



ASBESTOS CONTAINING BUILDING MATERIALS  
INSPECTION REPORT

FOR

DEPARTMENT OF HEALTH OF PUERTO RICO

SAMPLING CONDUCTED AT  
SELECTIVE AREAS OF  
DIAGNOSTIC AND TREATMENT CENTER  
ADJUNTAS, PR

ZEM-19058

MARCH, 2019

PREPARED BY:  
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## SECTION 1: EXECUTIVE SUMMARY

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### 1.1 INTRODUCTION

An Asbestos Containing Building Materials (ACBM) Inspection was conducted on February 27, 2019 at Selective Areas of the Adjuntas' Diagnostic and Treatment Center in Adjuntas, PR. The asbestos containing building materials inspection was performed to identify material that contains asbestos fibers above allowable levels and assist with the compliance of local, state and federal regulations.

### 1.2 SUMMARY OF PROPERTY EVALUATION

The project consisted of the evaluation of selective interior areas of the aforementioned property. The evaluation found that **asbestos fibers were present at floor vinyl tiles and associated mastics, rigid acoustical ceiling tiles, and a/c ductwork mastics** installed at various areas of the subject property included in the scope of work. For specific locations and additional details on the location of ACBM reference Sections 2 and 3. If suspected components and surfaces that were not previously evaluated are identified in the facilities they shall be considered as containing asbestos until the appropriate analysis is performed.

### 1.3 PROPERTY LOCATIONS OF BUILDING COMPONENTS WITH ASBESTOS

Table 1-1 summarizes the building components containing asbestos fibers. Details that identify positive asbestos findings within specific areas and on surfaces were provided in the Asbestos Sampling inspection report, Section 2. The quantification of positives materials presented in Table 1-1 is only an estimate. If an abatement of the materials will be conducted the Contractors shall estimate the amount of materials to be abated. If homogeneous materials that were not accounted for are identified in areas not described, they shall be managed as asbestos containing material.

Table 1-1: Summary of Building Components Containing Asbestos		
Location (Area)	Component	Amount (Approx.)
Medical Assistance Office #4, Administration Waiting Area, External Clinics, Delivery Room Area 1-16	Blue Vinyl Tiles 12"x12" & Associated Mastics	Undetermined
Delivery Room Areas 1-4 to 1-6 & 1-9 to 1-15	Rigid Acoustical Ceiling Tiles	Undetermined
Mechanical Rooms, External Clinics & Delivery Room Areas	A/C Ductwork Mastics	Undetermined

Notes:

- The quantification of positives materials presented in Table 1-1 is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

## **SECTION 2: ASBESTOS CONTAINING BUILDING MATERIALS INSPECTION REPORT**

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### **2.1 OVERVIEW OF THE EVALUATION**

This ACBM inspection is an evaluation to identify the location of material containing asbestos that exist within. Our scope of work services for this project consisted of the following tasks.

- A walk-through and observation of the site was performed.
- Bulk sampling of Suspected ACBM within the structure.
- Polarized Light Microscopy (PLM) Analysis of bulk samples.
- Final Inspection Report.

Throughout the inspection of the following suspected ACBM were observed and sampled:

- A/C Duct Mastic
- Door Fire Retardant
- Galvanized Duct Adhesive
- Rigid Ceiling Tile
- Undersink Mastic
- Vinyl Tiles & Associated Mastics
- Vinyl Cove Base Adhesive

The sampling was conducted by Puerto Rico EQB and United States Environmental Protection Agency (USEPA) accredited Inspectors qualified by experience, education and training in the recognition of potential ACBM and approved bulk sampling techniques. Some areas may not have been directly accessible due to the physical hazards encountered within. In these areas, if any, assumptions based on findings in other areas were made whenever possible. These assumptions, if any, are duly noted as such in this report.

The inspection was performed in accordance with Environmental Protection Agency recommended procedures found in EPA-450/2-78-014 (Parts I and II), EPA 560/5-85-024, and 40 CFR 763. These procedures call for the visual inspection of the building for suspect friable material and collection and analysis of representative samples of suspect material.

### **2.2 SAMPLING PROCEDURE AND RESULTS PRESENTATION**

The bulk sampling procedures utilized for the collection of the ACBM, required the establishment of homogeneous sampling areas. A homogeneous sampling area is defined as an area of friable or non-friable material of similar type that appears to be applied or constructed during the same time period.

Samples collected from these predetermined homogeneous sampling areas were labeled and transported for analysis. Sample locations were identified by their current use or functional space name. Each type of asbestos displays a unique property when subject to PLM. Properties are unique to crystalline asbestos form and; therefore, can be used to identify the type of asbestos mineral as chrysotile, amosite, crocidolite, anthophyllite, tremolite and actinolite.

Percentage of each asbestos mineral type is determined by visual estimation, by mixing the sample thoroughly to provide a more accurate percentage. Any material containing over one percentage (>1%) by weight of any type of asbestos mineral forms is considered by the USEPA to be asbestos containing material; and if disturbed, it must be handled according to specific State and Federal Regulations.

Eighteen (18) samples of suspected materials were collected. It is our opinion that an acceptable minimum number of critical areas were sampled in keeping with the homogeneous nature of much of the material that was observed. Non-destructive sampling techniques were used. If they exist, walls, ceilings, columns and other inaccessible areas were not broken into. It should be noted that these inaccessible areas may contain ACBM which was not observed during the inspection. Any future construction or renovation should anticipate the presence of these materials.

The samples were received and analyzed by Analytical Environmental Services, Inc. in Atlanta GA (Certified Proficient by the National Institute of Science and Technology NVLAP program for bulk sample asbestos analysis; Laboratory Id 102082-0). The method of analysis was polarized light microscopy with dispersion staining, as recommended by the US EPA. This survey focused on the building materials, which are present throughout the interior and exterior of the building structure.

## 2.3 FINDINGS AND RECOMMENDATIONS

### 2.3.1 INTRODUCTION

This section describes the asbestos containing building materials (ACBM), which were observed in the inspection. Please note that the recommendations given are always the minimum action, which in our professional judgment should be taken.

There were three types of Asbestos Containing Building Materials found within the evaluated site:

- A/C Duct Mastic
- Rigid Ceiling Tile
- Vinyl Tiles & Associated Mastics

**If these materials are to be removed they should be managed and disposed by a licensed asbestos contractor and disposed of as contaminated waste in as approved asbestos landfill site.**

### 2.3.2 SPECIFIC FINDINGS

The following ACBM were found to contain more than one percent (1%) of asbestos by weight and are listed according to their homogeneous area:

1. **A/C Duct Mastic Samples:** 19058-11 & 19058-14

This material is in a non-friable condition and the analytical result was 10% chrysotile asbestos. The material is installed at mechanical rooms and plenum space through the subject areas of the project.

**2. Rigid Ceiling Tile Sample:** 19058-13

This material is in a non-friable condition and the analytical result was 15% chrysotile asbestos. The material is installed at selective delivery room areas as an acoustical system.

**3. Vinyl Tiles & Associated Mastics Samples:** 19058-07, 19058-09, 19058-10 & 19058-15

These materials are in a non-friable condition and the analytical result was between 2-3% chrysotile asbestos. The material is installed at selective areas through the subject project.

**2.3.3 HOMOGENEOUS AREAS WITH SPECIAL CONSIDERATIONS**

NONE

**2.3.4 SUSPECT MATERIALS PRESUMED TO BE ASBESTOS-CONTAINING MATERIALS WITHOUT LABORATORY ANALYSIS**

NONE

**2.3.5 INACCESSIBLE AREAS**

NONE

**2.4 CONDITIONS AND LIMITATIONS—DISCLAIMER**

Zimmetry Environmental Management Corp. has performed this asbestos containing building materials inspection in a thorough and professional manner consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this property on the date of the evaluation. If additional suspected materials not accounted for are identified, they shall be managed as containing asbestos until the appropriated laboratory analysis is performed. The quantification of positives materials presented in the table 1-1 is only an estimate. If an abatement of the materials will be conducted the Contractors shall estimate the amount of the materials to be abated.

The results reported and conclusions reached by the Preparer are solely for the benefit of the Owner and occupants. The results and opinions in this report, based solely on the conditions found at the property on the date of the evaluation, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any real or potential asbestos hazards at this structure beyond the date of the property evaluation.

**2.5 ABATEMENT CONDITIONS**

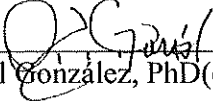
The US Environmental Protection Agency rules concerning the application, removal, and disposal of Asbestos Containing Building Materials (ACBM) were issued under the asbestos NESHAP (U.S. EPA National Emission Standards of Hazardous Air Pollutants, 40 CFR 61 Subpart M, October 30, 1987). The asbestos N.E.S.H.A.P. regulation governs asbestos demolition and renovation projects in

all facilities. The NESHAP rule usually requires owners or operators to have all friable ACBM removed before a building is demolished, and may require its removal before a renovation. The Environmental Quality Board (E.Q.B.) of Puerto Rico requires inspecting the presence of Asbestos Containing Materials prior to buildings demolitions.

If the identified materials are to be removed, they should be managed following the work practices and procedures for the removal and disposal of asbestos containing materials by a licensed asbestos contractor and disposed of as contaminated waste in an approved asbestos landfill site. The Contractor shall comply with all the PR Environmental Quality Board requirements. The Contractor has to submit to the EQB the abatement work plan for its approval. The asbestos abatement is classified Class II asbestos work which means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics. The abatement has to be performed without damaging any structure or adjacent area and protecting the safety and health of the employees and the general public.

## **2.6 ENVIRONMENTAL ASSESSMENT REPORT CERTIFICATION**

Zimmetry Environmental Management Corp. has performed this asbestos containing building materials inspection in a thorough and professional manner consistent with commonly accepted industry standards. The ACBM inspection was performed on February 27, 2019 by Onell Gonzalez, Asbestos Inspector ASB-0818-0587-SI, qualified by experience, education and training in the recognition of asbestos containing materials and approved sampling techniques.

  
\_\_\_\_\_  
Onell Gonzalez, PhD(c), CIEC, LEED AP O+M  
Professional Industrial Hygienist |  
Green Building Advisor & International Trainer

## **SECTION 3: APPENDICES**

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**Appendix A: Certifications, Licenses and Accreditations**

**Appendix B: Location of Positive Materials**

**Appendix C: Project Photographs**

**Appendix D: Laboratory Results & Chain of Custody**



## APPENDIX A: CERTIFICATIONS, LICENSES, AND ACCREDITATIONS

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	<p>TARJETA DE REGISTRO LA REMOCION PARA DE ASBESTO</p> <p>Esta tarjeta autoriza a:</p> <p><b><i>Onell González Martínez</i></b></p> <p><b>Inspector</b></p> <p>A trabajar en la remoción de asbesto en P.R. Esta persona <b>NO</b> es un empleado, ni un representante de la Junta.</p> <p> Firma Autorizada Junta de Calidad Ambiental</p>
<p><b>ASB-0818-0587-SI</b></p> <p>Número de Registro</p>	
<p><b>5-ago-2019</b></p> <p>Fecha de vencimiento</p>	

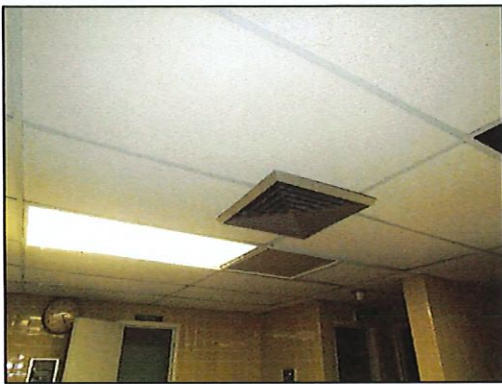
## APPENDIX B: LOCATION OF POSITIVE MATERIALS

## APPENDIX C: PROJECT PHOTOGRAPHS

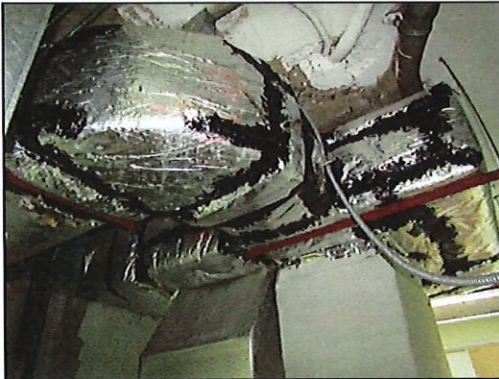
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**Administration Waiting Area**  
Asbestos containing blue floor vinyl tiles 12"x12"  
& associated mastics



**Delivery Room Area 1-4**  
Asbestos containing rigid acoustical ceiling tiles



**Mechanical Room A/B**  
Asbestos containing a/c ductwork mastics



**External Clinics**  
Asbestos containing a/c ductwork mastics

APPENDIX D: LABORATORY RESULTS AND CHAIN OF  
CUSTODY

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ZIMMETRY ENVIRONMENTAL MANAGEMENT CORP.

1903282

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3080 Presidential Drive, Atlanta GA 30340-3704  
Phone (770) 457-8177 Fax (770) 457-8188

**CHAIN OF CUSTODY  
BULK ASBESTOS SAMPLE**

Project Name: CDT Adjuntas

Contact: Harry Peña

Project Location: Adjuntas, PR

Samplers Name: Ramón Rosado

Project Number: ZEM-19058

Sampling Date: 2/27/2019

	Sample ID	Sample Description	Sample Location	Analysis Requested	Turnaround Time	Comments	For AES Use Only
1	19058-01	A/C Duct Mastic	Mechanical Room A/B	PLM	Regular		
2	19058-02	A/C Duct Mastic	Mechanical Room A/B	PLM	Regular		
3	19058-03	Galvanized Duct Adhesive Gray	Mechanical Room A/B	PLM	Regular		
4	19058-04	Galvanized Duct Adhesive Gray	Mechanical Room A/B	PLM	Regular		
5	19058-05	A/C Duct Mastic	Mechanical Room C/D	PLM	Regular		
6	19058-06	Galvanized Duct Adhesive Gray	Mechanical Room C/D	PLM	Regular		
7	19058-07	Blue Vinyl Tile (12x12)	Medical Assistance Office 4	PLM	Regular		
8	19058-08	Vinyl Cove Base Adhesive	Medical Assistance Office 4	PLM	Regular		
9	19058-09	Blue Vinyl Tile (12x12)	Administration Waiting Area	PLM	Regular		
10	19058-10	Blue Vinyl Tile (12x12)	External Clinics	PLM	Regular		
11	19058-11	A/C Duct Mastic	External Clinics	PLM	Regular		
12	19058-12	Door Fire Retardant	Delivery Room 1-9	PLM	Regular		
13	19058-13	Rigid Ceiling Tile	Delivery Room 1-4	PLM	Regular		
14	19058-14	A/C Duct Mastic	Delivery Room 1-4	PLM	Regular		
15	19058-15	Blue Vinyl Tile (12x12)	Delivery Room 1-16	PLM	Regular		
16	19058-16	Undersink Mastic	Delivery Room 1-5	PLM	Regular		
17	19058-17	Vinyl Cove Base Adhesive	Delivery Room 1-20	PLM	Regular		
18	19058-18	Undersink Mastic	Delivery Room 1-2	PLM	Regular		
19							
20							

Relinquished by: Harry Peña

Date/Time: 2/28/2019 15:00

FOR LAB USE ONLY

Page 1 of 7

Lab Recipient: [Signature]

Date/Time: 3/5/19 10:18

Method of Shipment: [Signature]



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Lab Code 102082-0

11-Mar-19

Client Name:	Zimmetry Environmental Mgmt Corp.	AES Job Number:	1903282
Project Name:	CDT ADJUNTAS	Project Number:	ZEM-19058

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-01 Layer: 1	1903282-001A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-01 Layer: 2	1903282-001A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-01 Layer: 3	1903282-001A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-02 Layer: 1	1903282-002A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-03 Layer: 1	1903282-003A	GALVANIZED DUCT ADHESIVE GREY	ND	ND	ND	ND	ND	ND	
19058-04 Layer: 1	1903282-004A	GALVANIZED DUCT ADHESIVE GREY	ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.

ND = None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), 1993.

These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume.

PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials, quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.

This report must not be reproduced except in full without written approval of Analytical Environmental Services, Inc.

Microanalyst:

Elena Ivanova

QC Analyst:

Yelena Khanina





ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Lab Code 102082-0

11-Mar-19

Client Name:	Zimmetry Environmental Mgmt Corp.	AES Job Number:	1903282
Project Name:	CDT ADJUNTAS	Project Number:	ZEM-19058

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-05 Layer: 1	1903282-005A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-05 Layer: 2	1903282-005A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-05 Layer: 3	1903282-005A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-06 Layer: 1	1903282-006A	GALVANIZED DUCT ADHESIVE GREY	ND	ND	ND	ND	ND	ND	
19058-07 Layer: 1	1903282-007A	BLUE VINYL TILE (12X12)	2	ND	ND	ND	ND	ND	Floor tile
19058-07 Layer: 2	1903282-007A	BLUE VINYL TILE (12X12)	3	ND	ND	ND	ND	ND	Black Mastic

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

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Lab Code 102082-0

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Project Name:	<b>CDT ADJUNTAS</b>	Project Number:	<b>ZEM-19058</b>

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-08 Layer: 1	1903282-008A	VINLY COVE BASE ADHESIVE	ND	ND	ND	ND	ND	ND	
19058-09 Layer: 1	1903282-009A	BLUE VINYL TILE (12X12)	2	ND	ND	ND	ND	ND	Floor tile
19058-09 Layer: 2	1903282-009A	BLUE VINYL TILE (12X12)	ND	ND	ND	ND	ND	ND	Glue
19058-09 Layer: 3	1903282-009A	BLUE VINYL TILE (12X12)	3	ND	ND	ND	ND	ND	Black Mastic
19058-10 Layer: 1	1903282-010A	BLUE VINYL TILE (12X12)	2	ND	ND	ND	ND	ND	Floor tile
19058-10 Layer: 2	1903282-010A	BLUE VINYL TILE (12X12)	ND	ND	ND	ND	ND	ND	Glue

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

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Bulk Sample Summary Report



Lab Code 102082-0

11-Mar-19

Client Name:	Zimmetry Environmental Mgmt Corp.	AES Job Number:	1903282
Project Name:	CDT ADJUNTAS	Project Number:	ZEM-19058

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-10 Layer: 3	1903282-010A	BLUE VINYL TILE (12X12)	3	ND	ND	ND	ND	ND	Black Mastic
19058-11 Layer: 1	1903282-011A	A/C DUCT MASTIC	10	ND	ND	ND	ND	ND	
19058-12 Layer: 1	1903282-012A	DOOR FIRE RETARDANT	ND	ND	ND	ND	ND	ND	
19058-13 Layer: 1	1903282-013A	RIGID CEILING TILE	15	ND	ND	ND	ND	ND	Paint included as binder
19058-14 Layer: 1	1903282-014A	A/C DUCT MASTIC	10	ND	ND	ND	ND	ND	
19058-14 Layer: 2	1903282-014A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	

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11-Mar-19

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Project Name:	<b>CDT ADJUNTAS</b>	Project Number:	<b>ZEM-19058</b>

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-14 Layer: 3	1903282-014A	A/C DUCT MASTIC	ND	ND	ND	ND	ND	ND	
19058-15 Layer: 1	1903282-015A	BLUE VINYL TILE (12X12)	2	ND	ND	ND	ND	ND	Floor tile
19058-15 Layer: 2	1903282-015A	BLUE VINYL TILE (12X12)	3	ND	ND	ND	ND	ND	Black Mastic
19058-16 Layer: 1	1903282-016A	UNDERSINK MASTIC	ND	ND	ND	ND	ND	ND	
19058-16 Layer: 2	1903282-016A	UNDERSINK MASTIC	ND	ND	ND	ND	ND	ND	
19058-17 Layer: 1	1903282-017A	VINYL COVE BASE ADHESIVE	ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.


ND = None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), 1993.

These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume. PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials, quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.

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Microanalyst:



Elena Ivanova

QC Analyst:



Yelena Khanina



**ANALYTICAL ENVIRONMENTAL SERVICES, INC.**

**Bulk Sample Summary Report**



Lab Code 102082-0

11-Mar-19

Client Name:	<b>Zimmetry Environmental Mgmt Corp.</b>	AES Job Number:	<b>1903282</b>
Project Name:	<b>CDT ADJUNTAS</b>	Project Number:	<b>ZEM-19058</b>

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
19058-18  Layer: 1	1903282-018A	UNDERSINK MASTIC	ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.


ND = None Detected

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