] No []

All samples received within holding time? Yes [checked] No []

Container/Temp Blank temperature in compliance? Yes [checked] No []

Temperature(s)/Thermometer(s): [] []

Cooler(s)/Kit(s): []

Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted [checked]

Water - pH acceptable upon receipt? Yes [] No [] N/A [checked]

pH adjusted? Yes [] No [] N/A [checked]

pH adjusted by: []

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

[Empty text box for comments]

CorrectiveAction:

[Empty text box for corrective action]